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ABSTRACT

Presented is a curriculum guide for primary and intermediate special education in the areas of communication skills, arithmetic, science, and physical education. The guide, prepared by the Opelika (Alabama) schools, is said to be based on assumptions such as the values of structured individualized learning, use of materials which do not require reading ability, and development of feelings of competence. Noted is the belief that special education students can learn more in less time if provided with an appropriate curriculum. Major knowledge and skill groupings are presented as either a stimulus-response training sequence or as a continuum of sequential education units. It is stressed that the multi-level program provides for differences in learning pace through achievement of objectives at six sequential plateaus. Briefly considered are a procedure for instructional placement, differences between training and education components, and meanings of terms such as percept, generalization, and competency. Provided for oral, pictorial, and written communication skills are 198 objectives. Approximately 450 arithmetic objectives are listed and coordinated with commercial programs for the subject areas of location and direction, measurement, time and motion, money concepts, numbers and grouping, fractions, and geometric forms. The 525 science objectives deal with concepts about the earth, plants, animals, people, and matter and energy. The physical education component stresses fundamental movements with emphasis on balance and posture, body image and differentiation, and perceptual-motor match. (DB)

A CURRICULUM GUIDE

FOR

PRIMARY AND INTERMEDIATE SPECIAL EDUCATION

IN THE

OPELIKA CITY SCHOOLS

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PREFACE

This is the third edition of this curriculum guide. It represents three years of developmental work and includes several major revisions based upon teacher and student feedback.

As with any innovative project, numerous obstacles to successful development and implementation confronted the staff and teachers. Many, but not all, of the problems were solved.

The major obstacle not yet surmounted was that of multi-media production of instructional materials. Our goal was to project-produce a package of audio-visual instruction for each of the sequential training objectives on the six plateaus of three curriculum divisions. (Approximately 2000 such packages were planned for each of five special classes.)

Fortunately, the curriculum design, scope and sequences of objectives was not totally dependent upon project-produced means of instruction. A shift to teacher-provided instructional means has been made and accepted by our teachers as not only possible, but preferred over the incomplete technological packages.**

Perhaps in another project at another time in the future a way will be found to develop and produce technological instructional packages to fully extend this curriculum to its highest potential.

**The user of this guide is cautioned not to expect full instructional guidelines within this volume. Each plateau of each curriculum division has a detailed separate guide of instructional procedures to aid the teacher in teaching each performance objective.

CONTENTS

INTRODUCTION..... 1
Basic Assumptions..... 2
Sources Utilized in Development..... 4
Guiding Philosophy

CURRICULUM SCOPE AND DESCRIPTIONS..... 7
Citizenship Education..... 8
Communication Skills..... 8
Arithmetic Skills.....10
Science Concepts.....10
Occupational Orientation.....11
Physical Education.....12

METHODOLOGY OF INSTRUCTION..... 13
Method of Leveling.....13
Instructional Placement.....15
Learning Plans.....16
Learning Process.....17
Training Performance Objectives.....19
Education Performance Objectives.....22
Evaluation.....22
Mental Age Chart.....25

SEQUENTIAL TRAINING OBJECTIVES..... 27
Communication Skills.....29
Arithmetic Skills.....99
Science Competencies.....225
Physical Education 1.....277

TEACHERS' INSTRUCTIONAL GUIDES
(see separate booklets)

INTRODUCTION

The purpose of this curriculum guide is to record, publish, and make available to teachers, administrators, and interested others the design, methodology, and performance objectives of the Opelika City Schools' elementary section of the special education curriculum.

From its beginning as a problem to be solved or, at least, alleviated; this project has been one of action research...that is, the educators involved have focused their attention on the immediate application in special education classrooms of already known educational theories and practices. We have placed our emphasis on a problem here, and now, in a local setting.

Simply stated; the Opelika City School system was essentially concerned with improving our local special education programs and practices so that all students with extreme learning difficulties could more successfully develop the concepts, skills, and attitudes needed for effective social, political, and economic citizenship in spite of a general three to five year lag in learning to read.

Thus; evaluation of this curriculum's effect upon students' capability and behavioral growth has been limited to local applicability, not universal validity.

The arrangement and utilization of the elements involved in the improvement attempt might be unique and may be of value to educators beyond this school system, but we make no claims to that distinction. This is not to say we lack hope of its universal applicability, but we prefer to let other systems evaluate the curriculum and its effect for themselves in light of their own local setting and problems.

Much of this curriculum's design, methodology, and objectives is not new...we reviewed multiple other curriculum guides, research projects, books by noted authorities, and the experiences of other educators to discover what would be of value. Our major concern was to identify and delineate bodies of knowledge concepts and skills which appeared to be universally accepted and taught by special education teachers.

Through the process of evaluation against our project criteria we have established this tentative guide for our teachers. It still remains, and we hope always will be, tentative. It is our intention to continually evaluate and revise, as in-school problems emerge and the need to change arises. We believe it is the interaction between and with the teachers, students, and specialists that ultimately determines the successful curriculum, and such evaluation and revision should not be limited to a single year's experience.

Basic Assumptions

The development of this curriculum was guided by several basic assumptions which were agreed upon prior to beginning the project and which were reflected in the statement of the project's objectives.

1. The curriculum design, methodology, and performance objectives should be structured in order to insure unity of teacher purpose, continuity of student learning, and revision and expansion in an orderly manner.
2. The design of the curriculum should not deviate excessively from that of the regular curriculum so that the special student may feel and, to a greater extent than now, be a part of the total school environment.

3. The methodology of the curriculum should incorporate the theories of individualized instruction in order to fully meet the range of individual differences in student abilities, interests, and rates of learning. A multi-level, multi-media, multi-sensory approach should be utilized to facilitate individualized instruction.

4. The methodology of the curriculum should acquire or produce learning methods, materials, and devices which do not require the ability to read during the student's elementary stages of development so that special students will have greater opportunity to acquire knowledge and develop skills at earlier chronological ages than at present.

5. The methodology of the curriculum should incorporate a learning method which encourages the development of an attitude of competency and which reduces experiences which cause feelings of inadequacy so that the slower learners will be motivated to continually seek new knowledge and educational skill.

6. The objectives of the curriculum divisions should be identified and incorporated into the program on the basis of what will be most essential, relevant, and useful to the special education student, both while he is in school and when he is employed as an adult, so that the slow learner's school years will be utilized for the most profit to him and to society.

7. The performance objectives of the curriculum's divisions should be arranged in logical developmental sequences or

hierarchies so that learning will flow naturally from that which the learner knows into that which he seeks to learn. Training objectives, such as those of Communication and Arithmetic, should be arranged in small steps and utilize a stimulus-response-reinforcement-redirection format. Education objectives, such as those of Citizenship Education and Occupational Orientation, should be arranged in units of an hierarchical continuum and utilize a personal discovery or group interaction format. The S-R format should make possible pre-testing, placement in a sequence according to achieved capability, and movement forward at a comfortable and more successful rate of learning. The skills gotten via the S-R format can be used in the P-D and G-I modes thus reinforcing skill learning and providing motivation to seek new knowledge and new skills.

Sources Utilized in Development

As stated previously; the curriculum builders borrowed ideas liberally from many others...national and local, public and private, commercial and non-profit...infact, the staff spent the better part of the first year searching for the best ideas in design, methodology, and objectives.

This project owes the whole educational community a debt of gratitude for having contributed so many ideas which we were able to use in our design. It would be impractical to list all of the sources of ideas and information here, but some which were of particular value will be mentioned.

A visit to the Southeastern Materials Center at the University of South Florida provided the most extensive review of the literature. In one place, this center had at least one copy of many of the most recent curriculum guides, instructional manuals, reports of research projects, materials and equipment catalogs, books, and articles dealing with special education. Many sources were loaned to us for several weeks.

Auburn University's Learning Resource Center provided additional literature, particularly in the area of media technology and multisensory instructional materials.

A tour of the Special School District of St. Louis County, Missouri provided considerable information and many ideas about special education in a modern and technological instructional setting.

Books by Samuel A. Kirk, G. Orville Johnson, Lloyd M. Dunn, Newell C. Kephart, Maria Montessori, Elia Katz, Don H. Parker, G. N. Getman, and others were particularly helpful in providing information about the most effective design and methodology for the education of the mentally retarded and slow learner.

Curriculum guides which were most helpful in determining the performance objectives, their order and sequence, were The Illinois Plan for Special Education of Exceptional Children, the Missouri Special Education Guide For Teachers, and Arithmetic Skills for Living and Learning by Margaret A. Neuber.

Dr. James Sartin, Director of the Program for Exceptional Children, Auburn University, provided extensive consultation and review of the design, methodology, and performance objectives.

The teachers of the Opelika Special Classes provided numerous ideas and feedback as the project developed and helped tremendously in preventing errors from becoming permanent.

Dr. Tom Michels, Assistant Professor, Counselor Education, Auburn University, provided the design for project evaluation and aided in design of evaluative means to determine student progress.

Guiding Philosophy

Those involved in the design, production, and implementation of this curricu um believe the special education student can learn much more and in much less time than has been possible in the past if the learner is given the opportunities of individualized instruction, sequential concepts, skills, and affectives, and the continuity of a structured curriculum with-in an educational environment that recognizes the slow learner as a person of worth and dignity.

EVELOPED WITH SIX PACE LEVELS
by year) TO MEET VARYING DEGREES
F EST AND
APABILITIES.

SCOPE OF ELEMENTARY SPECIAL EDUCATION

(See detailed descriptions attached.)

		PRIMARY YEARS			INTERMEDIATE YEARS			
ENVIRONMENTAL EDUCATION (Expanding Community)	KNOWLEDGE AND PROCESSES	THE SOCIAL SCIENCES: CONCEPTS AND VALUES BLUE LEVEL → RED LEVEL → GREEN LEVEL			THE SOCIAL SCIENCES: CONCEPTS AND VALUES ORANGE LEVEL → PURPLE LEVEL → BROWN LEVEL			ART AND MUSIC INTEGRATED WHERE APPROPRIATE IN CURRICULUM
	INTELLECTUAL SKILLS AND AFFECTIVES	DEVELOPING THE SELF-CONCEPT INDIVIDUAL SKILLS, AND SELF-CONTROL			DEVELOPING THE GROUP-CONCEPT, SOCIAL SKILLS, AND RESPONSIBILITIES			
SKILLS	Oral: LISTENING, SPEAKING	→	→	→	→	→	→	
	Pictorial: RECEIVING, ORGANIZING, EXPRESSING	→	→	→	→	→	→	
	Written: READING, WRITING, SPELLING	→	→	→ SLOW LEARNER SEQUENTIAL READING → PROGRAM				
SKILLS (S/R Sequences)	LOCATION & DIREC.	→	→	→	→	→	→	
	MEASUREMENT	→	→	→	→	→	→	
	TIME & MOTION	→	→	→	→	→	→	
	MONEY CONCEPTS	→	→	→	→	→	→	
	NUMBERS & GROUPS	→	→	→	→ ELEMENTARY MATHEMATICS			
	FRACTIONS	→	→	→	→	→	→	
	TABLES & GRAPHS	→	→	→	→	→	→	
	GEOMETRIC FORMS	→	→	→	→	→	→	
CONCEPTS	EARTH	→	→	→	→	→	→	
	LIVING THINGS	→	→	→	→	→	→	
	HEALTH & SAFETY	→	→	→	→	→	→	
	MATTER & ENERGY	→	→	→	→	→	→	
ORIENTATION	PRACTICAL ARTS	Hand built projects to provide multi-sensory support for audio-visual presentations.						
	AUDIO-VISUAL PRESENTATIONS	Transportation	Communications	Agriculture	Public Services	Industries	Local Occupations	
EDUCATION		PERCEPTUAL-MOTOR TESTS AND REMEDIATIONS →	Sequenced program already developed by regular P.E. will be adapted.					

CURRICULUM SCOPE AND DESCRIPTIONS

The scope chart shows the major knowledge and skill groupings for the six divisions of the elementary special education curriculum. Not shown but integrated into the curriculum where there is appropriate need or opportunity are Personal and Social Competencies, Art and Music activities, and Practical Arts.

Each of the major groupings has been developed primarily as either a stimulus-response training sequence with its knowledge concepts and/or skills identified and placed in a learning order, or as a continuum of sequential education units.

Performance objectives have been written to guide the development of instructional materials and devices and provide the criteria for pre-test and post-test evaluation of learner achievement.

The curriculum divisions, major groupings, sequences, and unit continuums have been tentatively validated by both special education and general education specialists.

All the divisions will have multi-levels after the first year. (See the section on methodology for a description of the leveling method). The scope chart shows only level one, for fastest learners.

A brief description of each curriculum division is given below. See also the introduction to each section of the sequential training objectives for "how-to-do-it" guidelines.

Citizenship Education

The scope of citizenship education is based upon the commercial sequential program The Social Sciences: Concepts and Values (Harcourt, Brace, and World). Strongly integrated into this core program will be teaching of Personal and Social Competencies.

During the first three years (Primary classes), emphasis will be on developing the self-concept, individual intellectual skills, and self-control over emotions and behaviors through affective development of a value system.

During the second three years (Intermediate classes), emphasis will be on developing the group concept, social skills, and social-political-economic citizenship responsibilities and values.

Because the social science program being used as the core is highly sequential, all classes will begin with the "Blue Level" section and, over several years, develop the scope as shown on the chart.

The methodology to be used will be primarily educational, i.e. teacher led personal discovery and group interaction modes. Audio and visual aids to supplement reading will be added to the program where needed.

Communication Skills

The scope of communication skills includes most of the groupings usually a part of a Language Arts division except that Pictorial Communications will be strongly emphasized for the special education student as long as he has a reading handicap.

Each of the groupings ..Oral, Pictorial, Written...is divided into continuous progress sequences. Each of the sequences is composed of

small steps, usually only one concept or skill, and are in a logical developmental order, but each concept or skill may require extended repetition for successful achievement.

Arrows shown on the chart emphasize the high degree of continuous progress involved in the program. Each individual student moves from one concept or skill to the next, in consecutive order, on a pace level appropriate for him.

Most of the steps in each sequence will be training which utilizes the stimulus-response format, but some steps direct the student into skill-using exercises.

Reading in the first year will be readiness training and readiness will continue until such time as the E.M.R. reaches the mental age and/or attitude necessary for beginning formal reading training. (Preliminary field testing and evaluation indicates the strong possibility that reading skill training under the heuristic conditions of this new curriculum may progress much faster for many E.M.R.'s than previous research has reported). With the sequential approach, there is no limit to the rate a learner may develop this competency and an earlier success will be encouraged.

Although the teacher will produce most of the instructional materials for the communication sequences, commercial programs such as the Sullivan Reading Program and the Peabody Language Kits will also be utilized when and where appropriate.

Art and Music will be heavily integrated into the communication skills division.

Arithmetic Skills

The scope of the Arithmetic Skills division includes much more attention to "useful" concepts and skills than is usually found in commercial programs. Measurement, Time, and Money, for example, are usually only briefly covered in arithmetic books. Numbers and grouping, on the other hand, are covered adequately in commercial programs.

Special education students have evidenced particular difficulty with those sequences, other than numbers, shown on the chart; thus, training sequences in these areas have been developed for this curriculum.

The commercial program Elementary School Mathmatics (Addison-Wesley) will be used to provide training with number and grouping.

Although the sequences utilize the stimulus-response method heavily, opportunity to use acquired skills in problem solving is built into each sequence at appropriate points.

Multi-level and multi-sensory approaches are characteristic of this curriculum division and reading skill is not required for achievement. The learner moves at a pace appropriate to him.

The gray areas on the chart indicate the extent of the sequences. Location and Direction, for example, extend for only two years on level one.

Science Concepts

The scope chart for the Science division shows four major groupings, all of which are separate sequences except Health and Safety. This latter grouping is integrated into all of the other three, especially into Living Things.

Although all of the Science division is sequential and continuous progress, training and education have an almost equal part in developing the learner's science competencies. A branching technique for personal discovery and some group activities is built into the program at appropriate points.

The concepts and skills sequenced for science are approximately the same as for normal classes. The major difference here is in emphasis and instructional materials. This program emphasizes the use of science in daily life and teaches via audio, visual, and concrete materials.

Occupational Orientation

The scope chart shows two modes of learning...practical arts and audio-visual presentations. Practical Arts, i.e. building projects which provide multi-sensory support for the learnings via audio-visual presentations, is a means of occupational expression and motivation.

Audio-visual presentations are not sequential although presentations will be appropriate to the mental age of the learner and may be received individually or in small groups.

The categories shown on the chart are relatively developmental, with the more common and local categories stated for the primary years.

Occupational Orientation is included in this curriculum, although it is a departure from the regular curriculum, because the primary cause of E.M.R. failure as an adult has been shown to be the lack of good work attitudes and habits. Because attitudes and habits are developed slowly by the E.M.R., he needs an early start in acquiring

knowledge of his options in the world of work and developing a respect for the dignity of work. In order to receive aid from the Vocational Rehabilitation Services, the E.M.R. must show he has the necessary ambition and attitudes to profit from vocational training and he must have enough knowledge of the options to make a wise decision as to which vocational training he prefers.

Physical Education

As indicated on the scope chart, physical education will be basically the same as that for normals. The major exception is in the first year.

It is believed by many educators and most physical education authorities that the development of gross motor, fine motor, and perceptual-motor skills is directly related to success in learning to read and write.

As a precautionary measure, the first year of the physical education program will be concerned with testing for disabilities in the areas mentioned and remediating those discovered weaknesses.

The primary test to be used will be the Purdue Perceptual-Motor Survey. Remediation will be prescribed as discussed in Motoric Aids to Perceptual Learning by Clara M. Chaney and Newell C. Kephart and/or Developing Learning Readiness by G. N. Getman et. all.

METHODOLOGY OF INSTRUCTION

It is not the intent of this section to tell the teacher how to teach. The assumption is made that the special education teacher has vastly more knowledge of and experience in teaching the educable mentally retarded than a curriculum guide could even partially describe.

The purpose here is to describe those techniques being utilized by this new curriculum to achieve the instructional goals of the project. By so doing, it is hoped that unity of purpose and continuity of learning can be maintained from year to year and from elementary through secondary programs.

Method of Leveling

This is a multi-level instructional program. The levels, (except for Citizenship Education and Occupational Orientation), are not content levels...they are pace levels. That is, all of the given objectives for a specified plateau* are to be achieved by all learners, but not all learners will achieve success in the same length of time or to the same degree of competence.

Level 1 learners, achieving at least a 70% degree of competence, will be able to complete all of the objectives for each plateau in each school year or sooner. A slower learner, working on plateau 1 objectives in his second school year, would be identified as being on level 2. A learner still working on plateau 1 objectives in his

*"Plateau" is used to specify a particular section of a continuum of objectives. Generally; each plateau consists of those objectives the fastest special education student is expected to achieve in one school year.

third school year would be identified as being on level 3.

Instructional materials for objectives would change for the slower learners to meet the interests of the physically and socially older student, but the objectives would remain essentially the same.

Citizenship Education and Occupational Orientation use a different levels approach than that described above. The chart shown below describes the levels for Citizenship Education. Occupational Orientation will follow the same pattern.

IMPLEMENTATION SCHEDULE OF THE CITIZENSHIP EDUCATION PROGRAM
(color codes indicate the level of instruction being used)

Plateaus → / Year of program development ↓	1	2	3	4	5	6
First Year	Blue Level	Blue	Blue	Blue	Blue	Blue
Second Year	Blue	Red Level	Red	Red	Red	Red
Third Year	Blue	Red	Green Level	Green	Green	Green
Fourth Year	Blue	Red	Green	Orange Level	Orange	Orange
Fifth Year	Blue	Red	Green	Orange	Purple Level	Purple
Sixth Year and Thereafter	Blue	Red	Green	Orange	Purple	Brown Level

The primary purposes of levels are to identify the learner and his particular strengths and weaknesses when he changes teachers, to provide a simple signal for help (the slower the learner is learning, the more likely it is that he needs greater individual attention from the teacher), and to provide a means of ready identification for instructional objectives and materials.

Instructional Placement

After the first year of this new program, placement will not be much of a problem. Only new students entering special education later than during their first year of school will need continuous progress placement evaluation after our first year. The reason why this will be so is that all of the curriculum is sequential. Once a learner is learning at his comfort pace, his learning becomes continuous and never ending. He "jumps" continuous progress instruction when a pre-test shows he already knows the skill or concept and continues on to the next objective. In Citizenship Education and Occupational Orientation, he stays with his year group.

The process of evaluation for continuous progress placement is relatively simple when only a few students need it. The following steps are required:

1. What is the chronological age of the learner? If 6, do not evaluate. If 7, evaluate with Plateau 1 pre-tests only. If 8, evaluate with Plateau 1 and 2 pre-tests only. If 9, evaluate with Plateau 1, 2, and 3 pre-tests only. And so on if older.
2. If 6, place on first objective of Plateau 1.
3. If 7 and fails 70% of Plateau 1 pre-tests, place on first missed objective of Plateau 1 and continue with missed objectives until Plateau 1 is completed, then begin with first objective of Plateau 2.

Follow the same procedure with other ages.

Placement after our first year in Citizenship Education and Occupational Orientation will be done according to the student's year

in school. If it is his first year, he would be with the Blue level group; if it is his second year, he would be with the Red level group, and so on.

Learning Plans

Two major plans of learning are used in this curriculum. One is training and the other is education.

Training is two-fold...called systematic and opportunistic by Don Parker in Schooling for Individual Excellence.

Systematic training is the learning of basic skills which have been structured as a continuous progress track and utilizes a stimulus-response-reinforcement-redirection learning process.

Opportunistic training is the learning of a skill when there is a need to learn it, as when confronted with a problem that requires a particular skill for solution and the learner is highly motivated to solve the problem, so he learns the skill.

This curriculum provides the learner with opportunity for both types of training.

Education is three-fold...factual, methodological, and conceptual.

Factual education involves the learner in gathering data by using the skills he has acquired in the training modes.

Methodological education involves the learner in generating knowledge to meet his own or society's needs by using the methods of prediction and decision-making.

Conceptual education involves the learner in the process of relating two or more facts, figure to ground, detail to main idea, cause and effect, likenesses and differences, and/or a time order of events in

such a way that generalizations are formed by which the learner can make quicker decisions.

The learning process needed for education involves the intellectual skills and is utilized extensively in Citizenship Education and Occupational Orientation.

Learning Process

TRAINING

The diagram shown on page 18 presents the learning process used for Communication Skills, Arithmetic Skills, Science Concepts, and remediation in Physical Education.

When the learner is placed on a plateau, he begins this learning process...a systematic training process.

If the result of the learner's pre-test of an objective is satisfactory (S), he goes on to the next pre-test.

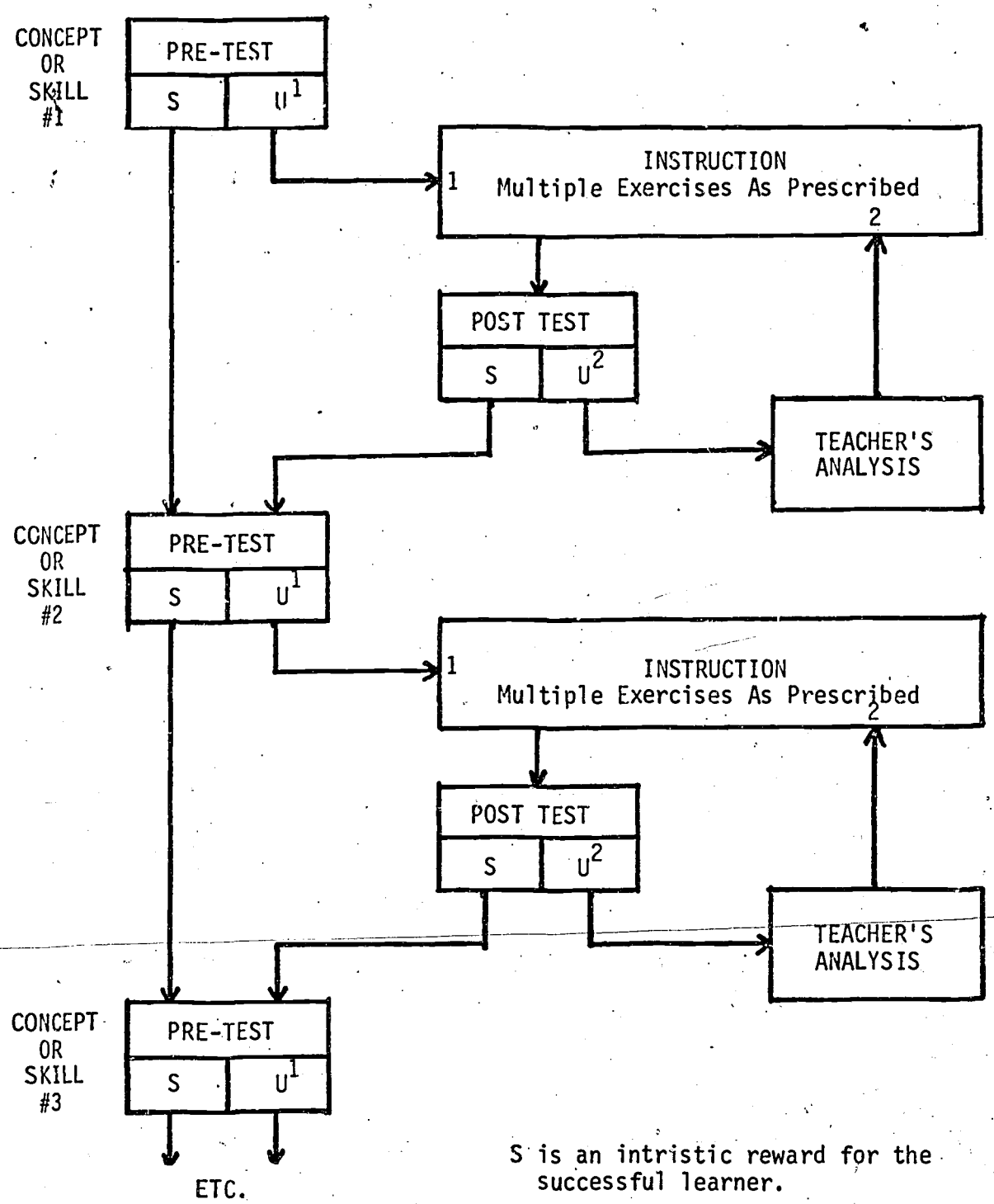
If the result is not satisfactory (U^1), he begins a series of prescribed stimulus-response exercises which are designed to teach him the concept or skill. The number of these exercises is limited to the "rule of three" the first time, i.e. he can successfully perform the requirement three times on each of three consecutive trials.

When the instruction is completed, the learner takes a post-test. If the result is satisfactory, he goes on to the next pre-test.

If the result is not satisfactory (U^2), the teacher must determine why, prescribe new or more instructional process, and take whatever steps are necessary to prevent a feeling of incapability from developing.

Level 1 instructional materials are generally representational, i.e. pictures, drawings. Some learners may require more concrete materials (tactile) in order to learn the concept or skill. In such cases, the

CONTINUOUS PROGRESS LEARNING



S is an intristic reward for the successful learner.

U is failure to the learner and must be offset immediately by teacher intervention and new instruction that will lead to success for the learner.

teacher should prescribe these. Generally; the lower the pace level, the more concrete, specific, and relevant the instruction should be.

Not shown on the diagram is the method of branching used often in science for opportunistic training.

EDUCATION

The commercial program for citizenship education provides an extensive and detailed guide to the methodology. Each level of the program utilizes a learning process which leads students from the factual to the methodological to the conceptual. The teachers will maintain unity of method by following the instructions in the guide.

Integrated instruction such as teaching Personal and Social Competencies should utilize both training and education processes leading to the conceptualization of values, i.e. Why should we brush our teeth? What might happen if we didn't? Examples. Motivation. Teach me how. It is good!

Occupational Orientation utilizes the process of acquiring factual knowledge via films, filmstrips, and pictorial communication; then building a project, either individually or by groups, utilizing problem solving methodology such as what should it be, how big should it be, what kind of materials are needed, how to do it, etc.

Both intellectual skills and affectives are heavily emphasized in these two programs.

Training Performance Objectives

The training performance objectives given in this curriculum guide are written to the teacher for achievement by the learner.

Inherent in each objective is a request to the teacher to insure that the learner can do whatever the objective requires, to at least a 70% degree of proficiency (i.e. has learned the skill or concept well enough for further practice or use in education instruction).

Each objective should be considered as the terminal performance expected as a result of (1) a prescribed series of systematic training steps or (2) opportunistic training the learner engaged in on his own initiative prior to a pre-test for the given objective.

Most objectives, particularly those in the arithmetic sequences, use several cognitive terms to describe desired terminal results. To insure unity of understanding, explanations of the most frequently used terms are given below.

Percept--Knowledge the learner can see, hear, feel, smell, or taste; usually a single concrete fact or process. Examples: an apple in a bowl, a ball in a box, a girl in a car. Each example is one of many percepts comprising the concept "in".

Concept--An abstract idea; usually a category for mental storage of related perceptions. Examples: in, fruit, food, human life necessities. The concept "in" has multiple percepts which relate to it, but alone it has no meaning; thus, percepts are required to form this concept. The concept "fruit" is a category which has no meaning unless percepts such as apple, orange, banana etc. are known. Concepts build into larger categories such as "food" (fruit, bread, meat, etc.) and "human life necessities" (food, shelter, clothing, etc.). The more complex the learner's conceptual framework the quicker the learner can comprehend given information.

Generalization--In the noun form, it is a general concept or principle, arrived at as a result of multiple concept relationships or repeated tests of specific skills, which can be applied to comprehend new knowledge or solve new problems. Examples: (1) a learner, by multiple percept-to-concept exposures, has derived the general concept that "fruit is food" (not universally true, but generally true) and is able to apply the generalization in the planning and purchase of food for family meals; or (2) a learner, by multiple specific skill experiences, has derived the general principle that a hacksaw blade will cut through metals (not universally true, but generally true) and is able to apply the generalization to any problem where metal cutting is the solution.

Retention--Ability to remember knowledge exactly as given during instruction. To show retention of a given percept, for example, the learner must be able to recognize the percept when he perceives it again and be able to prove he remembers it by selection from among other percepts not previously given.

Comprehension--An intellectual skill which requires the learner to translate retained knowledge into a different form and requires him to interpret related knowledge on the basis of the characteristics of the retained knowledge so that he fully grasps the meaning of the given knowledge.

For example: a learner retains the pictorial percepts, "an apple in a bowl", "a ball in a box", and "a marble in a circle". If he can translate each of these pictorial percepts by physically putting an apple in a bowl, a ball in a box, and a marble in a circle and if he can interpret and translate a request to put "a spoon in the cup" (new, but related knowledge), "water in a glass", or "sand in a pail", he has shown comprehension of the concept "in".

Draw Conclusions--Determine the means by which interpreted concepts will be translated. For example: the learner is requested to "put water in a glass". His conclusion might be to translate by using water from a faucet, if one is available, or he might decide to pour water from a bucket.

Competencies--The habitual behaviors a learner develops to a degree sufficient for the intended purpose. For example; one of the social competencies we want learners to develop is the habitual action of showing consideration for others in a group so that they can better hold a job. Because the steps in developing this capability cannot be ordered exactly and because attitude development is also required, we call the desired behavior a competency rather than a skill.

The prescribed instructional steps, their materials and devices, are not given in the stated objective. The variety of possibilities for multi-sensory and multi-media instructions are so extensive that a statement of specifics within the objective would not be practical or desirable. Thus; the objective is stated so that the media specialist and/or the teacher will be free to prescribe the type and form of instruction that will insure successful achievement of the objective by the learner. (Instructional steps, materials and devices are suggested for each objective in the Teachers' Instructional Guide booklets).

Education Performance Objectives

There are two categories of educational performance objectives used in this curriculum, intellectual skills and affectives.

The intellectual skills and affectives for Citizenship Education are provided by the publisher and fully explained in the teacher's manual.

The objectives for Occupational Orientation are provided in the teacher's instructional guide along with a full explanation of their intent and terminology.

The intellectual skills objectives involve the cognitive hierarchy and are derived from The Taxonomy of Educational Objectives: Cognitive Domain by Benjamin S. Bloom et all.

The affective objectives involve the hierarchy of attitude and value formation and are derived from The Taxonomy of Educational Objectives: Affective Domain by David R. Krathwohl et all.

Evaluation

The primary purpose of evaluation is to discover student strengths and weaknesses and report student progress to parents.

With the use of sequential performance objectives, evaluation of student progress becomes more accurate and realistic. The teacher will now know not only what the learner does not know, but also what he does know, and how well he knows it.

Eventually; a complete record of the training skills and concepts the learner has acquired will be available to another school so that the learner who moves from our system will not need to repeat what he has already learned. (See, also, the description of record maintenance with each section of performance objectives).

Exact weaknesses can be reported to parents immediately for homework that is profitable by the use of the continual evaluation format inherent in continuous progress methodology.

Evaluation in the training programs will generally be limited to measurement of perception and conceptualization to the level of comprehension; but an evaluative objective, the Generalization Development Instrument (G.D.I.), has been placed at the end of each plateau, of each sequence. The G.D.I. is used to evaluate and record student progress toward generalizing concepts and/or skills to the extent that they can be applied in meaningful education activities. For example, has the student generalized the concepts in and out to the extent that he can automatically respond with the correct behavior when these concepts are used in daily directions or activities? The G.D.I. is not a formal test. It is directed to the teacher and is completed by observational techniques.

It is essential that the teacher utilize the learner's mental age as guidance for both instruction and evaluation. Though not absolute, the M. A. is still the best expectancy guage of the mentally retarded learner's cognitive capabilities.

Evaluation should also consider progress in relation to other possible handicaps; such as visual and auditory defects, perceptual-motor underdevelopment, and impairment in social adjustment due to environmental conditions.

Instructional Materials and Equipment

Most of the instructional materials are either representational or concrete types.

Representational materials are photographs, magazine cut outs, printed pictures and drawings in books, teacher-made drawings, transparencies, color slides, filmstrips, films, etc.

Concrete materials and devices are any three-dimensional objects or mechanisms, usually of a size and type which the learner can easily see and manipulate.

All directions and explanations are verbal and may be presented either directly by the teacher or indirectly via recorded tapes.

The major equipment items needed for each classroom are tape recorders; earphones; slide projectors; filmstrip projectors; 8mm movie projectors; manipulative items such as bean bags, peg boards, blocks, etc.; and a balance beam, gym mat, rocking board, and jump ropes.

The teacher is cautioned to *first* read and analyze the performance objective, *then* determine the instructional materials and equipment needed to teach the objective.

There are many new and effective "special" instructional packages available commercially, but none can be considered a total instructional program in any curriculum area.

"Hand made" materials may often be the only means available with which to teach an objective. Teacher creativity and art work has not "gone out of style".

MENTAL AGES $\frac{IQ \times CA}{100} = MA$

		ALABAMA E.M.R. CLASSES									
CA ↓	50	55	60	65	70	75	80	85	90	95	100
6.0	3.0	3.3	3.6	3.9	4.2	4.5	4.8	5.1	5.4	5.7	6.0
6.5	3.3	3.6	4.2	4.6	4.9	5.2	5.5	5.5	5.9	6.2	6.5
7.0	3.5	3.9	4.2	4.6	4.9	5.3	5.6	6.0	6.3	6.7	7.0
7.5	3.8	4.1	4.5	4.9	5.3	5.6	6.0	6.4	6.8	7.1	7.5
8.0	4.0	4.4	4.8	5.2	5.6	6.0	6.4	6.8	7.2	7.6	8.0
8.5	4.3	4.7	5.1	5.5	6.0	6.4	6.8	7.2	7.7	8.1	8.5
9.0	4.5	5.0	5.4	5.9	6.3	6.8	7.2	7.7	8.1	8.6	9.0
9.5	4.8	5.2	5.7	6.2	6.7	7.1	7.6	8.1	8.6	9.0	9.5
10.0	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0
10.5	5.3	5.8	6.3	6.8	7.4	7.9	8.4	8.9	9.5	10.0	10.5
11.0	5.5	6.1	6.6	7.2	7.7	8.3	8.8	9.4	9.9	10.5	11.0
11.5	5.8	6.3	6.9	7.5	8.1	8.6	9.2	9.8	10.4	10.9	11.5
12.0	6.0	6.6	7.2	7.8	8.4	9.0	9.6	10.2	10.8	11.4	12.0
12.5	6.3	6.9	7.5	8.1	8.8	9.4	10.0	10.6	11.3	11.9	12.5
13.0	6.5	7.2	7.8	8.5	9.1	9.8	10.4	11.1	11.7	12.4	13.0
13.5	6.8	7.4	8.1	8.8	9.5	10.1	10.8	11.5	12.2	12.8	13.5
14.0	7.0	7.7	8.4	9.1	9.8	10.5	11.2	11.9	12.6	13.3	14.0
14.5	7.3	8.0	8.7	9.4	10.2	10.9	11.6	12.3	13.1	13.8	14.5
15.0	7.5	8.3	9.0	9.8	10.5	11.3	12.0	12.8	13.5	14.3	15.0
15.5	7.8	8.5	9.3	10.1	10.9	11.6	12.4	13.2	14.0	14.7	15.5
16.0	8.0	8.8	9.6	10.4	11.2	12.0	12.8	13.6	14.4	15.2	16.0
16.5	8.3	9.1	9.9	10.7	11.6	12.4	13.2	14.0	14.9	15.7	16.5
17.0	8.5	9.4	10.1	11.1	11.9	12.8	13.6	14.5	15.3	16.1	17.0
17.5	8.8	9.6	10.4	11.4	12.3	13.1	14.0	14.9	15.8	16.6	17.5
18.0	9.0	9.9	10.8	11.7	12.6	13.5	14.4	15.3	16.2	17.1	18.0

PRIMARY

INTERMEDIATE

SECONDARY

SEQUENTIAL TRAINING OBJECTIVES

COMMUNICATION SKILLS
ARITHMETIC SKILLS
SCIENCE CONCEPTS
PHYSICAL EDUCATION I

COMMUNICATION SKILLS

ORAL
PICTORIAL
WRITTEN

ALL THREE SEQUENCES ARE TAUGHT CONCURRENTLY.

PUPIL PROGRESS RECORD SHEET

COMMUNICATION SKILLS

NAME _____

PLATEAU 1. 1 2 3 4 5 6
(see below)

ORAL COMMUNICATION SKILLS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	GDI
PICTORIAL COMMUNICATION SKILLS	1	2	3	4	5	6	7	GDI												
WRITTEN COMMUNICATION SKILLS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	21	22	23	24	25	26	27	28	29	30	GDI									

Mark X for successful pre-test.
Mark / for unsuccessful pre-test.
Mark X for successful post test.

Circle the appropriate pace level above.
Levels 4, 5, 6 utilize concrete means.
Levels 1, 2, 3 utilize technological means.
(except for oral sequence objectives)

PUPIL PROGRESS RECORD SHEET

COMMUNICATION SKILLS

NAME _____

PLATEAU 2. 1 2 3 4 5 6
(see below)

ORAL COMMUNICATION SKILLS	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	GDI		
PICTORIAL COMMUNICATION SKILLS	8	9	10	11	12	13	14	15	GDI											
WRITTEN COMMUNICATION SKILLS	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
	51	52	53	54	55	56	57	58	59	60	61	GDI								

Mark X for successful pre-test.
Mark / for unsuccessful pre-test.
Mark X for successful post test.

Circle the appropriate pace level above.
Levels 4, 5, 6 utilize concrete means.
Levels 1, 2, 3 utilize technological means.
(except for oral communication)

PUPIL PROGRESS RECORD SHEET

COMMUNICATION SKILLS

NAME _____ PLATEAU 3. 1 2 3 4 5 6 (see below)

ORAL COMMUNICATION SKILLS	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	GDI	
PICTORIAL COMMUNICATION SKILLS	16	17	18	19	20	21	22	23	24	25	26	GDI								
WRITTEN COMMUNICATION SKILLS	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81
	82	83	84	85	86	87	88	89	90	91	92	93	GDI							

Mark X for successful pre-test.
Mark / for unsuccessful pre-test.
Mark X for successful post test.

Circle the appropriate pace level above.
Levels 4, 5, 6 utilize concrete means.
Levels 1, 2, 3 utilize technological means.
(except for oral communications)

PUPIL PROGRESS RECORD SHEET

COMMUNICATION SKILLS

NAME _____

PLATEAU 4. 1 2 3 4 5 6
(see below)

ORAL COMMUNICATION SKILLS	55	56	57	58	59	60	61	62	63	64	65	GDI								
PICTORIAL COMMUNICATION SKILLS	27	28	29	30	31	32	33	34	35	36	37	38	39	40	GDI					
Start Sullivan Reading Program here. WRITTEN COMMUNICATION SKILLS																				

Mark X for successful pre-test.
Mark / for unsuccessful pre-test.
Mark X for successful post test.

Circle the appropriate pace level above.
Levels 4, 5, 6 utilize concrete means.
Levels 1, 2, 3 utilize technological means.
(except for oral communication skills)

PUPIL PROGRESS RECORD SHEET

COMMUNICATION SKILLS

NAME_____

PLATEAU 5. 1 2 3 4 5 6
(see below)

ORAL COMMUNICATION SKILLS	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	GDI			
PICTORIAL COMMUNICATION SKILLS	41	42	43	44	45	46	47	48	49	50	51	52	GDI							
Continue Sullivan Reading Program.																				
WRITTEN COMMUNICATION SKILLS																				

Mark X for successful pre-test.
Mark / for unsuccessful pre-test.
Mark X for successful post test.

Circle the appropriate pace level above.
Levels 4, 5, 6 utilize concrete means.
Levels 1, 2, 3 utilize technological means.
(except for oral communications)

PUPIL PROGRESS RECORD SHEET

COMMUNICATION SKILLS

NAME _____

PLATEAU 6. 1 2 3 4 5 6
(see below)

ORAL COMMUNICATION SKILLS	82	83	84	85	86	87	88	89	90	91	92	93	94	GDI					
PICTORIAL COMMUNICATION SKILLS	53	54	55	56	57	58	59	60	61	62	GDI								
Continue Sullivan Reading Program																			
WRITTEN COMMUNICATION SKILLS																			

Mark X for successful pre-test.
Mark / for unsuccessful pre-test.
Mark X for successful post test.

Circle the appropriate pace level above.
Levels 4, 5, 6 utilize concrete means.
Levels 1, 2, 3 utilize technological means.
(except for oral communication)

ORAL COMMUNICATION SKILLS

---Speaking Capabilities
---Listening Capabilities
---Thinking Capabilities

INSTRUCTIONAL MEANS AND MODE

Instructional Means

The oral communication skills sequence uses teacher-prescribed verbal, representational, and/or concrete instructional means.

Descriptions, explanations, directions, and other stimuli are presented orally by the teacher to the learner. The learner responds orally to a given stimulus and is evaluated by observation.

Instructional Mode

Two types of instructional modes are utilized. The Stimulus/Response mode is used with either "one-to-one" instruction or small group instruction. Learners working on the same objectives on the same approximate pace level can be grouped for stimulus presentation then allowed to respond individually.

The Personal Discovery mode is utilized for practice of skills and in the development of generalizations. This mode is used with most instruction guided by "suggested procedures" since learning through experimentation is a major need in generalizing skill objectives.

Of essential importance in the oral communication sequence are such objectives as numbers 19 and 35 which deal specifically with articulation.

Uncorrected articulation problems (or other speech handicaps) will make achievement of many higher oral communications objectives more difficult for the learner.

The teacher must use her own judgement about how long to stay on an objective if the learner is having trouble with it. Usually, it is

best to move on to another objective in the sequence and come back later or occasionally to the troublesome one.

Objectives in the oral communication skills sequence should be taught concurrently with other objectives on the same plateau in pictorial and written communication. In no case should a higher plateau be started for one sequence before the objectives of the other two sequences on the lower plateau are successfully completed.

Instructional Guides

Suggested procedures are given in the Teachers' Instructional Guide for each objective, but the teacher may utilize any appropriate resources or means to aid the learner in successful achievement.

Three copies of instructional guide sheets are included here as typical examples.

Pupil Progress Records

Record of achievement is maintained on the colored record sheets (see front of this section). All three sequences of Communication Skills are on a single form. To maintain ease of identification, each plateau of all sequences is printed on the same color paper. Plateau 1 is always blue, plateau 2 is pink, plateau 3 is green, plateau 4 is golden rod, plateau 5 is lavender, and plateau 6 is tan or buff.

One record sheet for each plateau is set up for each student. Progress is maintained continuously and it should be possible to analyze a student's progress in all curriculum areas at any time during the school year.

The record sheets are stored in a student progress folder and will go to the new teacher whenever a student is transferred from a current class.

It is vital that records of achievement be known continuously in a sequential program. Accuracy is also extremely important since future instruction for a learner is prescribed on the basis of his current progress. Each sequential teacher is dependent upon the information forwarded by a previous teacher.

OBJECTIVE

1. Be able to tell first name when requested. (Birth name, not "nick" name.)

INSTRUCTIONAL MEANS FOR THIS OBJECTIVE IS TEACHER-PROVIDED

This is a verbal S/R objective which requires (1) the teacher to verbally describe or explain, with concrete examples, the desired performance; (2) the learner to practice by repetition the desired performance; and (3) the learner to respond with the correct performance when the teacher has provided the specified stimulus.

SUGGESTED PROCEDURE

1. Verbally describe or explain, with concrete examples, the desired performance.

   Example: (Assume the name is James) "Your first name is James." It is your birth name, the one for school records. Jimmy is your nick name. It is for friends, schoolmates, and family. There is nothing wrong with Jimmy as a name. It is a good name for friends to call you. James is your birth name. It is the one for school records. Say your birth name for me. Let me hear you say it again."

2. Ask the learner to practice the desired performance a number of times.

   Example: "Practice saying your birth name for me. Say James is my birth name, my school record name. Say it many times for me."

3. Check successful achievement by providing a stimulus to which the learner can respond correctly.

   Example: "Tell me your birth name, Jimmy."

NOTE: Achievement of this objective may require many repetitions of the instructional means in a variety of situations over lengthy periods of time. For this reason, the teacher may find it appropriate to work with the learner on this and several other unachieved objectives concurrently when classroom conditions offer such opportunity.

SUGGESTED PROCEDURES ARE NOT INTENDED TO RESTRICT THE TEACHER FROM USING HER OWN TECHNIQUES TO AID THE LEARNER TO ACHIEVE THE OBJECTIVE.

OBJECTIVE

14. Be able to listen attentively to stories told about animals when personification and repetition is used in the telling.

INSTRUCTIONAL MEANS FOR THIS OBJECTIVE IS TEACHER-PROVIDED

This is a verbal S/R objective which requires (1) the teacher to verbally describe or explain, with concrete examples, the desired performance; (2) the learner to practice by repetition the desired performance; and (3) the learner to respond with the correct performance when the teacher has provided the specified stimulus.

SUGGESTED PROCEDURE

1. Verbally describe or explain, with concrete examples, the desired performance.

   Note: This is specific and academic rather than general as in 11 & 12.

   Example:

   "I am going to tell you a story about an animal...a cat. Listen carefully because I will ask you some questions about the story when I have finished."

   Tell the story with a few specific points to be remembered. Use repetition and illustrations to reinforce the points. Then, ask the questions and give the answers to show how they are to do it.

2. Ask the learner to practice the desired performance a number of times.

   Example: You, or a learner buddy who has achieved this objective, tell short specific stories about several different animals. At the end of each story, ask questions to remind the learner of what he should listen for and remember.

3. Check successful achievement by providing a stimulus to which the learner can respond correctly.

   Example: Tell a story not told before about an animal. Ask questions about the points you reinforced. If the learner was listening attentively to the extent required by the objective, he should give the correct answers.

   SHORT TALES USED IN OTHER SEQUENCES, SUCH AS SCIENCE, MAY BE USED FOR THIS OBJECTIVE, but be sure the story reinforces the points. Do not use recorded stories for this objective. See #15.

NOTE: Achievement of this objective may require many repetitions of the instructional means in a variety of situations over lengthy periods of time. For this reason, the teacher may find it appropriate to work with the learner on this and several other unachieved objectives concurrently when classroom conditions offer such opportunity.

SUGGESTED PROCEDURES ARE NOT INTENDED TO RESTRICT THE TEACHER FROM USING HER OWN TECHNIQUES TO AID THE LEARNER TO ACHIEVE THE OBJECTIVE.

OBJECTIVE

19. Be able to eliminate some articulation difficulties.

INSTRUCTIONAL MEANS FOR THIS OBJECTIVE IS TEACHER-PROVIDED

This is a verbal S/R objective which requires (1) the teacher to verbally describe or explain, with concrete examples, the desired performance; (2) the learner to practice by repetition the desired performance; and (3) the learner to respond with the correct performance when the teacher has provided the specified stimulus.

SUGGESTED PROCEDURE

1. Verbally describe or explain, with concrete examples, the desired performance.

   Example: Use a commercial test for articulation disabilities, arrange for a speech therapist to conduct the test, or use the test provided by the program.

   When the articulation disabilities, if any, have been determined, proceed with instruction as described in the guide with the test or by a speech therapist.

2. Ask the learner to practice the desired performance a number of times.

   Example:

   See procedures noted above.

3. Check successful achievement by providing a stimulus to which the learner can respond correctly.

   Example:

   See procedures noted above.

   Achievement of this objective does not require all articulation difficulties to be overcome, only some.

   Plateau 2 continues this objective.

NOTE: Achievement of this objective may require many repetitions of the instructional means in a variety of situations over lengthy periods of time. For this reason, the teacher may find it appropriate to work with the learner on this and several other unachieved objectives concurrently when classroom conditions offer such opportunity.

SUGGESTED PROCEDURES ARE NOT INTENDED TO RESTRICT THE TEACHER FROM USING HER OWN TECHNIQUES TO AID THE LEARNER TO ACHIEVE THE OBJECTIVE.

ORAL COMMUNICATION

SKILLS SEQUENCE
OBJECTIVES

PLATEAU 1.1

1. Be able to tell first name when requested. (Birth name, not "nick" name)
2. Be able to tell last name when requested.
3. Be able to tell age when requested.
4. Be able to follow simple oral directions given one at a time.
5. Be able to orally identify single objects in the classroom.
6. Be able to identify orally single objects seen from a window.
7. Be able to orally identify single objects seen in a box or on a shelf.
8. Be able to ask questions about new, unknown things.
9. Be able to associate a real object with its oral name.
10. Be able to associate a real object with a picture of the object, with oral names given.
11. Be able to listen attentively to exciting, dramatically presented or pictorially illustrated stories.
12. Be able to listen attentively to stories told and retold by an adult.
13. Be able to tell about incidents from own experiences in simple terms (short phrases and gestures acceptable).
14. Be able to listen attentively to stories told about animals when personification and repetition is used in the telling.
15. Be able to listen attentively to stories told by records or tapes.
16. Be able to listen attentively to jingles, rhymes, and short poems.
17. Be able to hold a telephone receiver correctly.
18. Be able to talk to and listen to a telephone receiver.
19. Be able to eliminate some articulation difficulties.

G.D.I. #1 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

PLATEAU 2.1

20. Be able to tell full name when requested.

21. Be able to tell number of brothers you have when requested.

22. Be able to tell number of sisters you have when requested.

23. Be able to follow two simple oral directions given at the same time.

24. Be able to follow "right hand only" oral directions.

25. Be able to follow "to the right" oral directions.

26. Be able to comprehend the concept of "in the morning we will...." and "this morning we will...."

27. Be able to associate pictures with orally given simple descriptive words.

28. Be able to contribute to a group discussion without wandering from the topic.

29. Be able to listen to a short story and retell it approximately in own words.

30. Be able to relate in narrative and descriptive form a personal experience.

31. Be able to orally report an incident and limit the details to specifics.

32. Be able to express a simple opinion when specifically questioned.

33. Be able to cooperate in composing a group originated short story by contributing one or two sentences or phrases on a specific topic.

34. Be able to converse courteously on a telephone.

35. Be able to eliminate ordinary articulation difficulties such as with the beginning and ending of words.

36. Be able to orally reproduce short songs from memory.

G.D.I. #2 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

PLATEAU 3.1

37. Be able to tell month of birth when requested.

38. Be able to tell day of birth when requested.

39. Be able to tell names of brothers and sisters when requested.

40. Be able to execute in sequence two simple oral directions.

41. Be able to follow "left hand only" oral directions.

42. Be able to follow "to the left" oral directions.

43. Be able to comprehend the concept of "in the afternoon we will...." and "this afternoon we will...."

44. Be able to follow "to the left, then to the right" oral directions.

45. Be able to follow "use your right hand to...and your left hand to..." oral directions.

46. Be able to state simple oral requests to someone.

47. Be able to tell stories or give information to another in a "buddy" situation.

48. Be able to listen attentively to another in a "buddy" situation.

49. Be able to speak in audible voice in audience situations.

50. Be able to cooperate in composing a group originated short story by contributing three or four sentences on a specific topic.

51. Be able to relate an incident from own experience in simple complete sentences.

52. Be able to orally reproduce rhymes from memory.

53. Be able to observe several spontaneous actions and relate them in a sequence.

54. Be able to relate short messages, taken over telephone, exactly as given.

G.D.I. #3 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

PLATEAU 4.1

55. Be able to tell year of birth when requested.

56. Be able to tell telephone number when requested.

57. Be able to remember and follow at least two oral directions which are to be executed at a specified later time period.

58. Be able to respond courteously to telephone requests.

59. Be able to speak with sentence structure which approximates that of the teacher.

60. Be able to alternately listen attentively to and speak directly to another person in a group situation.

61. Be able to contribute spontaneously to a group discussion.

62. Be able to make an oral report to a small group.

63. Be able to make an oral report to a larger group.

64. Be able to express pro and con opinions on a specified topic or issue.

65. Be able to orally reproduce one stanza poems from memory.

G.D.I. #4 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

66. Be able to tell number and street of home address when requested.

67. Be able to tell city and state of home address when requested.

68. Be able to tell place of birth when requested.

69. Be able to execute several simple oral directions which have been given simultaneously.

70. Be able to request information by specific questions over the telephone.

71. Be able to eliminate some slang, foreignisms, or colloqualisms from speech.

72. Be able to use a pleasing voice when a specific need to do so arises.

73. Be able to orally give meanings of words in descriptive terms.

74. Be able to recognize the differences between proper and improper oral usage of words.

75. Be able to observe critically and orally describe details of visual presentation.

76. Be able to discuss experiences of the past in a group situation.

77. Be able to express own opinions with respect for opinions of others.

78. Be able to make an oral report on a current news topic.

79. Be able to participate in oral reading groups as a listener.

80. Be able to participate in oral reading groups as a reader (if can read).

81. Be able to orally reproduce two stanza poems from memory.

G.D.I. #5 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

82. Be able to tell father's name when requested.

83. Be able to tell mother's name when requested.

84. Be able to execute a sequence of daily oral directions, some of which extend beyond the immediate time period.

85. Be able to remember and carry out a short set of standard daily procedures given orally.

86. Be able to remember operational procedures given orally at beginning of a job assignment.

87. Be able to make appointments by telephone in a clearly articulated voice.

88. Be able to listen attentively to an oral factual presentation and remember the important facts which relate to a specific topic.

89. Be able to express more than one major idea gained from listening to a discussion.

90. Be able to contribute to a discussion without introducing new topics.

91. Be able to participate in a knowledgeable current affairs discussion at peer level of comprehension.

92. Be able to summarize the central thoughts of a discussion.

93. Be able to form a generalization by taking into account a number of orally given factors.

94. Be able to form a generalization from a number of orally given factors and state a possible happening for some time in the future.

G.D.I. #6 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

PICTORIAL COMMUNICATION SKILLS

---Getting Ideas From Pictures
---Organizing Ideas Pictorially
---Expressing Ideas With Pictures

INSTRUCTIONAL MEANS AND MODE

Instructional Means

The pictorial communication skills sequence uses teacher-prescribed verbal, representational, and/or concrete instructional means.

Descriptions, explanations, directions, and other stimuli are presented orally by the teacher to the learner. The learner responds orally to a given stimulus and is evaluated by observation.

Instructional Mode

Two types of instructional modes are utilized. The Stimulus/Response mode is used with either "one-to-one" instruction or small group instruction. Learners working on the same objectives on the same approximate pace level can be grouped for stimulus presentation then allowed to respond individually.

The Personal Discovery mode is utilized for practice of skills and in the development of generalizations. This mode is used with most instruction guided by "suggested procedures" since learning through experimentation is a major need in generalizing skill objectives.

This sequence offers much opportunity for creative expression and individualized art work.

The number of objectives for each plateau have been limited intentionally to provide time for multiple experimentation and practice at a learner's own pace.

The teacher must use her own judgement about how long to stay on an objective if the learner is having trouble with it. Usually, it is best to move on to another objective in the sequence and come back later or occasionally to the troublesome one.

Be sure the student is not perceptually handicapped before moving on to another objective if he is having trouble with figure-ground identifications. A perceptually handicapped child cannot usually identify objects against a variety background and such children need perceptual-motor training first, before academic work. (See the P.E. sequence for first year).

Objectives in the pictorial communication skills sequence should be taught concurrently with other objectives on the same plateau in oral and written communication. In no case should a higher plateau be started for one sequence before the objectives of the other two sequences on the lower plateau are completed successfully.

Instructional Guides

Suggested procedures are given in the Teachers' Instructional Guide for each objective, but the teacher may utilize any appropriate resources or means to aid the learner in successful achievement.

Three copies of instructional guide sheets are included here as typical examples.

Pupil Progress Records

Record of achievement is maintained on the colored record sheets (see front of this section). All three sequences of Communication Skills are on a single form. To maintain ease of identification, each plateau of all sequences is printed on the same color paper. Plateau 1 is always blue, plateau 2 is pink, plateau 3 is green, plateau 4 is golden rod, plateau 5 is lavender, and plateau 6 is tan or buff.

One record sheet for each plateau is set up for each student. Progress is maintained continuously and it should be possible to

analyze a student's progress in all curriculum areas at any time during the school year.

The record sheets are stored in a student progress folder and will go to the new teacher whenever a student is transferred from a current class.

It is vital that records of achievement be known continuously in a sequential program. Accuracy is also extremely important since future instruction for a learner is prescribed on the basis of his current progress. Each sequential teacher is dependent upon the information forwarded by a previous teacher.

OBJECTIVE

1. Be able to name the object in a picture of a single object with no background detail.

INSTRUCTIONAL MEANS FOR THIS OBJECTIVE IS TEACHER-PROVIDED

This is a verbal S/R objective which requires (1) the teacher to verbally describe or explain, with concrete examples, the desired performance; (2) the learner to practice by repetition the desired performance; and (3) the learner to respond with the correct performance when the teacher has provided the specified stimulus.

SUGGESTED PROCEDURE

1. Verbally describe or explain, with concrete examples, the desired performance.

   Example: Show a picture or a line drawing of a single common object or animal. The background should be either white or a solid color. Only the object or animal should be recognizable.

   Ask: "What do you see?"

   Do several such presentations.

2. Ask the learner to practice the desired performance a number of times.

   Example: Use a student buddy to show a stack of at least 10 similar pictures or drawings. The learner will respond to each such stimulus orally.

3. Check successful achievement by providing a stimulus to which the learner can respond correctly.

   Example: Show a series of pictures or drawings the learner has not previously seen.

   Ask: "What do you see?"

   Be sure the learner is shown objects or animals he can name. This is a test of perception not vocabulary.

NOTE: Achievement of this objective may require many repetitions of the instructional means in a variety of situations over lengthy periods of time. For this reason, the teacher may find it appropriate to work with the learner on this and several other unachieved objectives concurrently when classroom conditions offer such opportunity.

SUGGESTED PROCEDURES ARE NOT INTENDED TO RESTRICT THE TEACHER FROM USING HER OWN TECHNIQUES TO AID THE LEARNER TO ACHIEVE THE OBJECTIVE.

OBJECTIVE

5. Be able to cut out pictures from a magazine and arrange by a pattern.

INSTRUCTIONAL MEANS FOR THIS OBJECTIVE IS TEACHER-PROVIDED.

This is a verbal S/R objective which requires (1) the teacher to verbally describe or explain, with concrete examples, the desired performance; (2) the learner to practice by repetition the desired performance; and (3) the learner to respond with the correct performance when the teacher has provided the specified stimulus.

SUGGESTED PROCEDURE

1. Verbally describe or explain, with concrete examples, the desired performance.

   Example: Show the learner a pattern of 3 or 4 pictures you have arranged on sheet of paper. (Such as a cut out of food, clothes, people, etc.) Cut from a magazine one picture like each type on the pattern. Paste each cut out on a sheet of paper like the pattern. (Teach use of scissors and paste if necessary).

2. Ask the learner to practice the desired performance a number of times.

   Example: Give the learner a magazine and a pattern. Ask him to make three sheets like you did. The learner can also practice as homework if needed.

3. Check successful achievement by providing a stimulus to which the learner can respond correctly.

   Example: Show a pattern the learner has not seen before.

   Ask him to make one like yours.

   (Be sure the magazine you give the learner has items like yours).

NOTE: Achievement of this objective may require many repetitions of the instructional means in a variety of situations over lengthy periods of time. For this reason, the teacher may find it appropriate to work with the learner on this and several other unachieved objectives concurrently when classroom conditions offer such opportunity.

SUGGESTED PROCEDURES ARE NOT INTENDED TO RESTRICT THE TEACHER FROM USING HER OWN TECHNIQUES TO AID THE LEARNER TO ACHIEVE THE OBJECTIVE.

OBJECTIVE

7. Be able to name the object or picture produced for objective 6.

INSTRUCTIONAL MEANS FOR THIS OBJECTIVE IS TEACHER-PROVIDED

This is a verbal S/R objective which requires (1) the teacher to verbally describe or explain, with concrete examples, the desired performance; (2) the learner to practice by repetition the desired performance; and (3) the learner to respond with the correct performance when the teacher has provided the specified stimulus.

SUGGESTED PROCEDURE

1. Verbally describe or explain, with concrete examples, the desired performance.

   Example: Point to the work you produced for objective 6 instruction.

   Say: "This is _____"

   Then print a name tag for it and place it under the work.

2. Ask the learner to practice the desired performance a number of times.

   Example: (Not necessary)

3. Check successful achievement by providing a stimulus to which the learner can respond correctly.

   Example: Point to the learner's work for objective 6.

   Say: "What is it?"

   When the learner names his work, help him make a name tag for it.

   Place his work on display in the room.

NOTE: Achievement of this objective may require many repetitions of the instructional means in a variety of situations over lengthy periods of time. For this reason, the teacher may find it appropriate to work with the learner on this and several other unachieved objectives concurrently when classroom conditions offer such opportunity.

SUGGESTED PROCEDURES ARE NOT INTENDED TO RESTRICT THE TEACHER FROM USING HER OWN TECHNIQUES TO AID THE LEARNER TO ACHIEVE THE OBJECTIVE.

PICTORIAL COMMUNICATION

SKILLS SEQUENCE
OBJECTIVES

PLATEAU 1.1

1. Be able to name the object in a picture of a single object with no background detail.

2. Be able to name the objects in a picture with 2 or 3, but not more than 4, objects with no background detail.

3. Be able to find a picture of a named object in a book.

4. Be able to arrange several given pictures by a pattern.

5. Be able to cut out pictures from a magazine and arrange by a pattern.

6. Be able to make an object or express an idea of own choice by use of scribbling, outlining, clay-modelling, finger-painting, paper cutting, or any other means.

7. Be able to name the object or picture produced for objective 6.

G.D.I. #1 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

PLATEAU 2.1

8. Be able to name the objects in pictures with many objects on a simple background.

9. Be able to describe objects in a given picture as to size, color, and use.

10. Be able to give names to children and animals in pictures with no more than 2 or 3 children or animals on a simple background.

11. Be able to sort a given pile of pictures into several categories (children, animals, toys, etc.)

12. Be able to cut out pictures in magazines representing several classes and arrange them according to class.

13. Be able to name parts of own picture or favorite object.

14. Be able to describe action or idea connected with picture or object in unit 13.

15. Be able to name parts of body on a cardboard doll.

G.D.I. #2 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

PLATEAU 3.1

16. Be able to tell what is happening in an action picture, or what a person or animal is doing.

17. Be able to recognize simple relationships between persons, animals, and/or objects (such as "The dog is running after the ball.")

18. Be able to begin reading story strips in simple sequences by being able to identify the same objects in each of 2 or 3 connected pictures.

19. Be able to begin reading story strips in simple sequences by being able to describe different actions of the same objects in each of 2 or 3 connected pictures.

20. Be able to find pictures that illustrate a given action or idea.

21. Be able to arrange 2 or 3 pictures in sequences to show parts of a story in order.

22. Be able to draw a picture which shows a story action or ideas as told to you by the teacher.

23. Be able to use cut outs to make a picture which shows a story action or idea as told to you by the teacher.

24. Be able to contribute to a group story-telling project by creating a picture to tell your part of the story.

25. Be able to help your group tell its story by helping to put individual pictures in correct sequence.

26. Be able to "read" your group's story by describing each picture in turn.

G.D.I. #3 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attentioi in practical situations as often as opportunity arises until they can be marked positive.

PLATEAU 4.1

27. Be able to recognize and point out relationship between parts of a picture with average background detail.

28. Be able to explain what is happening in a picture.

29. Be able to predict what might happen next on the basis of action in a single picture of a sequence.

30. Be able to give a guess as to what might have happened before the action picture of a sequence.

31. Be able to assemble 3 or 4 pictures in sequence.

32. Be able to "read" story strips by being able to readily tell the relationship between 3 or 4 picture sequences.

33. Be able to "read" short filmstrips of familiar stories by being able to tell the single incidents in order.

34. Be able to "read" short movies of familiar stories by being able to tell the major ideas presented.

35. Be able to "read" short movies which give information or instruction about an activity by being able to tell the major facts or major steps presented.

36. Be able to collect and arrange pictures around a theme such as fun, work, clothing, or any topic of interest.

37. Be able to sort and classify pictures in sequence according to a theme. (Ex. Good Health - Part A - Pictures concerning sleep and rest; Part B - Pictures concerning cleanliness; Part C - Pictures concerning food.)

38. Be able to arrange pictures in action sequence. (Ex. Show daily activities from rising to retiring.)

39. Be able to make notes on information given by filmstrip or movie and arrange the points in order of importance or operation.

40. Be able to contribute in making a frieze for classroom or hall wall by being able to help determine the parts of the total, the order of the presentation, and each group member's job in construction.

G.D.I. #4 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

PLATEAU 5.1

41. Be able to "read" pictorial advertisements as seen in catalogues, magazines, and newspapers to get ideas for a list of basic needs such as clothing, household items, tools, homes, food, etc.

42. Be able to "read" pictorial advertisements, as seen in store windows or store counters to get ideas for a list of basic needs such as clothing, food, household items, tools, etc.

43. Be able to associate the real objects with pictorial concepts gained in steps 41 and 42 and note differences between real and pictorial.

44. Be able to "read" television commercials and get ideas for a basic list of needs such as food, clothing, health products, etc.

45. Be able to "read" television commercials and compare products such as different types of toothpaste, different brands of cereals, different brands of asprin, etc.

46. Be able to "read" television commercials and analyze which types of presentations catch your attention most easily.

47. Be able to "read" television commercials and analyze what is likely truth and what is likely propaganda.

48. Be able to form conclusions as to "good" and "less good" buys by testing different brands of a product advertised in newspapers, magazines, catalogs, or on T.V. as to quality and usefulness vs price.

49. Be able to reduce a list of products advertises in newspapers, magazines, catalogs, and on T.V. to basic necessities, eliminating luxuries one could do without.

50. Be able to use pictorial advertising methods to express ideas by creating posters for a school, church, or community project.

51. Be able to use pictorial advertising methods to convince students in lower grades that they should obey rules.

52. Be able to use pictorial advertising methods to express a desire or ambition you feel strongly about for presentation to your parents.

G.D.I. #5 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

PLATEAU 6.1

53. Be able to critically "read" pictorial advertisements as seen in catalog, magazines, newspapers, special pamphlets, "junk mail," and "contribution requested," brochures to determine value or worth of the idea presented.

54. Be able to critically "read" T.V. reports of news, weather, and societal problems to form judgements and internalize opinions.

55. Be able to catagorize T.V. programs as to entertainment, factual information, and opinion or propaganda.

56. Be able to critically compare a T.V. news report with a newspaper account of the same incident and recognize the major differences.

57. Be able to interpret cartoons and determine central ideas presented.

58. Be able to extrapolate from an idea or fact presented pictorially.

59. Be able to apply an idea or method gained from comprehension of one or a series of pictorial presentations to solve a given problem.

60. Be able to analyze a pictorially presented problem.

61. Be able to synthesize to form a creative idea from a variety of given pictorial materials or by use of a camera within a given framework.

62. Be able to critically evaluate either your own or another's pictorial presentation to arrive at a judgement of value or worth.

G.D.I. #6 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

WRITTEN COMMUNICATION SKILLS

---Readiness To Read
---Readiness To Write
---Readiness To Spell

INSTRUCTIONAL MEANS AND MODE

Instructional Means

The written communication skills sequence uses teacher-prescribed verbal, representational, and/or concrete instructional means. (See page 83 for special information about the Sullivan Reading Program).

Descriptions, explanations, directions, and other stimuli are presented by the teacher to the learner. The learner responds orally and/or physically to a given stimulus and is evaluated by observation.

Instructional Mode

Two types of instructional modes are utilized. The Stimulus/Response mode is used with "one-to-one" instruction and small group instruction. Learners working on the same objectives on the same approximate pace level can be grouped for stimulus presentation then allowed to respond individually.

The Personal Discovery mode is utilized for practice of skills and in the development of generalizations. This mode is used with most instruction guided by "suggested procedures" since learning through experimentation is a major need in generalizing skill objectives.

This mode also provides an avenue for teacher aid to individuals. While several learners are engaged in independent practice exercises, the teacher can utilize the S/R mode in one-to-one instruction with a learner who has a special learning disability.

Most written communication objectives are skills found in "readiness-to-read" programs. Since few learners will be at the same stage of readiness development at the same time, "holding a learner back" by total class grouping for this sequence will mean a delay in beginning the formal

reading program. The EMR cannot aford such avoidable delays. Thus; regrouping on the basis of learner progress is essential after every instructional situation. When some learners have achieved observable competence during a practice session and show evidence of "boredom", it may be wise to regroup these faster achievers before the end of the current instructional situation. (Some learners achieve faster on some objectives than they do on others because of non-sequential learnings prior to or outside of school instructions).

The teacher must use her own judgement about how long to stay on an objective if the learner is having trouble with it. Sometimes, it is best to move on to another objective in the sequence and come back later or occasionally to the troublesome area, but be sure the student is not visually or auditorily perceptually handicapped before moving on to another objective. It is unlikely he can learn a higher skill until remediation is achieved.

Objectives in the written communication skills sequence should be taught concurrently with other objectives on the same plateau in oral and written communication. In no case should a higher plateau be started for one sequence before the objectives of the other two sequences on the lower plateau are completed successfully. (See page 84 for an exception to this general rule).

Instructional Guides

Suggested procedures are given in the Teachers' Instructional Guide for each objective, but the teacher may utilize any appropriate resources or means to aid the learner in successful achievement.

Three copies of instructional guide sheets are included here as typical examples.

Pupil Progress Records

Record of achievement is maintained on the colored record sheets (see front of this section). All three sequences of Communication Skills are on a single form. To maintain ease of identification, each plateau of all sequences is printed on the same color paper. Plateau 1 is always blue, plateau 2 is pink, plateau 3 is green, plateau 4 is golden rod, plateau 5 is lavender, and plateau 6 is tan or buff.

One record sheet for each plateau is set up for each student. Progress is maintained continuously and it should be possible to analyze a student's progress in all curriculum areas at any time during the school year.

The record sheets are stored in a student progress folder and will go to the new teacher whenever a student is transferred from a current class.

It is vital that records of achievement be known continuously in a sequential program. Accuracy is also extremely important since future instruction for a learner is prescribed on the basis of his current progress. Each sequential teacher is dependent upon the information forwarded by a previous teacher.

The Commercial Reading Program

After plateau 3 has been successfully completed for oral, pictorial, and written communication skills, the learner should be able to begin the commercial reading program adopted for special education classes.

Generally (there are always exceptions to any set of guidelines), the mentally retarded learner should be ready-to-read at the level indicated on the mental age scale presented on page 85.

Many authorities agree that mental age is still the best general measure of reading expectancy available. It should never be used as the sole criteria for evaluation, however. Children who have not received a full and effective readiness program, including sequential perceptual-motor development, may not be "ready" until much later than the scale suggests.

Once the learner is placed on the Commercial program, plateaus no longer apply to written communications. The learner works in the program at his own pace, continuously.

The intermediate goals of the communication skills sequences are to enable the learner to communicate and be communicated with, in spite of a delayed reading capability; but, ultimately, he should reach the functional level of reading which can make his adult life socially and economically successful.

The chart on the following page indicates that the slow learner has the potential to profit from a sound, sequential program.

APPROXIMATE READING EXPECTANCY LEVELS

		ALABAMA E.M.R. CLASSES									
CA	50	55	60	65	70	75	80	85	90	95	100
6.0	PM	PM	PM	OR	OR	SR	SR	SR	SR	SR	1.0
6.5	PM	PM	OR	OR	SR	SR	SR	SR	SR	1.0	1.5
7.0	PM	PM	OR	OR	SR	SR	SR	1.0	1.0	1.5	2.0
7.5	PM	OR	OR	SR	SR	SR	1.0	1.0	1.5	2.0	2.5
8.0	PM	OR	SR	SR	SR	1.0	1.0	1.5	2.0	2.5	3.0
8.5	OR	OR	SR	SR	1.0	1.0	1.5	2,0	2.5	3.0	3.5
9.0	OR	SR	SR	SR	1.0	1.5	2.0	2.5	3.0	3.5	4.0
9.5	OR	SR	SR	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
10.0	SR	SR	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
10.5	SR	SR	1.0	1.5	2.0	2.5	3.0	3.5	4.5	5.0	5.5
11.0	SR	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.5	6.0
11.5	SR	1.0	1.5	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.5
12.0	1.0	1.5	2.0	2.5	3.0	4.0	4.5	5.0	5.5	6.0	7.0
12.5	1.0	1.5	2.5	3.0	3.5	4.0	5.0	5.5	6.0	6.5	7.5
13.0	1.5	2.0	2.5	3.5	4.0	4.5	5.0	6.0	6.5	7.0	8.0
13.5	1.5	2.0	3.0	3.5	4.5	5.0	5.5	6.5	7.0	7.5	8.5
14.0	2.0	2.5	3.0	4.0	4.5	5.5	6.0	6.5	7.5	8.0	9.0
14.5	2.0	3.0	3.5	4.0	5.0	5.5	6.5	7.0	8.0	8.5	9.0
15.0	2.5	3.0	4.0	4.5	5.5	6.0	7.0	7.5	8.5	9.0	10.0
15.5	2.5	3.5	4.0	5.0	5.5	6.5	7.0	8.0	9.0	9.5	10.5
16.0	3.0	3.5	4.5	5.0	6.0	7.0	7.5	8.5	9.0	10.0	11.0

PM = Perceptual-Motor Training
OR = Opelika Readiness Program
SR = Sullivan Readiness Program
1, 1.5, 2, etc. = grade level of reading (beginning points)

OBJECTIVE

8. Be able to recognize and remember each of the primary and secondary colors. (red, blue, yellow, green, purple, and brown).

INSTRUCTIONAL MEANS FOR THIS OBJECTIVE IS TEACHER-PROVIDED

This is a verbal S/R objective which requires (1) the teacher to verbally describe or explain, with concrete examples, the desired performance; (2) the learner to practice by repetition the desired performance; and (3) the learner to respond with the correct performance when the teacher has provided the specified stimulus.

SUGGESTED PROCEDURE

1. Verbally describe or explain, with concrete examples, the desired performance.

   Example: (Use white or black for contrast to each color).

   Set up a pile of chips (or paper cutouts) with only red and white (or red and black).

   Sort the red chips into a box painted or marked red. As you sort them, say: "This is red. I put the red chip in the red box."

   After learner practices red, repeat above for blue; then each color in turn.

2. Ask the learner to practice the desired performance a number of times.

   Example: Give the learner a pile of red and white chips. Ask him to put all the red chips in the red box. Check his work.

   Let the learner do this for each color.

3. Check successful achievement by providing a stimulus to which the learner can respond correctly.

   Example: Set up a "pool" of 18 chips or cutouts, three of each color. Use a plain box.

   Ask, in random order: "Put a _____ chip in this box."

   The learner should be able to identify the primary and secondary colors both visually and verbally.

   If the learner fails to identify any color, provide instruction for that color then post-test again.

NOTE: Achievement of this objective may require many repetitions of the instructional means in a variety of situations over lengthy periods of time. For this reason, the teacher may find it appropriate to work with the learner on this and several other unachieved objectives concurrently when classroom conditions offer such opportunity.

SUGGESTED PROCEDURES ARE NOT INTENDED TO RESTRICT THE TEACHER FROM USING HER OWN TECHNIQUES TO AID THE LEARNER TO ACHIEVE THE OBJECTIVE.

OBJECTIVE

15. Be able to match gross shapes of common objects and animals with like color coding and no variations in sizes of shapes to be matched. Note: Not Geometric Forms!

INSTRUCTIONAL MEANS FOR THIS OBJECTIVE IS TEACHER-PROVIDED

This is a verbal S/R objective which requires (1) the teacher to verbally describe or explain, with concrete examples, the desired performance; (2) the learner to practice by repetition the desired performance; and (3) the learner to respond with the correct performance when the teacher has provided the specified stimulus.

SUGGESTED PROCEDURE

1. Verbally describe or explain, with concrete examples, the desired performance.

   Example: Place two or three felt shapes (per objective specifications) across the top of a flannel board.

   Place one felt shape for each in the pattern on a table near the board in a random "pool".

   Show the learner how to select a shape from the "pool" and place it under the like shape at the top.

2. Ask the learner to practice the desired performance a number of times.

   Example: Let a "buddy" set up a pattern and let the learner match it.

   Repeat many times.

3. Check successful achievement by providing a stimulus to which the learner can respond correctly.

   Example: Set up a series of shapes (per objective specifications) as in 1. above. Use at least 50 percent objects or animals learner has not used in practice exercises.

   Ask the learner to match the shapes by placing one likeness under each.

NOTE: Achievement of this objective may require many repetitions of the instructional means in a variety of situations over lengthy periods of time. For this reason, the teacher may find it appropriate to work with the learner on this and several other unachieved objectives concurrently when classroom conditions offer such opportunity.

SUGGESTED PROCEDURES ARE NOT INTENDED TO RESTRICT THE TEACHER FROM USING HER OWN TECHNIQUES TO AID THE LEARNER TO ACHIEVE THE OBJECTIVE.

OBJECTIVE

29. Be able to use finger paints to color within defined large areas.

INSTRUCTIONAL MEANS FOR THIS OBJECTIVE IS TEACHER-PROVIDED

This is a verbal S/R objective which requires (1) the teacher to verbally describe or explain, with concrete examples, the desired performance; (2) the learner to practice by repetition the desired performance; and (3) the learner to respond with the correct performance when the teacher has provided the specified stimulus.

SUGGESTED PROCEDURE

1. Verbally describe or explain, with concrete examples, the desired performance.

   Example: In the Opelika system an art resource teacher is available for instruction with finger painting (and any other art techniques).

   This objective can be achieved by the normal procedures used for art instruction.

2. Ask the learner to practice the desired performance a number of times.

   Example: Let learner practice beyond the instruction given by the resource teacher.

3. Check successful achievement by providing a stimulus to which the learner can respond correctly.

   Example: The evaluation of this objective is self explanatory, but the teacher is cautioned to expect no greater perfection than the limits specified by the objective. i.e. Within defined large areas means gross motor skill, not fine motor skill.

NOTE: Achievement of this objective may require many repetitions of the instructional means in a variety of situations over lengthy periods of time. For this reason, the teacher may find it appropriate to work with the learner on this and several other unachieved objectives concurrently when classroom conditions offer such opportunity.

SUGGESTED PROCEDURES ARE NOT INTENDED TO RESTRICT THE TEACHER FROM USING HER OWN TECHNIQUES TO AID THE LEARNER TO ACHIEVE THE OBJECTIVE.

WRITTEN COMMUNICATION

SKILLS SEQUENCE
OBJECTIVES

PLATEAU 1.1

1. Be able to recognize common environmental sounds and noises.
2. Be able to recognize some one sylable words that rhyme.
3. Be able to recognize the difference between a story told and a story read.
4. Be able to fit in up to 12 large missing parts from incomplete picture puzzles.
5. Be able to turn pages with care while looking at pictures in a book.
6. Be able to hold pencil in hand correctly.
7. Be able to scribble with a pencil without losing control of pencil position in hand.
8. Be able to recognize and remember each of the primary and secondary colors. (red, blue, yellow, green, purple, and brown.)
9. Be able to string different colored beads with colors alternating, according to a given pattern.
10. Be able to use thumbs and fingers to tear paper along outlines of common objects and animals.
11. Be able to use blunt scissors to cut out common gross shapes of large objects and animals.
12. Be able to stack 2 or 3 blocks, one atop the other according to a given pattern or model.
13. Be able to build a simple block bridge according to a given pattern or model.
14. Be able to stack blocks according to oral directions.
15. Be able to match gross shapes of common objects and animals with like color coding and no variations in sizes of shapes to be matched.
16. Be able to match shapes in a left to right progression.

17. Be able to match gross shapes of common objects and animals with like color coding and with variations in sizes of shapes to be matched.

18. Be able to match gross shapes of common objects and animals with unlike color coding and no variations in sizes of shapes to be matched.

19. Be able to match gross shapes of common objects and animals with unlike color coding and with variations in sizes of shapes to be matched.

20. Be able to match gross shapes of common objects and animals with no color coding and with variations in size of shapes to be matched.

21. Be able to match gross shapes of common objects and animals with no color coding, no variations in size, and with unlike figure rotation of shapes to be matched.

22. Be able to hold a crayon in hand correctly.

23. Be able to color within a single large area to practice eye-hand coordination.

24. Be able to toss and catch a bean bag from one hand to another.

25. Be able to match drawings of common objects and animals with one internal identifying line and no size variations between drawings to be matched.

26. Be able to match drawings of common objects and animals with two internal identifying lines or spots and so size variations between drawings to be matched.

27. Be able to match drawings of common objects and animals with three to five internal identifying lines or spots and no size variations between drawings to be matched.

28. Be able to color drawings of common objects or animals with two or more different color crayons within clearly defined large areas.

29. Be able to use finger paints to color within defined large areas.

30. Be able to mold clay into a likeness of some object or animal.

G.D.I. #1 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

31. Be able to tell the differences between environmental sounds and identify each.

32. Be able to detect words that begin with the same sound.

33. Be able to select favorite story books from several on a shelf.

34. Be able to request previously heard stories to be read by tape or teacher.

35. Be able to hold a pencil correctly.

36. Be able to trace in manuscript own name at board or on paper.

37. Be able to copy in manuscript one or two words from a model written on own paper.

38. Be able to recognize one pastel color for each primary and secondary colors.

39. Be able to mix colors of finger paints to get other colors.

40. Be able to match gross shapes of geometric forms with like color coding and no size variations.

41. Be able to move eyes from left to right when doing the shape exercises.

42. Be able to match gross shapes of geometric forms with like color coding and with size variations.

43. Be able to match gross shapes of geometric forms with unlike color coding and no size variations.

44. Be able to match gross shapes of geometric forms with unlike color coding and with size variations.

45. Be able to match gross shapes of geometric forms with no color coding and with size variations.

46. Be able to match gross shapes of geometric forms with no color coding, no variations in size, and with like figure rotation.

47. Be able to build a three-dimensional structure with square blocks of several colors.

48. Be able to match geometric forms with one internal line and no size variations.

49. Be able to match geometric forms with two internal and no variations in size.

50. Be able to match geometric forms with three to five internal lines or spots and no variation in size.

51. Be able to match geometric forms with multiple internal lines, spots, and circles and no variation in size.

52. Be able to trace outlines of geometric forms.

53. Be able to draw an outline of a geometric form by copying a given model.

54. Be able to color within the outlines of geometric forms.

55. Be able to throw to someone and catch from someone a bean bag with one hand.

56. Be able to recognize geometric forms within an outline with no other details.

57. Be able to recognize geometric forms within an outline with multiple details.

58. Be able to match geometric forms which have similar, but not exact characteristics.

59. Be able to match drawings of objects or animals which have similar, but not exact characteristics.

60. Be able to complete an incomplete drawing of an object, animal, or geometric form.

61. Be able to draw from memory any geometric form.

G.D.I. #2 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

PLATEAU 3.1

62. Be able to identify hidden environmental sounds.

63. Be able to recognize, by sound, words given twice among a list pronounced by the teacher.

64. Be able to recognize own name on list of classmates names written in manuscript.

65. Be able to match picture-word cards of common objects and animals.

66. Be able to match picture-word cards with word only cards.

67. Be able to match by sight only the lower case manuscript letters of a,c,u,o,w,s, and g.

68. Be able to match by sight only the lower case manuscript letters of e,v,x,y,k,t,z, and l.

69. Be able to match by sight only the lower case manuscript letters of r,h,f,i,j, and m.

70. Be able to match by sight only the lower case manuscript letters of b,p,q, and d.

71. Be able to match word cards using only those words in learner's sight vocabulary.

72. Be able to recognize under "how to" pictures such commonly used verbs as "cut," "draw," "color," "paste," etc.

73. Be able to recognize a few sight words without clue such as "stop," "go," "slow," "yield," "wait," "walk," "exit," "entrance," "men," "women," etc.

74. Be able to find pages in a book by the number of the page (up to 10).

75. Be able to read classroom signs and labels such as "scissors," "crayons," "table," "paper," "tools," "paint," etc.

76. Be able to read names of streets on signs near the school or home.

77. Be able to complete a sentence, which the teacher or another student starts, by drawing a picture to convey a word.

78. Be able to read sequenced picture-word books created by self.

79. Be able to read sequenced picture-word books created by classmates.

80. Be able to read simple directions such as "start the recorder," "circle the answer," etc.

81. Be able to read experience charts dictated to the teacher.

82. Be able to read announcements from the bulletin board.

83. Be able to read a short list of class rules.

84. Be able to read sequenced picture-phrase books created by self.

85. Be able to read sequenced picture-sentence books created by self.

86. Be able to read sequenced picture-phrase books created by classmates.

87. Be able to read sequenced picture-sentence books created by classmates.

88. Be able to read short stories dictated to the teacher by the group or class.

89. Be able to read teacher produced materials in booklet form at pre-primer level with ease and comprehension.

90. Be able to read and comprehend teacher approved readers at primer level with aid on any new words.

91. Be able to copy labels and signs in manuscript.

92. Be able to copy short sentences from board or experience chart, one at a time.

93. Be able to write own first and last name in manuscript without aid.

G.D.I. #3 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

PLATEAUS 4.1, 5.1, and 6.1

Learners who are ready for a commercial reading program will begin such training at the discretion of the teacher. The instruction guided by the objectives of 1.1, 2.1, and 3.1 is "concrete" readiness.

The reading program adopted for all special education is the Sullivan program (published by McGraw-Hill).

Please read pages 83-84 for detailed information regarding reading expectancy levels.

ARITHMETIC SKILLS

LOCATION AND DIRECTION
MEASUREMENT
TIME AND MOTION
MONEY CONCEPTS
NUMBERS AND GROUPING (commercial)
FRACTIONS
GEOMETRIC FORMS

ALL SEQUENCES ARE TAUGHT CONCURRENTLY. COMPLETE ALL OF A PLATEAU OF EACH SEQUENCE BEFORE BEGINNING A HIGHER ONE.

PUPIL PROGRESS RECORD SHEET

ARITHMETIC SKILLS

NAME _____ PLATEAU 1. 1 2 3 4 5 6 (see below)

LOCATION AND DIRECTION	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 GDI
MEASUREMENT	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 GDI
TIME AND MOTION	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 A23 GDI
MONEY CONCEPTS	1 2 3 4 5 6 7 8 9 10 11 12 13 GDI
NUMBERS AND GROUPING (commercial)	Units 1 2 3 4 5 6 GDI Start Addison-Wesley, Book 1
FRACTIONS	1 2 GDI
GEOMETRIC FORMS	None this plateau. Starts with plateau 2.

Mark X for successful pre-test.
Mark / for unsuccessful pre-test.
Mark X for successful post test.

Circle the appropriate pace level above.
Levels 4, 5, 6 utilize concrete means.
Levels 1, 2, 3 utilize technological means.

PUPIL PROGRESS RECORD SHEET

ARITHMETIC SKILLS

NAME ____________________

PLATEAU 2. 1 2 3 4 5 6
(see below)

Skill	Items
LOCATION AND DIRECTION	22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 GDI
MEASUREMENT	38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 GDI
TIME AND MOTION	B23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 GDI
MONEY CONCEPTS	14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 GDI
NUMBERS AND GROUPING (commercial)	Continue Addison-Wesley, Book 1; Units 7 8 9 10 11 GDI
FRACTIONS	3 4 5 GDI
GEOMETRIC FORMS	1 2 3 4 5 6 7 8 9 10 11 12 13 GDI

Mark X for successful pre-test.
Mark / for unsuccessful pre-test.
Mark X for successful post test.

Circle the appropriate pace level above.
Levels 4,5,6 utilize concrete means.
Levels 1, 2, 3 utilize technological means.

PUPIL PROGRESS RECORD SHEET

ARITHMETIC SKILLS

NAME _____ PLATEAU 3. 1 2 3 4 5 6 (see below)

LOCATION AND DIRECTION	This sequence has been completed. None.
MEASUREMENT	86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 GDI
TIME AND MOTION	56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 GDI
MONEY CONCEPTS	37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 57 58 59 60 61 62 63 64 65 66 67 GDI
NUMBERS AND GROUPING (commercial)	Units 1 2 3 4 5 6 7 GDI Start Addison-Wesley, Book 2
FRACTIONS	6 7 8 9 10 11 12 13 14 15 16 17 GDI
GEOMETRIC FORMS	14 15 16 17 18 19 20 21 22 23 GDI

Mark X for successful pre-test.
Mark / for unsuccessful pre-test.
Mark X for successful post test.

Circle the appropriate pace level above.
Levels 4, 5, 6 utilize concrete means.
Levels 1, 2, 3 utilize technological means.

PUPIL PROGRESS RECORD SHI'ET

ARITHMETIC SKILLS

NAME ____________________

PLATEAU 4. 1 2 3 4 5 6
(see below)

MEASUREMENT	115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 [illegible] GDI
TIME AND MOTION	86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 GDI
MONEY CONCEPTS	TAUGHT VIA ADDISON-WESLEY WORKBOOKS NONE
NUMBERS AND GROUPING (commercial)	Continue Addison-Wesley, Book 2 Units 8 9 10 11 12 13 GDI
FRACTIONS	TAUGHT VIA ADDISON-WESLEY WORKBOOKS NONE
GEOMETRIC FORMS	24 25 26 27 28 29 30 31 32 33 34 35 36 GDI

Mark X for successful pre-test.
Mark / for unsuccessful pre-test.
Mark X for successful post test.

Circle the appropriate pace level above.
Levels 4, 5, 6 utilize concrete means.
Levels 1, 2, 3 utilize technological means.

PUPIL PROGRESS RECORD SHEET

ARITHMETIC SKILLS

NAME _____ PLATEAU 5. 1 2 3 4 5 6

	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	ENT
MEASUREMENT																										
TIME AND MOTION	TAUGHT VIA ADDISON-WESLEY WORKBOOKS																									
	NONE																									
MONEY CONCEPTS	TAUGHT VIA ADDISON-WESLEY WORKBOOKS																									
	NONE																									
NUMBERS AND GROUPING (commercial) Units	1	2	3	4	5	6	7	8	9	10	6D1	Start Addison-Wesley, Book 3														
FRACTIONS	TAUGHT VIA ADDISON-WESLEY WORKBOOKS																									
	NONE																									
GEOMETRIC FORMS	TAUGHT VIA ADDISON-WESLEY WORKBOOKS																									
	NONE																									

Mark X for successful pre-test.
Mark / for unsuccessful pre-test
Mark X for successful post test.

Circle the appropriate pace level above.
Levels 4, 5, 6 utilize concrete means.
Levels 1, 2, 3 utilize technological means.

PUPIL PROGRESS RECORD SHEET

ARITHMETIC SKILLS

NAME _____

PLATEAU 6. 1 2 3 4 5 6 (see below)

	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	GDI
MEASUREMENT																																						
TIME AND MOTION	TAUGHT VIA ADDISON-WESLEY WORKBOOKS																																					
	NONE																																					
MONEY CONCEPTS	TAUGHT VIA ADDISON-WESLEY WORKBOOKS																																					
	NONE																																					
NUMBERS AND GROUPING (commercial)	1	2	3	4	5	6	7	8	9	10	11	GDI	Start Addison-Wesley, Book 4																									
FRACTIONS	TAUGHT VIA ADDISON-WESLEY WORKBOOKS																																					
	NONE																																					
GEOMETRIC FORMS	TAUGHT VIA ADDISON-WESLEY WORKBOOKS																																					
	NONE																																					

Mark X for successful pre-test.
Mark / for unsuccessful pre-test.
Mark X for successful post test.

Circle the appropriate pace level above.
Levels 4, 5, 6 utilize concrete means.
Levels 1, 2, 3 utilize technological means.

INSTRUCTIONAL MEANS AND MODE

It is essential that the teacher study pages 20 and 21 of this curriculum guide in order to understand the pattern of learning and the instructional means for the arithmetic sequences. The use of words which may not be familiar to many teachers could not be avoided if exact understanding is to be conveyed. These words and phrases are explained with examples on the above cited pages.

Instructional Means

All arithmetic sequences utilize either representational or concrete instructional means. Representational means can be color slides, photographs, cut outs from magazines and other similar sources, overhead transparencies, line drawings, etc. Concrete means are any three-dimensional objects, materials, or devices, usually of a size and type which the learner can easily see and manipulate.

Teacher judgement is required to determine which type of instructional means to utilize. The criteria for such decisions are the limits specified by the objective, the developmental level of the learner, the availability of appropriate means, and common sense.

Generally; representational means is appropriate for instructing the slow learner on pace levels 1, 2, and 3, but common sense dictates that any instruction a learner will be required to repeat in skill training (such as "using a ruler") should be concrete.

Descriptions, explanations, directions, etc. are presented orally to the learner. The instructional guides provide scripts for most objectives which may be recorded on cassette tapes or read directly to the learner. Some objectives are taught by "suggested procedures" instead of scripts.

Instructional Mode

Two types of instructional modes are utilized. The Stimulus/Response mode is used with either "one-to-one" instruction or small group instruction. Learners working on the same objectives on the same approximate pace level can be grouped for stimulus presentation then allowed to respond individually.

The Personal Discovery mode is utilized for practice of skills and in the development of generalizations. This mode is used with most instruction guided by "suggested procedures" since learning through experimentation is a major need in generalizing skill objectives.

The teacher must use her own judgement about how long to stay on an objective if the learner is having trouble with it. Usually, it is best to move on to another objective in the sequence and come back later or occasionally to the troublesome one.

Objectives in each arithmetic skills sequence should be taught concurrently with other objectives on the same plateau in all other sequences. In no case should a higher plateau be started for one sequence before the objectives of the other two sequences on the lower plateau are completed successfully. (See Numbers & Grouping in this section for a possible exception to this general rule).

Instructional Guides

Each instructional guide sheet in the Teachers' Instructional Guide for each sequence gives the objective (stated to the teacher) and a suggested script for the oral presentation which the learner will receive.

The (c) part of the objective in all arithmetic sequences is the evaluation objective for both pre-testing and post-testing. Where there is no (c) part to the objective, the last or the only part given is the

evaluation objective. The (a) and (b) parts of the objective are instruction steps and are not ever used for evaluation.

At the end of this introduction are annotated copies of instructional guide sheets. The first two examples show the suggested S/R mode scripts. The third example shows the pattern of "suggested procedures" for skill objective instruction.

The instructional guides may be used "as is" or the teacher may utilize other available appropriate resources or means to aid the learner in successful achievement of the objectives.

Pupil Progress Records

Record of achievement is maintained on the colored record sheets (see front of this section). All seven sequences of Arithmetic Skills are on a single form. To maintain ease of identification, each plateau of all sequences is printed on the same color paper. Plateau 1 is always blue, plateau 2 is pink, plateau 3 is green, plateau 4 is golden rod, plateau 5 is lavender, and plateau 6 is tan or buff.

One record sheet for each plateau is set up for each student. Progress is maintained continuously and it should be possible to analyze a student's progress in all curriculum areas at any time during the school year.

The record sheets are stored in a student progress folder and will go to the new teacher whenever a student is transferred from a current class.

It is vital that records of achievement be known continuously in a sequential program. Accuracy is also extremely important since future instruction for a learner is prescribed on the basis of his current progress. Each sequential teacher is dependent upon the information forwarded by a previous teacher.

Remember, this is written to the teacher. It is not stated to the children.

SUGGESTED SCRIPT AND MATERIALS — LOCATION & DIRECTION 1

see page 21 of the curriculum guide — OBJECTIVE — see page 20 of the curriculum guide

1. (a) Show retention of three of the percepts comprising the concept in by being able to recognize, during each of three presented activities, whether or not an object was placed or found in something.

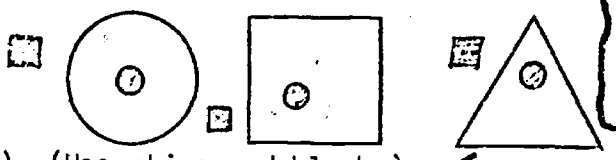
INSTRUCTIONS TO STUDENT ← given orally by teacher or taped

Wait for learner's answer to the question

In this lesson we are going to learn about in. Look at this.

guide to materials the teacher will use at this step

1. Which object is in the circle?
2. Which object is in the square?
3. Which object is in the triangle?



(Be sure learner responds correctly) (Use chips and blocks)

Instead of objects, the , the teacher can use X, A, etc or pictures

1. (b) Show comprehension of three of the percepts comprising the concept in by being able to translate from mental percept to physical action the three retained percepts.

Now you do this: if materials for 1(a) are changed, the same materials must be used for 1(b)

The teacher prepares the circle, square, & triangle on either posterboard or ditto sheets

1. Here is a circle. Now, put a chip in the circle.
2. Here is a square. Now, put a chip in the square.
3. Here is a triangle. Now, put a chip in the triangle.

---

see page 21 of the curriculum guide

1. (c) Show comprehension of the concept in by being able to interpret a concept of in, draw conclusions, and translate to physical action at least three in requests involving objects and locations similar to, but not exactly like, those given in step (a).

---

1. Here is a paper cup.
   Here are two marbles.
   Put the marbles in the cup.

2. Here are three sticks.
   Here is a box.
   Put the sticks in the box.

3. Here is a circle I have drawn on the floor.
   Put both your feet in the circle.

This step is used as both a pre-test and as the post test after instruction. Multiple versions of these examples can be devised to fit the classroom situation.

Appropriate verbal or other reward is given at the conclusion of each successful step.

Remember, this is written to the teacher. It is not stated for the child.

see page 21

OBJECTIVE

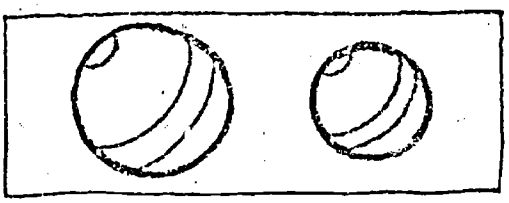
52. Show comprehension of the relationship between the concepts big and little by being able to interpret the concepts, draw conclusions, and translate by a physical action at least three big and little requests involving things similar to, but not exactly like, those given in previous big or little exercises. (See objectives 1 and 2, plateau 1.1 for original instruction on these concepts.)

INSTRUCTION TO THE STUDENT

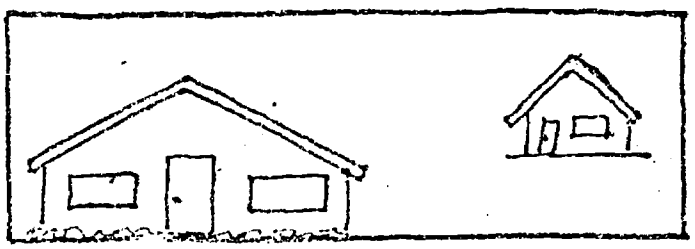
I want to see if you still know the difference between big and little.

Do this for me:

Color the big ball red.
Color the little ball blue.



Color the little house green.
Color the big house yellow.



See the two books on my desk?
Do this:
Bring me the big book and leave the little book there.

Note that this objective has only one part. It is used as both pre-test and post test. If the learner cannot do this objective successfully, he is given the instruction given for objectives 1 and 2, plateau 1.1, or similar remedial work.

Remember, this is written to the teacher. It is not stated to the child.

OBJECTIVE

52. Be able to tell time by the o'clock hour.

INSTRUCTIONAL MEANS FOR THIS OBJECTIVE IS TEACHER-PROVIDED

This is a verbal S/R objective which requires (1) the teacher to verbally describe or explain, with concrete examples, the desired performance; (2) the learner to practice by repetition the desired performance; and (3) the learner to respond with the correct performance when the teacher has provided the specified stimulus.

SUGGESTED PROCEDURE

1. Verbally describe or explain, with concrete examples, the desired performance.

   Example: Point to the classroom clock whenever it is at an o'clock hour. Say: "It is 9 o'clock now. The short hand is at nine. The long hand is at 12."

   Do this as often as it requires to aid the learner.

   It is important on this objective to use a running clock, not a picture or cut out type.

2. Ask the learner to practice the desired performance a number of times.

   Example: Ask the learner to tell a buddy who can tell time at o'clock hours the o'clock hour each hour during a day.

3. Check successful achievement by providing a stimulus to which the learner can respond correctly.

   Example: Point to the classroom clock at an o'clock hour and ask: "What time is it now?"

NOTE: Achievement of this objective may require many repetitions of the instructional means in a variety of situations over lengthy periods of time. For this reason, the teacher may find it appropriate to work with the learner on this and several other unachieved objectives concurrently when classroom conditions offer such opportunity.

SUGGESTED PROCEDURES ARE NOT INTENDED TO RESTRICT THE TEACHER FROM USING HER OWN TECHNIQUES TO AID THE LEARNER TO ACHIEVE THE OBJECTIVE.

LOCATION AND DIRECTION

SKILL SEQUENCE OBJECTIVES

PLATEAU 1.1

UNITS

1. (a) Show retention of three of the percepts comprising the concept in by being able to recognize, during each of three presented activities, whether or not an object was placed or found in something.

   (b) Show comprehension of three of the percepts comprising the concept in by being able to translate from mental percept to physical action the three retained percepts.

   (c) Show comprehension of the concept in by being able to interpret a concept of in, draw conclusions, and translate to physical action at least three in requests involving objects and locations similar to, but not exactly like, those given in step (a).

2. (a) Show retention of three of the percepts comprising the concept out by being able to recognize, during each of three presented activities, whether or not an object was placed or found out of something.

   (b) Show comprehension of three of the percepts comprising the concept out by being able to translate from mental percept to physical action the three retained percepts.

   (c) Show comprehension of the concept out by being able to interpret a concept of out, draw conclusions, and translate to physical action at least three out requests involving objects and locations similar to, but not exactly like, those given in step (a).

3. (a) Show retention of three of the percepts comprising the concept on by being able to recognize, during each of three presented activities, whether or not an object was placed or found on something.

   (b) Show comprehension of three of the percepts comprising the concept on by being able to translate from mental percept to physical action the three retained percepts.

   (c) Show comprehension of the concept on by being able to interpret a concept of on, draw conclusions, and translate to physical action at least three on requests involving objects and locations similar to, but not exactly like, those given in step (a).

4. (a) Show retention of three of the percepts comprising the concept off by being able to recognize, during each of three presented activities, whether or not an object was placed or found off of something.

   (b) Show comprehension of three percepts comprising the concept off by being able to translate from mental percept to physical action the three retained percepts.

   (c) Show comprehension of the concept off by being able to interpret a concept of off, draw conclusions, and translate to physical action at least three off requests involving objects and locations similar to, but not exactly like, those given in step (a).

5. (a) Show retention of three of the percepts comprising the concept up by being able to recognize, during each of three presented activities, whether or not an object was moving in the up direction.

   (b) Show comprehension of three of the percepts comprising the concept up by being able to translate from mental percept to physical action the three retained percepts.

   (c) Show comprehension of the concept up by being able to interpret a concept of up, draw conclusions, and translate to physical action at least three up requests involving objects and locations similar to, but not exactly like, those given in step (a).

6. (a) Show retention of three of the percepts comprising the concept down by being able to recognize, during each of three presented activities, whether or not an object was moving in the down direction.

   (b) Show comprehension of three of the percepts comprising the concept down by being able to translate from mental percept to physical action the three retained percepts.

   (c) Show comprehension of the concept down by being able to interpret a concept of down, draw conclusions, and translate to physical action at least three down requests involving objects and locations similar to, but not exactly like, those given in step (a).

7. (a) Show retention of the percepts comprising the concept under by being able to recognize, during each of three presented activities, whether or not an object was moving in the under direction.

   (b) Show comprehension of three percepts comprising the concept under by being able to translate from mental percept to physical action the three retained percepts.

   (c) Show comprehension of the concept under by being able to interpret a concept of under, draw conclusions, and translate to physical action at least three under requests involving objects and locations similar to, but not exactly like, those given in step (a).

8. (a) Show retention of three of the percepts comprising the concept over by being able to recognize, during each of three presented activities, whether or not an object was moving in the over direction.

(b) Show comprehension of three of the percepts comprising the concept over by being able to translate from mental percept to physical action the three retained percepts.

(c) Show comprehension of the concept over by being able to interpret a concept of over, draw conclusions, and translate to physical action at least three over requests involving objects and locations similar to, but not exactly like, those given in step (a).

9. (a) Show retention of three of the percepts comprising the concept high by being able to recognize, during each of three presented activities, whether or not an object was placed or found at a high location.

(b) Show comprehension of three of the percepts comprising the concept high by being able to translate from mental percept to physical action the three retained percepts.

(c) Show comprehension of the concept high by being able to interpret a concept of high, draw conclusions, and translate to physical action at least three high requests involving objects and locations similar to, but not exactly like, those given in step (a).

10. (a) Show retention of the percepts comprising the concept low by being able to recognize, during each of three presented activities, whether or not an object was placed or found at a low location.

(b) Show comprehension of three of the percepts comprising the concept low by being able to translate from mental percept to physical action the three retained percepts.

(c) Show comprehension of the concept low by being able to interpret a concept of low, draw conclusions, and translate to physical action at least three low requests involving objects and locations similar to, but not exactly like, those given in step (a).

11. (a) Show retention of three of the percepts comprising the concept near by being able to recognize, during each of three presented activities, whether or not an object was placed or found near to something.

(b) Show comprehension of three of the percepts comprising the concept near by being able to translate from mental percept to physical action the three retained percepts.

(c) Show comprehension of the concept near by being able to interpret a concept of near, draw conclusions, and translate to physical action at least three near requests involving objects and locations similar to, but not exactly like, those given in step (a).

12. (a) Show retention of three of the percepts comprising the concept far by being able to recognize, during each of three presented activities, whether or not an object was placed or found far from something.

(b) Show comprehension of three of the percepts comprising the concept far by being able to translate from mental percept to physical action the three retained percepts.

(c) Show comprehension of the concept far by being able to interpret a concept of far, draw conclusions, and translate to physical action at least three far requests involving objects and locations similar to, but not exactly like, those given in step (a).

13. (a) Show retention of three of the percepts comprising the concept top by being able to recognize, during each of three presented activities, whether or not an object was placed or found at the top location.

(b) Show comprehension of three of the percepts comprising the concept top by being able to translate from mental percept to physical action the three retained percepts.

(c) Show comprehension of the concept top by being able to interpret a concept of top, draw conclusions, and translate to physical action at least three top requests involving objects and locations similar to, but not exactly like, those given in step (a).

14. (a) Show retention of three of the percepts comprising the concept bottom by being able to recognize, during each of three presented activities, whether or not an object was placed or found at the bottom location.

(b) Show comprehension of three of the percepts comprising the concept bottom by being able to translate from mental percept to physical action the three retained percepts.

(c) Show comprehension of the concept bottom by being able to interpret a concept of bottom, draw conclusions, and translate to physical action at least three bottom requests involving objects and locations similar to, but not exactly like, those given in step (a).

15. (a) Show retention of three of the percepts comprising the concept front by being able to recognize, during each of three presented activities, whether or not an object was placed or found at a front location.

(b) Show comprehension of three of the percepts comprising the concept front by being able to translate from mental percept to physical action the three retained percepts.

(c) Show comprehension of the concept front by being able to interpret a concept of front, draw conclusions, and translate to physical action at least three front requests involving objects and locations similar to, but not exactly like, those given in step (a).

16. (a) Show retention of three of the percepts comprising the concept back by being able to recognize, during each of three presented activities, whether or not an object was placed or found at the back location.

(b) Show comprehension of three of the percepts comprising the concept back by being able to translate from mental percept to physical action the three retained percepts.

(c) Show comprehension of the concept back by being able to interpret a concept of back, draw conclusions, and translate to physical action at least three back requests involving objects and locations similar to, but not exactly like, those given in step (a).

17. (a) Show retention of three of the percepts comprising the concept first by being able to recognize, during each of three presented activities, whether or not an object was placed or found at the first point in a given sequence.

(b) Show comprehension of three of the percepts comprising the concept first by being able to translate from mental percept to physical action the three retained percepts.

(c) Show comprehension of the concept first by being able to interpret a concept of first, draw conclusions, and translate to physical action at least three first requests involving objects and locations similar to, but not exactly like, those given in step (a).

18. (a) Show retention of three of the percepts comprising the concept last by being able to recognize, during each of three presented activities, whether or not an object was placed or found at the last point in a given sequence.

(b) Show comprehension of three of the percepts comprising the concept last by being able to translate from mental percept to physical action the three retained percepts.

(c) Show comprehension of the concept last by being able to interpret a concept of last, draw conclusions, and translate to physical action at least three last requests involving objects and locations similar to, but not exactly like, those given in step (a).

19. (a) Show retention of three of the percepts comprising the concept next by being able to recognize, during each of three presented activities, whether or not an object was placed or found at the next point in a given sequence.

(b) Show comprehension of three of the percepts comprising the concept next by being able to translate from mental percept to physical action the three retained percepts.

(c) Show comprehension of the concept next by being able to interpret a concept of next, draw conclusions, and translate to physical action at least three next requests involving objects and locations similar to, but not exactly like, those given in step (a).

20. (a) Show retention of three of the percepts comprising the concept right by being able to recognize, during each of three presented activities, whether or not an object was placed or found at a right location.

(b) Show comprehension of three of the percepts comprising the concept right by being able to translate from mental percept to physical action the three retained percepts.

(c) Show comprehension of the concept right by being able to interpret a concept of right, draw conclusions, and translate to physical action at least three right requests involving objects and locations similar to, but not exactly like, those given in step (a).

21. (a) Show retention of three of the percepts comprising the concept left by being able to recognize, during each of three presented activities, whether or not an object was placed or found at a left location.

(b) Show comprehension of three of the percepts comprising the concept left by being able to translate from mental percept to physical action the three retained percepts.

(c) Show comprehension of the concept left by being able to interpret a concept of left, draw conclusions, and translate to physical action at least three left requests involving objects and locations similar to, but not exactly like, those given in step (a).

G.D.I. #1 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

PLATEAU 2.1

22. (a) Show retention of three of the percepts comprising the concept center by being able to recognize, during each of three presented activities, whether or not an object was placed or found at or in a center location.

(b) Show comprehension of three of the percepts comprising the concept center by being able to translate from mental percept to physical action the three retained percepts.

(c) Show comprehension of the concept center by being able to interpret a concept of center, draw conclusions, and translate to physical action at least three center requests involving objects and locations similar to, but not exactly like, those given in step (a).

23. (a) Show retention of three of the percepts comprising the concept across by being able to recognize, during each of three presented activities, whether or not an object was moving in the across direction.

(b) Show comprehension of three of the percepts comprising the concept across by being able to translate from mental percept to physical action the three retained percepts.

(c) Show comprehension of the concept across by being able to interpret a concept of across, draw conclusions, and translate to physical action at least three across requests involving objects and locations similar to, but not exactly like, those given in step (a).

24. (a) Show retention of three of the percepts comprising the concept above by being able to recognize, during each of three presented activities, whether or not an object was placed or found above something.

(b) Show comprehension of three of the percepts comprising the concept above by being able to translate from mental percept to physical action the three retained percepts.

(c) Show comprehension of the concept above by being able to interpret a concept of above, draw conclusions, and translate to physical action at least three above requests involving objects and locations similar to, but not exactly like, those given in step (a).

25. (a) Show retention of three of the percepts comprising the concept below by being able to recognize, during each of three presented activities, whether or not an object was placed or found below something.

(b) Show comprehension of three of the percepts comprising the concept below by being able to translate from mental percept to physical action the three retained percepts.

(c) Show comprehension of the concept below by being able to interpret a concept of below, draw conclusions, and translate to physical action at least three below requests involving objects and locations similar to, but not exactly like, those given in step (a).

26. (a) Show retention of three of the percepts comprising the concept beneath by being able to recognize, during each of three presented activities, whether or not an object was placed or found beneath something.

(b) Show comprehension of three of the percepts comprising the concept beneath by being able to translate from mental percept to physical action the three retained percepts.

(c) Show comprehension of the concept beneath by being able to interpret a concept of beneath, draw conclusions, and translate to physical action at least three beneath requests involving objects and locations similar to, but not exactly like, those given in step (a).

27. (a) Show retention of three of the percepts comprising the concept close by being able to recognize, during each of three presented activities, whether or not an object was placed or found close to something.

(b) Show comprehension of three of the percepts comprising the concept close by being able to translate from mental percept to physical action the three retained percepts.

(c) Show comprehension of the concept close by being able to interpret a concept of close, draw conclusions, and translate to physical action at least three close requests involving objects and locations similar to, but not exactly like, those given in step (a).

28. Show comprehension of the relationship between the concepts in and out by being able to interpret the concepts, draw conclusions, and translate to physical action at least three in and out requests which involve objects and locations similar to, but not exactly like, those given in previous in or out exercises.

29. Show comprehension of the relationship between the concepts on and off by being able to interpret the concepts, draw conclusions, and translate to physical action at least three on and off requests which involve objects and locations similar to, but not exactly like, those given in previous on and off exercises.

30. Show comprehension of the relationship between the concepts up and down by being able to interpret the concepts, draw conclusions, and translate to physical action at least three up and down requests which involve objects and locations similar to, but not exactly like, those given in previous up or down exercises.

31. Show comprehension of the relationship between the concept high and low by being able to interpret the concepts, draw conclusions, and translate to physical action at least three high and low requests which involve objects and locations similar to, but not exactly like, those given in previous high or low exercises.

32. Show comprehension of the relationship between the concepts near and far by being able to interpret the concepts, draw conclusions, and translate to physical action at least three near and far requests which involve objects and locations similar to, but not exactly like, those given in previous near or far exercises.

33. Show comprehension of the relationship between the concepts over and under by being able to interpret the concepts, draw conclusions, and translate to physical action at least three over and under requests which involve objects and locations similar to, but not exactly like, those given in previous over or under exercises.

34. Show comprehension of the relationship between the concepts top and bottom by being able to interpret the concepts, draw conclusions, and translate to physical action at least three top and bottom requests which involve objects and locations similar to, but not exactly like, those given in previous top or bottom exercises.

35. Show comprehension of the relationship between the concepts front and back by being able to interpret the concepts, draw conclusions, and translate to physical action at least three front and back requests which involve objects and locations similar to, but not exactly like, those given in previous front or back exercises.

36. Show comprehension of the relationship between the concepts left and right by being able to interpret the concepts, draw conclusions, and translate to physical action at least three left and right requests which involve objects and locations similar to, but not exactly like, those given in previous left or right exercises.

37. Show comprehension of the relationship between the concepts first and last by being able to interpret the concepts, draw conclusions, and translate to physical action at least three first and last requests which involve objects and locations similar to, but not exactly like, those given in previous first or last exercises.

38. Show comprehension of the relationship between the concepts close and closer by being able to interpret the concepts, draw conclusions, and translate to physical action at least three close and closer requests which involve objects and locations similar to, but not exactly like, those given in previous close exercises.

39. Show comprehension of the relationship between the concepts higher and lower by being able to interpret the concepts, draw conclusions, and translate to physical action at least three higher and lower requests which involve objects and locations similar to, but not exactly like, those given in previous high and low exercises.

40. Show comprehension of the relationship between the concepts nearer and farther by being able to interpret the concepts, draw conclusions, and translate to physical action at least three nearer and farther requests which involve objects and locations similar to, but not exactly like, those given in previous near and far exercises.

41. Show comprehension of the relationship between the concepts up, high, above and top by being able to interpret the concepts, draw conclusions, and translate to physical action at least three up, high, above, and top requests which involve objects and locations similar to, but not exactly like, those given in previous up, high, above or top exercises.

42. Show comprehension of the relationship between the concepts down, low, below, and bottom by being able to interpret the concepts, draw conclusions, and translate to physical action at least three down, low, below, and bottom requests which involve objects and locations similar to, but not exactly like, those given in previous down low, below, or bottom exercises.

43. Show comprehension of the relationship between the concepts top, center, and bottom by being able to interpret the concepts, draw conclusions, and translate to physical action at least three top, center and bottom requests which involve objects and locations similar to, but not exactly like, those given in previous top, center, or bottom exercises.

G.D.I. #2 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

THIS ENDS THE LOCATION & DIRECTION SEQUENCE

MEASUREMENT

SKILL SEQUENCE
OBJECTIVES

PLATEAU 1.1

UNITS

1. (a) Show retention of three percepts comprising the concept big by being able to recognize the big object among a variety of different sized objects in each of three given sets.

   (b) Show comprehension of three of the percepts comprising the concept big by being able to translate by a physical action the three retained percepts.

   (c) Show comprehension of the concept big by being able to interpret a concept of big, draw conclusions, and translate by a physical action at least three big requests involving things similar to, but not exactly like, those given in step (a).

2. (a) Show retention of three percepts comprising the concept little by being able to recognize the little object among a variety of different sized objects in each of three given sets.

   (b) Show comprehension of three of the percepts comprising the concept little by being able to translate by a physical action the three retained percepts.

   (c) Show comprehension of the concept little by being able to interpret a concept of little, draw conclusions, and translate by a physical action at least three little requests involving things similar to, but not exactly like, those given in step (a).

3. (a) Show retention of three percepts comprising the concept long by being able to recognize the long object among a variety of different length objects in each of three given sets.

   (b) Show comprehension of three of the percepts comprising the concept long by being able to translate by a physical action the three retained percepts.

   (c) Show comprehension of the concept long by being able to interpret a concept of long, draw conclusions, and translate by a physical action at least three long requests involving things similar to, but not exactly like, those given in step (a).

4. (a) Show retention of three percepts comprising the concept short by being able to recognize the short object among a variety of different sized objects in each of three given sets.

   (b) Show comprehension of three of the percepts comprising the concept short by being able to translate by a physical action the three retained percepts.

   (c) Show comprehension of the concept short by being able to interpret a concept of short, draw conclusions, and translate by a physical action at least three short requests involving things similar to, but not exactly like, those given in step (a).

5. (a) Show retention of three percepts comprising the concept round by being able to recognize the round object among a variety of different sized objects in each of three given sets.

   (b) Show comprehension of three of the percepts comprising the concept round by being able to translate by a physical action the three retained percepts.

   (c) Show comprehension of the concept round by being able to interpret a concept of round, draw conclusions, and translate by a physical action at least three round requests involving things similar to, but not exactly like, those given in step (a).

6. (a) Show retention of three percepts comprising the concept flat by being able to recognize the flat object among a variety of different sized objects in each of three given sets.

   (b) Show comprehension of three of the percepts comprising the concept flat by being able to translate by a physical action the three retained percepts.

   (c) Show comprehension of the concept flat by being able to interpret a concept of flat, draw conclusions, and translate by a physical action at least three flat requests involving things similar to, but not exactly like, those given in step (a).

7. (a) Show retention of three percepts comprising the concept heavy by being able to recognize the heavy object among a variety of different sized objects in each of three given sets.

   (b) Show comprehension of three of the percepts comprising the concept heavy by being able to translate by a physical action the three retained percepts.

   (c) Show comprehension of the concept heavy by being able to interpret a concept of heavy, draw conclusions, and translate by a physical action at least three heavy requests involving things similar to, but not exactly like, those given in step (a).

8. (a) Show retention of three percepts comprising the concept light by being able to recognize the light object among a variety of different weighted objects in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept light by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept light by being able to interpret a concept of light, draw conclusions, and translate by a physical action at least three light requests involving things similar to, but not exactly like those given in step (a).

9. (a) Show retention of three percepts comprising the concept thick by being able to recognize the thick object among a variety of different sized objects in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept thick by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept thick by being able to interpret a concept of thick, draw conclusions, and translate by a physical action at least three thick requests involving things similar to, but not exactly like, those given in step (a).

10. (a) Show retention of three percepts comprising the concept thin by being able to recognize the thin object among a variety of different sized objects in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept thin by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept thin by being able to interpret a concept of thin, draw conclusions, and translate by a physical action at least three thin requests involving things similar to, but not exactly like, those given in step (a).

11. (a) Show retention of three percepts comprising the concept little bit by being able to recognize a little bit of something among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept little bit by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept little bit by being able to interpret a concept of little bit, draw conclusions, and translate by a physical action at least three little bit requests involving things similar to, but not exactly like, those given in step (a).

12. (a) Show retention of three percepts comprising the concept each by being able to recognize each of a specific set among a variety of different sets in each of three given exercises.

(b) Show comprehension of three of the percepts comprising the concept each by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept each by being able to interpret a concept of each, draw conclusions, and translate by a physical action at least three each requests involving things similar to, but not exactly like, those given in step (a).

13. (a) Show retention of three percepts comprising the concept all by being able to recognize all of something among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept all by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept all by being able to interpret a concept of all, draw conclusions, and translate by a physical action at least three all requests involving things similar to, but not exactly like, those given in step (a).

14. (a) Show retention of three percepts comprising the concept some by being able to recognize some of something among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept some by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept some by being able to interpret a concept of some, draw conclusions, and translate by a physical action at least three some requests involving things similar to, but not exactly like, those given in step (a).

15. (a) Show retention of three percepts comprising the concept none by being able to recognize none of something among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept none by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept none by being able to interpret a concept of none, draw conclusions, and translate by a physical action at least three none requests involving things similar to, but not exactly like, those given in step (a).

16. (a) Show retention of three percepts comprising the concept full by being able to recognize something full among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept full by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept full by being able to interpret a concept of full, draw conclusions, and translate by a physical action at least three full requests involving things similar to, but not exactly like, those given in step (a).

17. (a) Show retention of three percepts comprising the concept empty by being able to recognize the empty container among a variety of differently filled containers in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept empty by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept empty by being able to interpret a concept of empty, draw conclusions, and translate by a physical action at least three empty requests involving things similar to, but not exactly like, those given in step (a).

18. (a) Show retention of three percepts comprising the concept cupful by being able to recognize a cupful of something among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept cupful by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept cupful by being able to interpret a concept of cupful, draw conclusions, and translate by a physical action at least three cupful requests involving things similar to, but not exactly like, those given in step (a).

19. (a) Show retention of three percepts comprising the concept boxful by being able to recognize a boxful of something among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept boxful by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept boxful by being able to interpret a concept of boxful, draw conclusions, and translate by a physical action at least three boxful requests involving things similar to, but not exactly like, those given in step (a).

20. (a) Show retention of three percepts comprising the concept spoonful by being able to recognize a spoonful of something among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept spoonful by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept spoonful by being able to interpret a concept of spoonful, draw conclusions, and translate by a physical action at least three spoonful requests involving things similar to, but not exactly like, those given in step (a).

21. (a) Show retention of three percepts comprising the concept handful by being able to recognize a handful of something among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept handful by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept handful by being able to interpret a concept of handful, draw conclusions, and translate by a physical action at least three handful requests involving things similar to, but not exactly like, those given in step (a).

22. (a) Show retention of three percepts comprising the concept hot by being able to recognize something which would normally be hot among a variety of different items in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept hot by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept hot by being able to interpret a concept of hot, draw conclusions, and translate by a physical action at least three hot requests involving things similar to, but not exactly like, those given in step (a).

23. (a) Show retention of three percepts comprising the concept cold by being able to recognize something which would normally be cold among a variety of different items in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept cold by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept cold by being able to interpret a concept of cold, draw conclusions, and translate by a physical action at least three cold requests involving things similar to, but not exactly like, those given in step (a).

24. (a) Show retention of three percepts comprising the concept very hot by being able to recognize something which would normally be very hot among a variety of different items in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept very hot by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept very hot by being able to interpret a concept of very hot, draw conclusions, and translate by a physical action at least three very hot requests involving things similar to, but not exactly like, those given in step (a).

25. (a) Show retention of three percepts comprising the concept very cold by being able to recognize something which would normally be very cold among a variety of different items in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept very cold by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept very cold by being able to interpret a concept of very cold, draw conclusions, and translate by a physical action at least three very cold requests involving things similar to, but not exactly like, those given in step (a).

26. (a) Show retention of three percepts comprising the concept large by being able to recognize the large object among a variety of different objects in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept large by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept large by being able to interpret a concept of large, draw conclusions, and translate by a physical action at least three large requests involving things similar to, but not exactly like, those given in step (a).

27. (a) Show retention of three percepts comprising the concept small by being able to recognize the small object among a variety of different sized objects in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept small by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept small by being able to interpret a concept of small, draw conclusions, and translate by a physical action at least three small requests involving things similar to, but not exactly like, those given in step (a).

28. (a) Show retention of three percepts comprising the concept wide by being able to recognize the wide object among a variety of different sized objects in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept wide by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept wide by being able to interpret a concept of wide, draw conclusions, and translate by a physical action at least three wide requests involving things similar to, but not exactly like, those given in step (a).

29. (a) Show retention of three percepts comprising the concept narrow by being able to recognize the narrow object among a variety of different sized objects in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept narrow by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept narrow by being able to interpret a concept of narrow, draw conclusions, and translate by a physical action at least three narrow requests involving things similar to, but not exactly like, those given in step (a).

30. Be able to use hands and arms to show approximate sizes.

31. Be able to measure objects approximately with hands and fingers.

32. Be able to measure liquid amounts with cups, bottles, and spoons.

33. Be able to measure dry amounts with boxes, bags, and baskets.

34. Be able to measure width, length, and height of objects with rulers called "little sticks."

35. Be able to measure the circumference of an object with a "little string."

36. Be able to measure width, length, and height of objects with yardsticks called "big sticks."

37. Be able to use scales to determine comparative weights of objects.

G.D.I. #1 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

38. (a) Show retention of three percepts comprising the concept tall by being able to recognize the tall object among a variety of different sized objects in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept tall by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept tall by being able to interpret a concept of tall, draw conclusions, and translate by a physical action at least three tall requests involving things similar to, but not exactly like, those given in step (a).

39. (a) Show retention of three percepts comprising the concept many by being able to recognize many of something among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept many by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept many by being able to interpret a concept of many, draw conclusions, and translate by a physical action at least three many requests involving things similar to, but not exactly like, those given in step (a).

40. (a) Show retention of three percepts comprising the concept few by being able to recognize a few of something among a variety of amounts in each of three given sets.

(b) Show comprehension of the percepts comprising the concept few by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept few by being able to interpret a concept of few, draw conclusions, and translate by a physical action at least three few requests involving things similar to, but not exactly like, those given in step (a).

41. (a) Show retention of three percepts comprising the concept pailful by being able to recognize a pailful of something among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept pailful by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept pailful by being able to interpret a concept of pailful, draw conclusions, and translate by a physical action at least three pailful requests involving things similar to, but not exactly like, those given in step (a).

42. (a) Show retention of three percepts comprising the concept jarful by being able to recognize a jarful among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept jarful by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept jarful by being able to interpret a concept of jarful, draw conclusions, and translate by a physical action at least three jarful requests involving things similar to, but not exactly like, those given in step (a).

43. (a) Show retention of three percepts comprising the concept teaspoonful by being able to recognize a teaspoonful of something among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept teaspoonful by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept teaspoonful by being able to interpret a concept of teaspoonful, draw conclusions, and translate by a physical action at least three teaspoonful requests involving things similar to, but not exactly like, those given in step (a).

44. (a) Show retention of three percepts comprising the concept glassful by being able to recognize a glassful among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept glassful by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept glassful by being able to interpret a concept of glassful, draw conclusions, and translate by a physical action at least three glassful requests involving things similar to, but not exactly like, those given in step (a).

45. (a) Show retention of three percepts comprising the concept pair by being able to recognize a pair of objects among a variety of objects in each of three given sets.

(b) Show comprehension of the percepts comprising the concept pair by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept pair by being able to interpret a concept of pair, draw conclusions, and translate by a physical action at least three pair requests involving things similar to, but not exactly like, those given in step (a).

46. (a) Show retention of three percepts comprising the concept group by being able to recognize a group of like objects among a variety of objects in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept group by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept group by being able to interpret a concept of group, draw conclusions, and translate by a physical action at least three group requests involving things similar to, but not exactly like, those given in step (a).

47. (a) Show retention of three percepts comprising the concept tablespoonful by being able to recognize a tablespoonful among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept tablespoonful by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept tablespoonful by being able to interpret a concept of tablespoonful, draw conclusions, and translate by a physical action at least three tablespoonful requests involving things similar to, but not exactly like, those given in step (a).

48. (a) Show retention of three percepts comprising the concept whole by being able to recognize something whole among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept whole by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept whole by being able to interpret a concept of whole, draw conclusions, and translate by a physical action at least three whole requests involving things similar to, but not exactly like, those given in step (a).

49. (a) Show retention of three percepts comprising the concept part by being able to recognize a part of something among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept part by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept part by being able to interpret a concept of part, draw conclusions, and translate by a physical action at least three part requests involving things similar to, but not exactly like, those given in step (a).

50. (a) Show retention of three percepts comprising the concept warm by being able to recognize something which would normally be warm among a variety of different items in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept warm by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept warm by being able to interpret a concept of warm, draw conclusions, and translate by a physical action at least three warm requests involving things similar to, but not exactly like, those given in step (a).

51. (a) Show retention of three percepts comprising the concept cool by being able to recognize something which would normally be cool among a variety of different items in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept cool by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept cool by being able to interpret a concept of cool, draw conclusions, and translate by a physical action at least three cool requests involving things similar to, but not exactly like, those given in step (a).

52. Show comprehension of the relationship between the concepts big and little by being able to interpret the concepts, draw conclusions, and translate by a physical action at least three big and little requests involving things similar to, but not exactly like, those given in previous big or little exercises.

53. Show comprehension of the relationship between the concepts long and short by being able to interpret the concepts, draw conclusions, and translate by a physical action at least three long and short requests involving things similar to, but not exactly like, those given in previous long or short exercises.

54. Show comprehension of the relationship between the concepts round and flat by being able to interpret the concepts, draw conclusions, and translate by a physical action at least three round and flat requests involving things similar to, but not exactly like, those given in previous round or flat exercises.

55. Show comprehension of the relationship between the concepts tall and short by being able to interpret the concepts, draw conclusions, and translate by a physical action at least three tall and short requests involving things similar to, but not exactly like, those given in previous tall or short exercises.

56. Show comprehension of the relationship between the concepts wide and narrow by being able to interpret the concepts, draw conclusions, and translate by a physical action at least three wide and narrow requests involving things similar to, but not exactly like, those given in previous wide or narrow exercises.

57. Show comprehension of the relationship between the concepts heavy and light by being able to interpret the concepts, draw conclusions, and translate by a physical action at least three heavy and light requests involving things similar to, but not exactly like, those given in previous heavy or light exercises.

58. Show comprehension of the relationship between the concepts thick and thin by being able to interpret the concepts, draw conclusions, and translate by a physical action at least three thick and thin requests involving things similar to, but not exactly like, those given in previous thick or thin exercises.

59. Show comprehension of the relationship between the concepts all and some by being able to interpret the concepts, draw conclusions, and translate by a physical action at least three all and some requests involving things similar to, but not exactly like, those given in previous all or some exercises.

60. Show comprehension of the relationship between the concepts few and many by being able to interpret the concepts, draw conclusions, and translate by a physical action at least three few and many requests involving things similar to, but not exactly like, those given in previous few or many exercises.

61. Show comprehension of the relationship between the concepts empty and full by being able to interpret the concepts, draw conclusions, and translate by a physical action at least three empty and full requests involving things similar to, but not exactly like, those given in previous empty or full exercises.

62. Show comprehension of the relationship between the concepts hot and cold by being able to interpret the concepts, draw conclusions, and translate by a physical action at least three hot and cold requests involving things similar to, but not exactly like, those given in previous hot or cold exercises.

63. Show comprehension of the relationship between the concepts large and small by being able to interpret the concepts, draw conclusions, and translate by a physical action at least three large and small requests involving things similar to, but not exactly like, those given in previous large or small exercises.

64. Show comprehension of the relationship between the concepts taller and shorter by being able to interpret the concepts, draw conclusions, and translate by physical action at least three taller and shorter requests involving things similar to, but not exactly like, those given in previous tall or short exercises.

65. Show comprehension of the relationship between the concepts heavier and lighter by being able to interpret the concepts, draw conclusions, and translate by a physical action at least three heavier and lighter requests involving things similar to, but not exactly like, those given in previous heavy or light exercises.

66. Show comprehension of the relationship between the concepts thicker and thinner by being able to interpret the concepts, draw conclusions, and translate by a physical action at least three thicker and thinner requests involving things similar to, but not exactly like, those given in previous thick and thin exercises.

67. Show comprehension of the relationship between the concepts more than and less than by being able to interpret the concepts, draw conclusions, and translate by a physical action at least three more than and less than requests involving things similar to, but not exactly like, those given in previous more than or less than exercises.

68. Show comprehension of the relationship between the concepts whole and part by being able to interpret the concepts, draw conclusions, and translate by a physical action at least three whole and part requests involving things similar to, but not exactly like, those given in previous whole and part exercises.

69. Show comprehension of the relationship between the concepts pair and group by being able to interpret the concepts, draw conclusions, and translate by a physical action at least three pair and group requests involving things similar to, but not exactly like, those given in previous pair and group exercises.

70. Show comprehension of the relationship between the concepts teaspoonful and tablespoonful by being able to interpret the concepts, draw conclusions, and translate by a physical action at least three teaspoonful and tablespoonful requests involving things similar to, but not exactly like, those given in previous teaspoonful or tablespoonful exercises.

71. Show comprehension of the relationship between the concepts warm and cool by being able to interpret the concepts, draw conclusions, and translate by a physical action at least three warm and cool requests involving things similar to, but not exactly like, those given in previous warm and cool exercises.

72. Show comprehension of the relationship between the concepts larger and smaller by being able to interpret the concepts, draw conclusions, and translate by a physical action at least three larger and smaller requests involving things similar to, but not exactly like, those given in previous large and small exercises.

73. Show comprehension of the relationship between the concepts longer and shorter by being able to interpret the concepts, draw conclusions, and translate by a physical action at least three longer and shorter requests involving things similar to, but not exactly like, those given in previous longer and shorter exercises.

74. Show comprehension of the relationship between the concepts more and most by being able to interpret the concepts, draw conclusions, and translate by a physical action at least three more and most requests involving things similar to, but not exactly like, those given in previous more than exercises.

75. (a) Show retention of three percepts comprising the concept foot by being able to recognize the foot long object among a variety of different longer length objects in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept foot by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept foot by being able to interpret a concept of foot, draw conclusions, and translate by a physical action at least three foot requests involving things similar to, but not exactly like, those given in step (a).

76. Be able to measure width, length, height, and circumference of objects by number of feet with a foot long ruler or tape.

77. (a) Show retention of three percepts comprising the concept gallon by being able to recognize a gallon of something among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept gallon by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept gallon by being able to interpret a concept of gallon, draw conclusions, and translate by a physical action at least three gallon requests involving things similar to, but not exactly like, those given in step (a).

78. Be able to measure liquids by number of gallons using a one gallon pail or jug.

79. Be able to measure liquids with pint jars called "little jars."

80. Be able to measure liquids with quart jars called "big jars."

81. Be able to measure dry amounts, such as cereals or sugar, with "little" and "big" boxes and bags.

82. Be able to measure objects, such as potatoes or oranges, in "little" and "big" baskets or bags.

83. Be able to measure eggs with a dozen box called an "egg box."

84. Be able to measure liquids with a teaspoon and a tablespoon called "little spoon" and "big spoon."

85. Be able to measure very hot and very cold with a thermometer.

G.D.I. #2 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

86. Show comprehension of the relationship between the concepts tall, taller, and tallest by being able to interpret the concepts, draw conclusions, and translate by a physical action at least three tall, taller, and tallest requests involving things similar to, but not exactly like, those given in previous tall or taller exercises.

87. Show comprehension of the relationship between the concepts short, shorter, and shortest by being able to interpret the concepts, draw conclusions, and translate by a physical action at least three short, shorter, and shortest requests involving things similar to, but not exactly like, those given in previous short or shorter exercises.

88. Show comprehension of the relationship between the concepts big, bigger, and biggest by being able to interpret the concepts, draw conclusions and translate by a physical action at least three big, bigger, and biggest requests involving things similar to, but not exactly like, those given in previous big or bigger exercises.

89. Show comprehension of the relationship between the concepts small, smaller and smallest by being able to interpret the concepts, draw conclusions, and translate by a physical action at least three small, smaller, and smallest requests involving things similar to, but not exactly like those given in previous small and smaller exercises.

90. Show comprehension of the relationship between the concepts large, larger, and largest by being able to interpret the concepts, draw conclusions, and translate by a physical action at least three large, larger, and largest requests involving things similar to, but not exactly like, those given in previous large and larger exercises.

91. Show comprehension of the relationship between the concepts hot, hotter, hottest by being able to interpret the concepts, draw conclusions, and translate by a physical action at least three hot or hotter requests involving things similar to, but not exactly like, those given in previous hot or hotter exercises.

92. Show comprehension of the relationship between the concepts cold, colder, coldest by being able to interpret the concept, draw conclusions, and translate by a physical action at least three cold, colder, coldest requests involving things similar to, but not exactly like, those given in previous cold or colder exercises.

93. (a) Show retention of three percepts comprising the concept same as by being able to recognize an amount that is the same as a given example from among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept same as by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept same as by being able to interpret a concept of same as, draw conclusions, and translate by a physical action at least three same as requests involving things similar to, but not exactly like, those given in step (a).

94. (a) Show retention of three percepts comprising the concept couple by being able to recognize a couple of something among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept couple by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept couple by being able to interpret a concept of couple, draw conclusions, and translate by a physical action at least three couple requests involving things similar to, but not exactly like, those given in step (a).

95. (a) Show retention of three percepts comprising the concept equal parts by being able to recognize the equal parts of an object among a variety of different divided objects in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept equal parts by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept equal parts by being able to interpret a concept of equal parts, draw conclusions, and translate by a physical action at least three equal parts requests involving things similar to, but not exactly like, those given in step (a).

96. (a) Show retention of three percepts comprising the concept equal groups by being able to recognize the equal groups among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept equal groups by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept equal groups by being able to interpret a concept of equal groups, draw conclusions, and translate by a physical action at least three equal groups requests involving things similar to, but not exactly like, those given in step (a).

97. (a) Show retention of three percepts comprising the concept several by being able to recognize several of something among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept several by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept several by being able to interpret a concept of several, draw conclusions, and translate by a physical action at least three several requests involving things similar to, but not exactly like, those given in step (a).

98. (a) Show retention of three percepts comprising the concept dozen by being able to recognize a dozen among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept dozen by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept dozen by being able to interpret a concept of dozen, draw conclusions, and translate by a physical action at least three dozen requests involving things similar to, but not exactly like, those given in step (a).

99. (a) Show retention of three percepts comprising the concept half-dozen by being able to recognize a half-dozen of something among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept half-dozen by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept half-dozen by being able to interpret a concept of half-dozen, draw conclusions, and translate by a physical action at least three half-dozen requests involving things similar to, but not exactly like, those given in step (a).

100. (a) Show retention of three percepts comprising the concept quart by being able to recognize a quart of something among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept quart by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept quart by being able to interpret a concept of quart, draw conclusions, and translate by a physical action at least three quart requests involving things similar to, but not exactly like, those given in step (a).

101. (a) Show retention of three percepts comprising the concept pint by being able to recognize a pint of something among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept pint by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept pint by being able to interpret a concept of pint, draw conclusions, and translate by a physical action at least three pint requests involving things similar to, but not exactly like, those given in step (a).

102. (a) Show retention of three percepts comprising the concept yard by being able to recognize the yard long object among a variety of different shorter length objects in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept yard by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept yard by being able to interpret a concept of yard, draw conclusions, and translate by a physical action at least three yard requests involving things similar to, but not exactly like, those given in step (a).

103. (a) Show retention of three percepts comprising the concept one inch by being able to recognize the one inch long object among a variety of different longer length objects in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept one inch by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept one inch by being able to interpret a concept of one inch, draw conclusions, and translate by a physical action at least three one inch requests involving things similar to, but not exactly like, those given in step (a).

104. (a) Show retention of three percepts comprising the concept six inches by being able to recognize the six inches long object among a variety of different shorter and longer objects in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept six inches by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept six inches by being able to interpret a concept of six inches, draw conclusions, and translate by a physical action at least three six inches requests involving things similar to, but not exactly like, those given in step (a).

105. (a) Show retention of three percepts comprising the concept one pound by being able to recognize one pound of something being weighed on a scale among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept one pound by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept one pound by being able to interpret a concept of one pound, draw conclusions, and translate by a physical action at least three one pound requests involving things similar to, but not exactly like, those given in step (a).

106. (a) Show retention of three percepts comprising the concept half-gallon by being able to recognize a half-gallon of something among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept half-gallon by being able to translate by a physical action the three retained percepts.

(c) Show comprehension of the concept half-gallon by being able to interpret a concept of half-gallon, draw conclusions, and translate by a physical action at least three half-gallon requests involving things similar to, but not exactly like, those given in step (a).

107. Be able to measure width, lengths, and heights and circumference of objects by number of inches using a ruler or tape marked off in inches.

108. Be able to measure liquids by number of half-gallon using a half-gallon container.

109. Be able to measure liquids by number of quarts using a one quart container.

110. Be able to measure liquids by number of pints using a one pint container.

111. Be able to measure objects the size of eggs or smaller by the dozen using a 12 section box.

112. Be able to measure one pound of dry objects or materials using a scale.

113. Be able to measure widths, lengths, heights, and circumferences of objects by the yard using a yardstick or yard tape measure.

114. Be able to measure hot to hotter and cold to colder with a thermometer.

G.D.I. #3 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

115. Show comprehension of the relationship between the concepts inch, foot, and yard by being able to interpret the concepts, draw conclusions, and translate by a physical action at least three inch, foot, and yard requests which require the learner to select the most appropriate instrument with which to measure.

116. (a) Show retention of three of the percepts, comprising the concept two quarts equal a half-gallon by being able to recognize the group of quart containers which equal a half-gallon in each of three given sets with each set consisting of one correct group and two incorrect groups of quart containers.

(b) Show comprehension of the concept two quarts equal a half-gallon by being able to interpret at least three requests to match the amount of a half-gallon in quarts and then physically choose the correct number and type of liquid measures from a collection of pint and quart containers.

117. (a) Show retention of three of the percepts, comprising the concept two half-gallons equal a gallon by being able to recognize the group of half-gallon containers which equal a gallon in each of three given sets with each set consisting of one correct group and two incorrect groups of half-gallon containers.

(b) Show comprehension of the concept two half-gallons equal a gallon by being able to interpret at least three requests to match the amount of a gallon in half-gallons and then physically choose the correct number and type of liquid measures from a collection of pint, quart, and half-gallon containers.

118. (a) Show retention of three of the percepts comprising the concept four quarts equal a gallon by being able to recognize the group of quart containers in each of three given sets with each set consisting of one correct group and two incorrect groups of quart containers.

(b) Show comprehension of the concept four quarts equal a gallon by being able to interpret at least three requests to match the amount of a gallon in quarts and then physically choose the correct number and type of liquid measures from a collection of pint, quart, and half-gallon containers.

119. (a) Show retention of three of the percepts comprising the concept one-half inch by being able to recognize the one-half inch long object among a variety of different longer length objects in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept one-half inch by being able to translate by a physical action three retained percepts.

(c) Show comprehension of the concept one-half inch by being able to interpret a concept of one-half inch, draw conclusions, and translate by a physical action at least three one-half inch requests involving things similar to, but not exactly like, those given in step (a).

120. (a) Show retention of three of the percepts comprising the concept one-half foot by being able to recognize the one-half foot long object among a variety of different longer length objects in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept one-half foot by being able to translate by a physical action three retained percepts.

(c) Show comprehension of the concept one-half foot by being able to interpret a concept of one-half foot, draw conclusions, and translate by a physical action at least three one-half foot requests involving things similar to, but not exactly like, those given in step (a).

121. (a) Show retention of three of the percepts comprising the concept one-half yard by being able to recognize the one-half yard long object among a variety of different longer length objects in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept one-half yard by being able to translate by a physical action three retained percepts.

(c) Show comprehension of the concept one-half yard by being able to interpret a concept of one-half yard, draw conclusions, and translate by a physical action at least three one-half yard requests involving things similar to, but not exactly like, those given in step (a).

122. (a) Show retention of three of the percepts comprising the concept one-half pound by being able to recognize one-half pound of something being weighed on a scale among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept one-half pound by being able to translate by a physical action three retained percepts.

(c) Show comprehension of the concept one-half pound by being able to interpret a concept of one-half pound, draw conclusions, and translate by a physical action at least three one-half pound requests involving things similar to, but not exactly like, those given in step (a).

123. (a) Show retention of three of the percepts comprising the concept two pounds by being able to recognize two pounds of something being weighed on a scale among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept two pounds by being able to translate by a physical action three retained percepts.

(c) Show comprehension of the concept two pounds by being able to interpret a concept of two pounds, draw conclusions, and translate by a physical action at least three two pounds requests involving things similar to, but not exactly like, those given in step (a).

124. (a) Show retention of three of the percepts comprising the concept three pounds by being able to recognize three pounds of something being weighed on a scale among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept three pounds by being able to translate by a physical action three retained percepts.

(c) Show comprehension of the concept three pounds by being able to interpret a concept of three pounds, draw conclusions, and translate by a physical action at least three three pounds requests involving things similar to, but not exactly like, those given in step (a).

125. (a) Show retention of three of the percepts comprising the concept four pounds by being able to recognize four pounds of something being weighed on a scale among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept four pounds by being able to translate by a physical action three retained percepts.

(c) Show comprehension of the concept four pounds by being able to interpret a concept of four pounds, draw conclusions, and translate by a physical action at least three four pounds requests involving things similar to, but not exactly like, those given in step (a).

126. (a) Show retention of three of the percepts comprising the concept five pounds by being able to recognize five pounds of something being weighed on a scale among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept five pounds by being able to translate by a physical action three retained percepts.

(c) Show comprehension of the concept five pounds by being able to interpret a concept of five pounds, draw conclusions, and translate by a physical action at least three five pounds requests involving things similar to, but not exactly like, those given in step (a).

127. (a) Show retention of three of the percepts comprising the concept ten pounds by being able to recognize ten pounds of something being weighed on a scale among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept ten pounds by being able to translate by a physical action three retained percepts.

(c) Show comprehension of the concept ten pounds by being able to interpret a concept of ten pounds, draw conclusions, and translate by a physical action at least three ten pounds requests involving things similar to, but not exactly like, those given in step (a).

128. (a) Show retention of three of the percepts comprising the concept one-fourth inch by being able to recognize the one-fourth inch long object among a variety of different longer length objects in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept one-fourth inch by being able to translate by a physical action three retained percepts.

(c) Show comprehension of the concept one-fourth inch by being able to interpret a concept of one-fourth inch, draw conclusions, and translate by a physical action at least three one-fourth inch requests involving things similar to, but not exactly like, those given in step (a).

129. (a) Show retention of three of the percepts comprising the concept one-fourth pound by being able to recognize one-fourth pound of something being weighed on a scale among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept one-fourth pound by being able to translate by a physical action three retained percepts.

(c) Show comprehension of the concept one-fourth pound by being able to interpret a concept of one-fourth pound, draw conclusions, and translate by a physical action at least three one-fourth pound requests involving things similar to, but not exactly like, those given in step (a).

130. (a) Show retention of three of the percepts comprising the concept a quarter of something is the same as one-fourth of something by being able to recognize a quarter pound when shown as a one-fourth measure of a whole in three given sets.

(b) Show comprehension of the concept a quarter of something is the same as one-fourth of something by being able to interpret at least three requests to select the quarter pound of something being weighed on a scale and then physically choose the correct measure from among several different amounts shown.

131. (a) Show retention of three percepts comprising the concept bushel by being able to recognize a bushel of something among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept bushel by being able to translate by a physical action three retained percepts.

(c) Show comprehension of the concept bushel by being able to interpret a concept of bushel, draw conclusions, and translate by a physical action at least three bushel requests involving things similar to, but not exactly like, those given in step (a).

132. Be able to measure objects which require one-half inch calculations.

133. Be able to measure objects which require one-half foot calculations.

134. Be able to measure objects which require one-half yard calculations.

135. Be able to weigh up materials or objects which require one-half pound calculations.

136. Be able to weigh up materials or objects which require two, three, four, five, and ten pound calculations.

137. Be able to measure objects which require one-fourth inch calculations.

138. Be able to weigh up materials or objects which require one-fourth pound calculations.

139. Be able to measure the degree of temperature of water in each of three containers with one being cold, one being warm, and one being hot.

140. When shown each of the types and sizes of measuring containers, devices, or instruments which have been presented in the measurement sequence thus far, the learner will be able to state at least one object, kind of material, product, liquid, or condition which can be measured with the shown container, device, or instrument. (Ex. "Here is a tablespoon. What can we measure with it?")

G.D.I. #4 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

PLATEAU 5.1

141. (a) Show retention of three of the percepts comprising the concept <u>one ounce as one-sixteenth of a pound</u> by being able to recognize <u>one ounce</u> of something being weighed on a scale among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept <u>one ounce as one-sixteenth of a pound</u> by being able to translate by a physical action three retained percepts.

(c) Show comprehension of the concept <u>one ounce</u> by being able to interpret a concept of <u>one ounce</u>, draw conclusions, and translate by a physical action at least three <u>one ounce</u> requests involving things similar to, but not exactly like, those given in step (a).

142. (a) Show retention of three of the percepts comprising the concept <u>fifty pounds</u> by being able to recognize <u>fifty pounds</u> of something being weighed on a scale among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept <u>fifty pounds</u> by being able to translate by a physical action three retained percepts.

(c) Show comprehension of the concept <u>fifty pounds</u> by being able to interpret a concept of <u>fifty pounds</u>, draw conclusions, and translate by a physical action at least three <u>fifty pounds</u> requests involving things similar to, but not exactly like, those given in step (a).

143. (a) Show retention of three of the percepts comprising the concept <u>one hundred pounds</u> by being able to recognize <u>one hundred pounds</u> of something being weighed on a scale among a variety of amounts in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept one hundred pounds by being able to translate by a physical action three retained percepts.

(c) Show comprehension of the concept one hundred pounds by being able to interpret a concept of one hundred pounds, draw conclusions, and translate by a physical action at least three one hundred pounds requests involving things similar to, but not exactly like, those given in step (a).

144. (a) Show retention of three of the percepts comprising the concept one-eighth inch by being able to recognize the one-eighth inch long object among a variety of different longer length objects in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept one-eighth inch by being able to translate by a physical action three retained percepts.

(c) Show comprehension of the concept one-eighth inch by being able to interpret a concept of one-eighth inch, draw conclusions, and translate by a physical action at least three one-eighth inch requests involving things similar to, but not exactly like, those given in step (a).

145. (a) Show retention of three of the percepts comprising the concept one-sixteenth inch by being able to recognize the one-sixteenth inch long object among a variety of different longer length objects in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept one-sixteenth inch by being able to translate by a physical action three retained percepts.

(c) Show comprehension of the concept one-sixteenth inch by being able to interpret a concept of one-sixteenth inch, draw conclusions, and translate by a physical action at least three one-sixteenth inch requests involving things similar to, but not exactly like, those given in step (a)

146. (a) Show retention of three of the percepts comprising the concept one ton is 2000 pounds by being able to recognize one or more objects which individually or combined weigh one ton in each of three given sets with each set consisting of one correct measurement and two incorrect measurements. (Ex. one scale shows 20 one hundred pound sacks of cement and another shows a one ton weight. An equal sign is shown between them.)

(b) Show comprehension of the concept one ton is 2000 pounds by being able to interpret at least three requests to match the amount of one ton with weights and then physically choose the correct number and size of weights (pictorial) from a collection of marked weights.

147. (a) Show retention of three of the percepts comprising the concept one revolution of a wheel measuring one foot in circumference equals a one foot flat measure by being able to recognize the correct wheel that equals a foot flat measure in three presentations.

(b) Show comprehension of the concept one revolution of a wheel measuring one foot in circumference equals a one foot flat measure by being able to interpret three requests to measure one foot on a flat line with a wheel and then physically choose the correct wheel from a given collection of wheels. (A tape measure may be used to determine the circumference of the correct wheel).

148. (a) Show retention of three of the percepts comprising the concept the distance between one point and another on a flat straight surface equals the number of revolutions a wheel turns times it's circumference by being able to recognize the number of revolutions a wheel with a one foot circumference must turn to equal a given flat measurement in three different presentations. (Let one flat surface be a one-foot ruler, one be a yardstick, and one by ten feet on a metal tape measure).

(b) Show comprehension of the concept the distance between one point and another on a flat straight surface equals the number of revolutions a wheel turns times it's circumference by being able to interpret three requests to measure a flat straight surface with a wheel that is one-foot in circumference and then physically measure each of three given lines on a flat surface. (Do not use the three articles used in (a) above, but use the same lengths unmarked).

149. (a) Show retention of three of the percepts which comprise the concept a speedometer measures miles by being able to recognize the speedometer as the instrument of measurement in each of three presentations with each presentation showing three different types of instruments being used to measure lengths and only one being a speedometer measuring miles.

(b) Show comprehension of the concept a speedometer measures miles by being able to interpret three requests to measure mileage and then choosing the correct instrument from a collection of length measurement instruments.

150. (a) Show retention of the differences between a water meter, a gas meter, and an electric meter by being able to recognize and identify each meter when it is shown with other meters three consecutive times.

(b) Show comprehension of the differences between a water meter, a gas meter, and an electric meter by being able to interpret three requests to choose the meter which will measure water, will measure gas, and will measure electricity and then physically select the correct meter from among three shown.

151. Be able to read and measure the amounts required in given recipes with the correct instruments. (See instructional guide for recipes).

152. Be able to estimate the most appropriate measuring instrument for measuring a shown, but unspecified, amount of liquid products in three different presentations. (See instructional guide for liquids and amounts).

153. Be able to estimate the most appropriate measuring instrument for measuring a shown, but unspecified, amount of dry products in three different presentations. (See instructional guide for dry products and amounts).

154. Be able to estimate the most appropriate measuring instrument for measuring a shown, but unspecified, length, width, and thickness.

The instructional guide will provide a list of concrete materials to be used in teaching the rate objectives to follow: ↓

155. Be able to calculate the following from the rates given:

(a) There are twelve inches per foot.
How many inches in three feet?

(b) There are three feet per yard.
How many feet in three yards?

156. Be able to calculate the following from the rates given:

(a) There are two pints per quart.
How many pints in two quarts?

(b) There are four pints per half-gallon.
How many pints in two half-gallons?

(c) There are eight pints per gallon.
How many pints in two gallons?

(d) There are two quarts per half-gallon.
How many quarts in two half-gallons?

(e) There are four quarts per gallon.
How many quarts in two gallons?

(f) There are two half-gallons per gallon.
How many half-gallons in two gallons?

157. Be able to calculate the following from the rates given:

(a) There are two shoes per pair.
How many shoes in three pair?

(b) There are two socks per pair.
How many socks in five pair?

158. Be able to calculate the following from the rates given:

(a) There are twelve eggs per dozen.
How many eggs in four dozen?

(b) There are twelve oranges per dozen.
How many oranges in five dozen?

159. Be able to calculate the following from the rates given:

(a) There are sixteen ounces per pound.
How many ounces in two pounds?

(b) There are eight ounces per half-pound.
How many ounces in one pound?

160. Be able to calculate the following from the rates given:

(a) My car goes twenty miles per gallon of gas.
How many miles will it go with ten gallons?

(b) Bill's car goes twelve miles per gallon of gas.
How many miles will it go with ten gallons?

161. Be able to calculate the following from the rates given:

(a) A store sells bacon at 90¢ per pound.
How much will five pounds cost?

(b) A store sells sugar at 10¢ per pound.
How much will ten pounds cost?

(c) Gold is worth 35 dollars per ounce.
How much is ten ounces worth?

(d) Butter sells for 70¢ per pound.
How much will two pounds cost?

162. Be able to calculate the following from the rates given:

(a) Milk sells for 32¢ per quart.
How much will four quarts cost?

(b) Vinegar sells for 25¢ per pint bottle.
How much will two bottles cost?

(c) Gasoline sells for 40¢ per gallon.
How much does twenty gallons cost?

163. Be able to calculate the following from the rates given:

(a) Shoes sell for ten dollars per pair.
How much will two pairs cost?

(b) Eggs sell for 80¢ per dozen.
How much will three dozen cost?

(c) Tomatoes sell for 50¢ per basket.
How much will four baskets cost?

164. Be able to calculate the following from the rates given:

(a) Ribbon sells for 10¢ per foot.
How much will three feet cost?

(b) Dress material sells for one dollar per yard.
How much will five yards cost?

(c) It costs ten cents per mile to rent a car.
How much will it cost if the car is driven 100 miles?

165. Be able to recognize the sign @ as "at" in pricing advertisement.

G.D.I. #5 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

PLATEAU 6.1

166. (a) Shown retention of the abbreviation for each of 15 terms of measurement (listed below) by being able to recognize the correct abbreviation among three shown for each of the 15 terms when the two incorrect abbreviations given are those of a different type of measurement.

Terms

(1)	inch	(5)	quart	(9)	ton	(13)	dozen
(2)	foot	(6)	gallon	(10)	teaspoon	(14)	bushel
(3)	yard	(7)	ounce	(11)	tablespoon	(15)	mile
(4)	pint	(8)	pound	(12)	cup		

(b) Show comprehension of the abbreviation for each of 15 terms of measurement (listed below) by being able to translate each abbreviation into the term either in written or verbal form.

Abbreviations

(1)	in.	(4)	pt.	(7)	oz.	(10)	tsp.	(13)	doz.
(2)	ft.	(5)	qt.	(8)	lb.	(11)	Tblsp.	(14)	bu.
(3)	yd.	(6)	gal.	(9)	T.	(12)	c.	(15)	mi.

167. Given the following different types of areas to be measured with standard instruments, the learner will be able to select the appropriate instruments and measure the width and length to within a teacher specified exactness:

(a) A floor area (b) A window pane area (c) A table top (d) A door (e) A wall with no windows or doors (f) An outdoor play area which is larger than 100 ft. x 100 ft.

168. Given the following problems to be solved, the learner will be able to select the appropriate instruments and perform the measurement tasks to within a teacher specified exactness, and state the answer to the problem:

(a) What size rug is needed to cover our classroom floor if eighteen inches of uncovered border is left on each of the four sides?

(b) What size table cloth is needed to cover our classroom table if the cloth is to hang over the table one foot on all sides?

(c) How many pints of paint should we buy to paint both sides of our classroom door if one pint of paint will cover an area approximately 10 ft. x 15 ft.?

(d) How many feet of fence should we buy to enclose our play area?

(e) How many yards of material will we need to make curtains for our classroom windows?

169. (a) Show retention of three of the percepts comprising the concept a square inch is a square area which is one inch wide and one inch long by being able to recognize the object which is one square inch in area among a variety of different sized objects when only one of the objects has a square inch of area in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept a square inch by being able to translate by a physical action three retained percepts.

(c) Show comprehension of the concept one square inch by being able to interpret the concept, draw conclusions, and translate by a physical action at least three square inch requests involving objects similar to, but not exactly like, those given in step (a).

170. (a) Be able to measure off and draw thirty-six square inch areas on a sheet of graph paper, with six rows of six squares each connected together.

(b) Be able to answer the following questions by counting the drawn squares on the graph paper:

(1) How many square inches are in a rectangle two inches wide and three inches long?

(2) How many square inches are in a rectangle four inches wide and six inches long?

(3) How many square inches are in a rectangle one inch wide and six inches long?

171. Be able to answer the following questions: (Student may use a ruler, paper, and pencil if needed)

(1) How many square inches would be in a rectangle four inches long and three inches wide?

(2) How many square inches would be in a rectangle six inches long and two inches wide?

(3) How many square inches would be in a rectangle twelve inches long and one inch wide?

172. Given the following different types of areas to be measured with standard instruments; the learner will be able to select the appropriate instrument, measure the width and length of the area to the nearest inch, and calculate the number of square inches in the area:

(a) one wall tile.
(b) one floor tile.
(c) A sheet of paper.
(d) One side of a concrete block.

173. (a) Show retention of three of the percepts comprising the concept the square inches in the area of a right triangle is one-half the product of the shortest two sides of the triangle by being able to recognize the square inch number which is correct for the area of a given triangle in each of three presentations.

(b) Show comprehension of three of the percepts comprising the concept the square inches in the area of a right triangle is one-half the product of the shortest two sides of the triangle by being able to translate byaa physical action three retained percepts.

(c) Show comprehension of the concept the square inches in the area of a right triangle is one-half the product of the shortest two sides of the triangle by being able to interpret the concept, draw conclusions, and translate by a physical action at least three requests to find the square inch area of right triangles similar to, but not exactly like, those given in step (a).

174. (a) Using the drawing of the thirty-six square inch areas done for objective 174 (a), be able to bisect each square inch area in the same direction to make 64 one-half square inch right triangles.

(b) Be able to answer the following questions by counting the drawn triangles of step (a) and dividing the number of triangles by 2:

(1) How many square inches are in a right triangle, whose shortest sides are two inches wide and two inches long?

(2) How many square inches are in a right triangle, whose shortest sides are four inches wide and four inches long?

(3) How many square inches are in a right triangle, whose shortest sides are six inches wide and six inches long?

175. (a) Be able to draw on a sheet of paper and bisect into two equal triangles, each of the following size rectangles:

(1) two inches wide and three inches long

(2) three inches wide and four inches long

(3) four inches wide and five inches long

(b) Be able to answer the following questions using the drawings of step (a) and calculating with a paper and pencil:

(1) How many square inches are in a right triangle whose shortest sides are two inches wide and three inches long?

(2) How many square inches are in a right triangle whose shortest sides are three inches wide and four inches long?

(3) How many square inches are in a right triangle whose shortest sides are four inches wide and five inches long?

176. Given three different sized areas (as described below) to be measured with standard instruments; the learner will be able to select the appropriate instrument, measure the area to the nearest inch, and calculate the number of square inches in the area:

(a) A triangle made from a bisected floor tile which has been pre-cut.

(b) A rectangle and a 90^0 triangle of cardboard, each having one common length side.

(c) A pre-drawn outline on a chalk board which has parallel top and bottom lines, has a perpendicular line at the left end, and a diagonal line at the right end. (Learner can be shown the method to determine the rectangle portion and the triangle portion).

177. (a) Show retention of three of the percepts comprising the concept a square foot is a square area which is one foot wide and one foot long by being able to recognize the object which is one square foot in area among a variety of different sized objects when only one of the objects has a square foot of area in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept a square foot by being able to translate by a physical action three retained percepts.

(c) Show comprehension of the concept a square foot by being able to interpret the concept, draw conclusions, and translate by a physical action at least three square foot requests involving objects similar to, but not exactly like, those given in step (a).

178. (a) Be able to measure off and draw nine square foot areas on a floor or sheet of large paper, with three rows of three squares each connected together.

(b) Be able to answer the following questions by counting the drawn squares of step (a).

(1) How many square feet are in a rectangle one foot wide and three feet long?

(2) How many square feet are in a rectangle two feet wide and two feet long?

(3) How many square feet are in a rectangle two feet wide and three feet long?

179. Be able to answer the following questions: (student may do the calculations by using a flat area, a ruler or yardstick, and/or pencil and paper if needed)

(a) How many square feet would be in a rectangle three feet wide and four feet long?

(b) How many square feet would be in a rectangle three feet wide and four feet long?

(c) How many square feet would be in a rectangle one foot wide and twelve feet long?

180. Given the following different types of areas to be measured with standard instruments, the learner will be able to select the appropriate instrument, measure the width and length of the area to the nearest foot, and calculate the number of square feet in the area:

(a) A table top
(b) A classroom floor
(c) A wall without doors or window
(d) An outdoor play area

181. (a) Show retention of three of the percepts comprising the concept the square feet in the area of a right triangle is one-half the product of the shortest two sides of the triangle by being able to recognize the square foot number which is correct for the area of a given triangle in each of three presentations.

(b) Show comprehension of three of the percepts comprising the concept the square feet in the area of a right triangle is one-half the product of the shortest two sides of the triangle by being able to translate by a physical action three retained percepts.

(c) Show comprehension of the concept the square feet in the area of a right triangle is one-half the product of the shortest two sides of the triangle by being able to interpret the concept, draw conclusions, and translate by a physical action at least three requests to find the square foot area of right triangles similar to, but not exactly like, those given in step (a).

182. (a) Using the drawing of the nine square foot areas done for objective 178 (a), be able to bisect each square foot area in the same direction to make 18 one-half square foot right triangles.

(b) Be able to answer the following questions by counting the drawn triangles of step (a) and dividing the number of triangles by 2:

(1) How many square feet are in a right triangle whose shortest two sides are one foot wide and one foot long?

(2) How many square feet are in a right triangle whose shortest two sides are two feet wide and two feet long?

(3) How many square feet are in a right triangle whose shortest two sides are three feet wide and three feet long?

183. (a) Be able to draw on a floor or playground area, and bisect into two equal triangles, each of the following size rectangles:

(1) two feet wide and three feet long

(2) three feet wide and four feet long

(3) four feet wide and five feet long

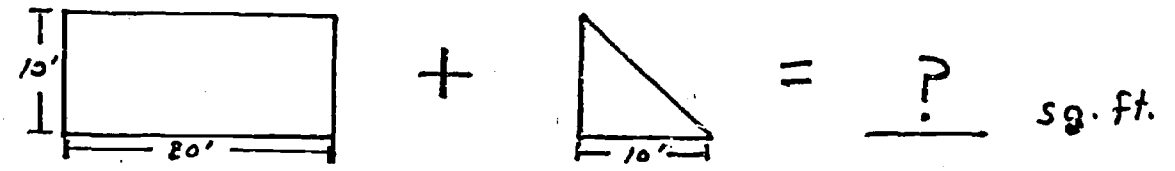
(b) Be able to answer the following questions using the drawings of step (a) and calculating with paper and pencil:

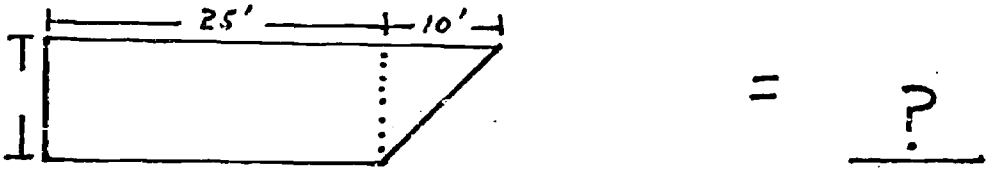
(1) How many square feet are in a right triangle whose shortest two sides are two feet wide and three feet long?

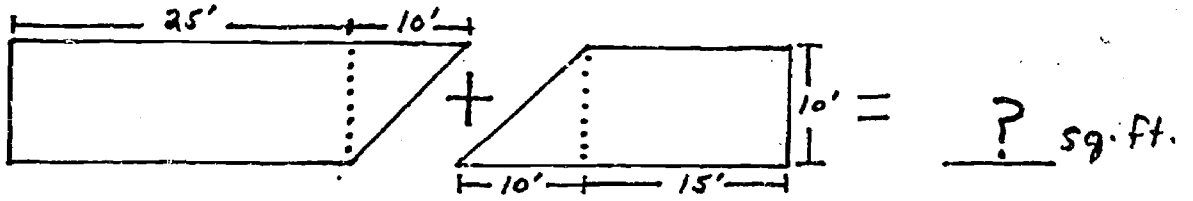
(2) How many square feet are in a right triangle whose shortest two sides are three feet wide and four feet long?

(3) How many square feet are in a right triangle whose shortest two sides are four feet wide and five feet long?

184. Given the three different sized scale drawings shown below, the learner will be able to calculate the number of square feet in each of the given areas:

a. 

b. 

c. 

185. Given the fact that one "square" of roofing material will cover 100 square feet of house top area and the following three house top diminsions, the learner will be able to calculate the exact number of "squares" of roofing material needed to cover each of the given house top areas:

(a) A house top area which measures 10 ft. high, 35 ft. across the top, and 25 ft. across the bottom.

(b) A house top area which measures 10 ft. high, 30 ft. across the top, and 20 ft. across the bottom.

(c) A house top area which measures 10 ft. high, and 50 ft. across the top and the bottom.

186. (a) Show retention of three of the percepts comprising the concept a square yard is a square area which is one yard wide and one yard long by being able to recognize the object which is one square yard in area among a variety of different sized objects when only one of the objects has a square yard of area in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept a square yard by being able to translate by a physical action three retained percepts.

(c) Show comprehension of the concept a square yard by being able to interpret the concept, draw conclusions, and translate by a physical action at least three square yard requests involving objects similar to, but not exactly like, those given in step (a).

187. (a) Be able to measure off and draw nine square yard areas on a floor or level playground, with three rows of three squares each connected together.

(b) Be able to answer the following questions by counting the drawn squares of step (a).

(1) How many square yards are in a rectangle one yard wide and three yards long?

(2) How many square yards are in a rectangle two yards wide and two yards long?

(3) How many square yards are in a rectangle three yards wide and two yards long?

188. Be able to answer the following questions: (student may do the calculations by using a flat area, a yardstick or tape measure, and/or pencil and paper if needed)

(a) How many square yards would be in a rectangle three yards wide and four yards long?

(b) How many square yards would be in a rectangle two yards wide and six yards long?

(c) How many square yards would be in a rectangle one yard wide and twelve yards long?

189. Given the following different types of areas to be measured with standard instruments; the learner will be able to select the appropriate instrument, measure the width and length of the area to the nearest yard, and calculate the number of square yards in the area:

(a) A classroom floor
(b) A cafeteria floor
(c) A school building's floors
(d) A parking lot

190. (a) Show retention of three of the percepts comprising the concept a cubic inch is a volume which is one inch wide, one inch long and one inch deep by being able to recognize the object which has a volume of one cubic inch among a variety of different sized objects when only one of the objects has a volume of one cubic inch in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept a cubic inch by being able to translate by a physical action three retained percepts.

(c) Show comprehension of the concept a cubic inch by being able to interpret the concept, draw conclusions, and translate by a physical action at least three cubic inch requests involving objects similar to, but not exactly like, those given in step (a).

191. (a) Given 36 clear plastic cubic inch blocks on a table, be able to arrange the blocks in a pattern of six rows of six blocks to each row.

(b) Be able to answer the following questions by counting the blocks arranged in the above pattern.

(1) How many cubic inches are in a space two inches wide, three inches long, and one inch deep?

(2) How many cubic inches are in a space four inches wide, six inches long, and one inch deep?

(3) How many cubic inches are in a space six inches long, one inch wide and one inch deep?

192. Given a one cubic inch measuring box, a supply of sand, and the following spaces to fill with sand, the learner will be able to determine the number of cubic inches of sand required to fill each space.

(a) A box which measures 3 inches x 9 inches x 1 inch.

(b) A box which measures 3 inches x 3 inches x 3 inches.

(c) A box which measures 4½ inches x 6 inches x 1 inch.

193. Be able to answer the following questions: (student may use one inch cube blocks and/or paper and pencil to aid with computations if needed)

(a) How many cubic inches are in a space which is four inches long, three inches wide and one inch thick?

(b) How many cubic inches are in a space which is six inches long, two inches wide, and two inches thick?

(c) How many cubic inches are in a space which is three inches long, three inches wide, and three inches thick?

194. Given the following different types of empty objects to be measured with standard instruments, the learner will be able to select the appropriate instruments, measure the width, length, and depth (or thickness) of the object to the nearest inch, and calculate the approximate number of cubic inches of empty space the object has in it:

(a) A rectangular bread pan.
(b) A shoe box
(c) A desk drawer
(d) A square bottle (or milk carton)

195. (a) Show retention of three of the percepts comprising the concept a cubic foot is a volume which is one foot wide, one foot long, and one foot deep by being able to recognize the object which has a volume of one cubic foot among a variety of different sized objects when only one of the objects has a volume of one cubic foot in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept a cubic foot by being able to translate by a physical action three retained percepts.

(c) Show comprehension of the concept a cubic foot by being able to interpret the concept, draw conclusions, and translate by a physical action at least three cubic foot requests involving objects similar to, but not exactly like, those given in step (a).

196. (a) Given 27 cubic foot boxes in an area of sufficient size, be able to arrange the boxes in a pattern of three rows of nine boxes to each row.

(b) Be able to answer the following questions by counting the boxes arranged in the above pattern:

(1) How many cubic feet are in a space three feet wide, five feet long, and one foot deep.

(2) How many cubic feet are in a space two feet wide, six feet long, and one foot deep?

(3) How many cubic feet are in a space three feet wide, nine feet long, and one foot deep?

197. Given a one cubic foot measuring box, a supply of dry sand, and the following spaces to fill with sand; the learner will be able to determine the number of cubic feet of sand required to fill each space:

(a) A frame box measuring 1 foot x 2 feet x 6 inches.

(b) A frame box measuring 1 foot x 3 feet x 4 inches.

(c) A frame box measuring 2 feet x 4 feet x 3 inches.

198. Be able to answer the following questions: (student may use scale drawings and/or pencil and paper for calculations if needed)

(a) How many cubic feet are in a space which is nine feet long, three feet wide, and one foot deep?

(b) How many cubic feet are in a space which is nine feet long, six feet wide, and one foot deep?

(c) How many cubic feet are in a space which is nine feet long, three feet wide, and five feet deep?

199. Given the following different types of spaces to be measured with standard instruments, the learner will be able to select the appropriate instrument, measure the width, length, and depth of the nearest foot, and calculate the approximate number of cubic feet within the space:

(a) A closet (excluding shelves)

(b) A classroom (excluding closets, cabinets, desks, etc.)

(c) A hallway (assuming doors at each end)

200. (a) Show retention of three of the percepts comprising the concept a cubic yard is a volume which is one yard wide, one yard long, and one yard deep by being able to recognize the object which has a volume of one cubic yard among a variety of different sized objects when only one of the objects has a volume of one cubic yard in each of three given sets.

(b) Show comprehension of three of the percepts comprising the concept a cubic yard by being able to translate by a physical action three retained percepts.

(c) Show comprehension of the concept a cubic yard by being able to interpret the concept, draw conclusions, and translate by a physical action at least three cubic yard requests involving objects similar to, but not exactly like, those given in step (a).

201. (a) Given 27 cubic foot boxes in an area of sufficient size and the fact recalled that three feet equal one yard, the learner will be able to construct a pattern with the cubic foot boxes which represents one cubic yard.

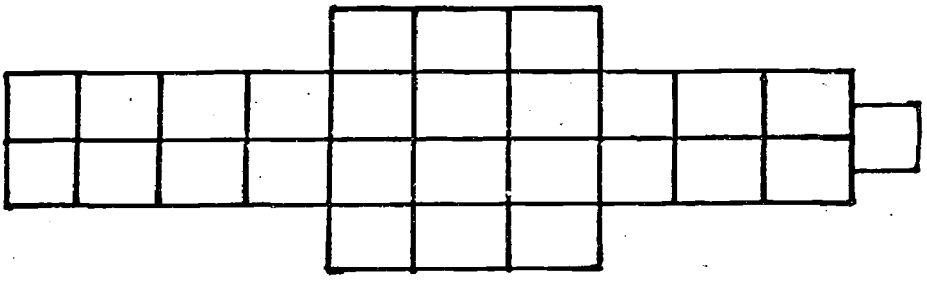
(b) Given the boxes in step (a) above and permission to rearrange them as needed to solve a problem, the learner will be able to determine answers to the following questions by box rearrangements:

(1) How many cubic yards are in a space which is three feet wide, nine feet long, and one foot deep?

(2) How many cubic yards are in a space which is one foot wide, nine feet long, and three feet deep?

(3) How many cubic yards are in a space which is one foot deep and looks like this....

Each block is one foot square



202. Using pencil and paper for calculations and the fact recalled that 27 cubic feet equal one cubic yard, the learner will be able to answer the following questions:

(a) How many cubic yards of sand will it take to make a beach in your backyard which will be 3 ft wide, 9 ft. long, and 1 ft. deep?

(b) How many cubic yards of concrete will it take to make a floor which will be 6 ft. wide, 9 ft. long, and ½ foot thick?

(c) How many cubic yards of rich dirt would it take to make a flower bed that would be 3 ft. wide, 27 feet long, and one foot deep?

G.D.I. #6 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

TIME AND MOTION

SKILLS SEQUENCE
OBJECTIVES

PLATEAU 1.1

UNITS

1. (a) Show retention of three of the percepts comprising the concept go by being able to recognize the going action in each of three given sets with each set consisting of stop and go motions.

   (b) Show comprehension of three percepts comprising the concept go by being able to translate by physical action the three retained percepts.

   (c) Show comprehension of the concept go by being able to interpret the concept of go, draw conclusions, and translate by physical action at least three go requests which are similar to, but not exactly like, those given in step (a).

2. (a) Show retention of three of the percepts comprising the concept stop by being able to recognize the stopped motion in each of three given sets with each set consisting of stop and go motions.

   (b) Show comprehension of three percepts comprising the concept stop by being able to translate by physical action the three retained percepts.

   (c) Show comprehension of the concept stop by being able to interpret the concept of stop, draw conclusions, and translate by physical action at least three stop requests which are similar to, but not exactly like, those given in step (a).

3. (a) Show retention of the three percepts comprising the concept wait by being able to recognize the waiting motion in each of three given sets with each set consisiting of a sequence of go, stop, wait, and go again motions.

   (b) Show comprehension of three percepts comprising the concept wait by being able to translate by physical action the three retained percepts.

   (c) Show comprehension of the concept wait by being able to interpret the concept of wait, draw conclusions, and translate by physical action at least three wait requests which are similar to, but not exactly like, those given in step (a).

4. (a) Show retention of three of the percepts comprising the concept slow by being able to recognize the slow motion in each of three given sets with each set consisting of a sequence of slow, hurry, and fast motions.

   (b) Show comprehension of three percepts comprising the concept slow by being able to translate by physical action the three retained percepts.

   (c) Show comprehension of the concept slow by being able to interpret the concept of slow, draw conclusions, and translate by physical action at least three slow requests which are similar to, but not exactly like, those given in step (a).

5. (a) Show retention of three of the percepts comprising the concept hurry by being able to recognize the hurrying motion in each of three given sets with each set consisiting of a sequence of slow, hurry, and fast motions.

   (b) Show comprehension of three percepts comprising the concept hurry by being able to translate by physical action the three retained percepts.

   (c) Show comprehension of the concept hurry by being able to interpret the concept of hurry, draw conclusions, and translate by physical action at least three hurry requests which are similar to, but not exactly like, those given in step (a).

6. (a) Show retention of three of the percepts comprising the concept fast by being able to recognize the fast motion in each of three given sets with each set consisiting of a sequence of slow, hurry, and fast motions.

   (b) Show comprehension of three percepts comprising the concept fast by being able to translate by physical action the three retained percepts.

   (c) Show comprehension of the concept fast by being able to interpret the concept of fast, draw conclusions, and translate by physical action at least three fast requests which are similar to, but not exactly like, those given in step (a).

7. (a) Show retention of three of the percepts comprising the concept now by being able to recognize the now activity in each of three given sets with each set consisiting of a sequence of before, now, and after actions.

   (b) Show comprehension of three percepts comprising the concept now by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept now by being able to interpret the concept of now, draw conclusions, and translate by physical action at least three now requests which are similar to, but not exactly like, those given in step (a).

8. (a) Show retention of three of the percepts comprising the concept before by being able to recognize the before action in each of three given sets with each set consisting of a sequence of before, now, and after actions.

(b) Show comprehension of three percepts comprising the concept before by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept before by being able to interpret the concept of before, draw conclusions, and translate by physical action at least three before requests which are similar to, but not exactly like, those given in step (a).

9. (a) Show retention of three of the percepts comprising the concept after by being able to recognize the after action in each of three given sets with each set consisting of a sequence of before, now, and after actions.

(b) Show comprehension of three percepts comprising the concept after by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept after by being able to interpret the concept of after, draw conclusions, and translate by physical action at least three after requests which are similar to, but not exactly like, those given in step (a).

10. (a) Show retention of three of the percepts comprising the concept on-time by being able to recognize the on-time action in each of three given sets with each set consisting of a sequence of early, on-time and late actions.

(b) Show comprehension of three percepts comprising the concept on-time by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept on-time by being able to interpret the concept of on-time, draw conclusions, and translate by physical action at least three on-time requests which are similar to, but not exactly like, those given in step (a).

11. (a) Show retention of three of the percepts comprising the concept early by being able to recognize the early action in each of three given sets with each set consisting of a sequence of early, on-time, and late actions.

(b) Show comprehension of three percepts comprising the concept early by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept early by being able to interpret the concept of early, draw conclusions, and translate by physical action at least three early requests which are similar to, but not exactly like, those given in step (a).

12. (a) Show retention of three of the percepts comprising the concept late by being able to recognize the late action in each of three given sets with each set consisting of a sequence of early, on-time, and late actions.

(b) Show comprehension of three percepts comprising the concept late by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept late by being able to interpret the concept of late, draw conclusions, and translate by physical action at least three late requests which are similar to, but not exactly like, those given in step (a).

13. (a) Show retention of three of the percepts comprising the concept lunch-time by being able to recognize the lunch-time activities in each of three given sets with each set consisting of breakfast, lunch, and supper-time activities.

(b) Show comprehension of three percepts comprising the concept lunch-time by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept lunch-time by being able to interpret the concept of lunch-time, draw conclusions, and translate by physical action at least three lunch-time requests which are similar to, but not exactly like, those given in step (a).

14. (a) Show retention of three of the percepts comprising the concept work-time by being able to recognize the work-time activities in each of three given sets with each set consisting of work-, play-, and recess-time activities.

(b) Show comprehension of three percepts comprising the concept work-time by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept work-time by being able to interpret the concept of work-time, draw conclusions, and translate by physical action at least three work-time requests which are similar to, but not exactly like, those given in step (a).

15. (a) Show retention of three of the percepts comprising the concept play-time by being able to recognize the play-time activities in each of three given sets with each set consisting of work-, play-, and recess-time activities.

(b) Show comprehension of three percepts comprising the concept play-time by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept play-time by being able to interpret the concept of play-time, draw conclusions, and translate by physical action at least three play-time requests which are similar to, but not exactly like, those given in step (a).

16. (a) Show retention of three of the percepts comprising the concept rest-time by being able to recognize the rest-time activities in each of three given sets with each set consisting of work-, play-, and rest-time activities.

(b) Show comprehension of three percepts comprising the concept rest-time by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept rest-time by being able to interpret the concept of rest-time, draw conclusions, and translate by physical action at least three rest-time requests which are similar to, but not exactly like, those given in step (a).

17. (a) Show retention of three of the percepts comprising the concept go-home-time by being able to recognize the go-home-time activities in each of three given sets with each set consisting of work-time, play-time, and go-home-time activities.

(b) Show comprehension of three percepts comprising the concept go-home-time by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept go-home-time by being able to interpret the concept of go home time, draw conclusions, translate by physical action at least three go-home-time requests which are similar to, but not exactly like, those given in step (a).

18. (a) Show retention of three of the percepts comprising the concept today by being able to recognize the today activities in each of three given sets with each set consisting of yesterday and today activities. (Note: use Sunday and Monday examples).

(b) Show comprehension of three percepts comprising the concept today by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept today by being able to interpret the concept of today, draw conclusions, and translate by physical action at least three today requests which are similar to, but not exactly like, those given in step (a).

19. (a) Show retention of three of the percepts comprising the concept yesterday by being able to recognize the yesterday activities in each of three given sets with each set consisting of yesterday and today activities. (Note: use Sunday and Monday examples).

(b) Show comprehension of three percepts comprising the concept yesterday by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept yesterday by being able to interpret the concept of yesterday, draw conclusions, and translate by physical action at least three yesterday requests which are similar to, but not exactly like, those given in step (a).

20. (a) Show retention of three of the percepts comprising the concept tomorrow by being able to recognize the tomorrow activities in each of three given sets with each set consisting of today and tomorrow activities. (Note: use Friday and Saturday examples).

(b) Show comprehension of three percepts comprising the concept tomorrow by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept tomorrow by being able to interpret the concept of tomorrow, draw conclusions, and translate by physical action at least three tomorrow requests which are similar to, but not exactly like, those given in step (a).

21. (a) Show retention of three of the percepts comprising the concept beginning by being able to recognize the beginning action or point in each of three given sets with each set consisting of beginning, middle, and end actions or points.

(b) Show comprehension of three percepts comprising the concept beginning by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept beginning by being able to interpret the concept of beginning, draw conclusions, and translate by physical action at least three beginning requests which are similar to, but not exactly like, those given in step (a).

22. (a) Show retention of three of the percepts comprising the concept end by being able to recognize the end action in each of three given sets with each set consisting of beginning, middle, and end actions or points.

(b) Show comprehension of three percepts comprising the concept end by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept end by being able to interpret the concept of end, draw conclusions, and translate by physical action at least three end requests which are similar to, but not exactly like, those given in step (a).

A23. (a) Show retention of three of the percepts comprising the concept middle by being able to recognize the middle action in each of three given sets with each set consisting of beginning, middle, and end actions or points.

(b) Show comprehension of three percepts comprising the concept middle by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept middle by being able to interpret the concept of middle, draw conclusions, and translate by physical action at least three middle requests which are similar to, but not exactly like, those given in step (a).

G.D.I. #1 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

PLATEAU 2.1

B23. Show comprehension of the relationship between the concept go and stop by being able to interpret the concepts, draw conclusions, and translate by physical action at least three go and stop requests which are similar to, but not exactly like, those given in previous go or stop exercises.

24. Show comprehension of the relationship between the concept slow and fast by being able to interpret the concept, draw conclusions, and translate by physical action at least three slow and fast requests which are similar to, but not exactly like, those given in previous slow or fast exercises.

25. Show comprehension of the relationship between the concepts slower and faster by being able to interpret the concepts, draw conclusions, and translate by physical action at least three slower and faster requests which are similar to, but not exactly like, those given in previous slower or fast exercises.

26. Show comprehension of the relationship between the concepts before and after by being able to interpret the concepts, draw conclusions, and translate by physical action at least three before and after requests which are similar to, but not exactly like, those given in previous before and after exercises.

27. Show comprehension of the relationship between the concepts early and late by being able to interpret the concepts, draw conclusions, and translate by physical action at least three early and late requests which are similar to, but not exactly like, those given in previous early or late exercises.

28. Show comprehension of the relationship between the concepts beginning and end by being able to interpret the concepts, draw conclusions and translate by physical action at least three beginning and end requests which are similar to, but not exactly like, those given in previous beginning or end exercises.

29. (a) Show retention of three of the percepts comprising the concept night by being able to recognize the night scene or activity in each of three given sets with each set consisting of day or night scenes or activities.

(b) Show comprehension of three percepts comprising the concept night by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept night by being able to interpret the concept of night, draw conclusions, and translate by physical action at least three night requests which are similar to, but not exactly like, those given in step (a).

30. (a) Show retention of three of the percepts comprising the concept day by being able to recognize the day scene or activity in each of three given sets with each set consisting of day or night scenes and activities.

(b) Show comprehension of three percepts comprising the concept day by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept day by being able to interpret the concept of day, draw conclusions, and translate by physical action at least three day requests which are similar to, but not exactly like, those given in step (a).

31. Show comprehension of the relationship between the concepts day and night by being able to interpret the concepts, draw conclusions, and translate by physical action at least three day and night requests which are similar to, but not exactly like, those given in previous day or night exercises.

32. (a) Show retention of three of the percepts comprising the concept morning by being able to recognize the morning scene or activity in each of three given sets with each set consisting of morning, noon, and afternoon scenes or activities.

(b) Show comprehension of three percepts comprising the concept morning by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept morning by being able to interpret the concept of morning, draw conclusions, and translate by physical action at least three morning requests which are similar to, but not exactly like, those given in step (a).

33. (a) Show retention of three of the percepts comprising the concept noon by being able to recognize the noon scene or activity in each of three given sets with each set consisting of morning, noon, and afternoon scenes or activities.

(b) Show comprehension of three percepts comprising the concept noon by being able to translate by physical action the three retained percepts

(c) Show comprehension of the concept noon by being able to interpret the concept of noon, draw conclusions, and translate by physical action at least three noon requests which are similar to, but not exactly like, those given in step (a).

34. (a) Show retention of three of the percepts comprising the concept afternoon by being able to recognize the afternoon scene or activity in each set consisting of morning, noon, and afternoon scenes or activities.

(b) Show comprehension of three percepts comprising the concept afternoon by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept afternoon by being able to interpret the concept of afternoon, draw conclusions, and translate by physical action at least three afternoon requests which are similar to, but not exactly like, those given in step (a).

35. Show comprehension of the relationship between the concepts morning, noon, and afternoon by being able to interpret the concepts, draw conclusions, and translate by physical action at least three morning, noon, and afternoon requests which are similar to, but not exactly like, those given in previous morning, noon, or afternoon exercises.

36. (a) Show retention of three of the percepts comprising the concept winter season by being able to recognize the winter scene or activity in each of three given sets with each set consisting of winter and summer scenes or activities.

(b) Show comprehension of three percepts comprising the concept winter by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept winter by being able to interpret the concept of winter, draw conclusions, and translate by physical action at least three winter requests which are similar to, but not exactly like, those given in step (a).

37. (a) Show retention of three of the percepts comprising the concept summer season by being able to recognize the summer scene or activity in each of three given sets with each set consisting of winter and summer scenes or activities.

(b) Show comprehension of three percepts comprising the concept summer by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept summer by being able to interpret the concept of summer, draw conclusions, and translate by physical action at least three summer requests which are similar to, but not exactly like, those given in step (a).

38. Show comprehension of the relationship between the concepts winter and summer by being able to interpret the concepts, draw conclusions, and translate by physical action at least three winter and summer requests which are similar to, but not exactly like, those given in previous winter or summer exercises.

39. (a) Show retention of three of the percepts comprising the concept holiday by being able to recognize the holiday scene or activity in each of three given sets with each set consisting of school day and holiday scenes or activities.

(b) Show comprehension of three percepts comprising the concept holiday by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept holiday by being able to interpret the concept of holiday, draw conclusions, and translate by physical action at least three holiday requests which are similar to, but not exactly like, those given in step (a).

40. (a) Show retention of three of the percepts comprising the concept calendar by being able to recognize the calendar in each of three given sets with each set consisting of a calendar and a clock.

(b) Show comprehension of three percepts comprising the concept calendar by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept calendar by being able to interpret the concept of calendar, draw conclusions, and translate by physical action at least three calendar requests which are similar to, but not exactly like, those given in step (a).

41. Be able to locate holidays on a calendar.

42. (a) Show retention of three of the percepts comprising the concept young age by being able to recognize the young step in aging in each of three given sets with each set consisting of children, parents, and grandparents.

(b) Show comprehension of three percepts comprising the concept young age by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept young age by being able to interpret the concept of young age, draw conclusions, and translate by physical action at least three young age requests which are similar to, but not exactly like, those given in step (a).

43. (a) Show retention of three of the percepts comprising the concept middle age by being able to recognize the middle age step in aging in each of three given sets with each set consisting of children, parents, and grandparents.

(b) Show comprehension of three percepts comprising the concept middle age by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept middle age by being able to interpret the concept of middle age, draw conclusions, and translate by physical action at least three middle age requests which are similar to, but not exactly like, those given in step (a).

44. (a) Show retention of three of the percepts comprising the concept old age by being able to recognize the old step in aging in each of three given sets with each set consisting of children, parents, and grandparents.

(b) Show comprehension of three percepts comprising the concept old age by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept old age by being able to interpret the concept of old age, draw conclusions, and translate by physical action at least three old age requests which are similar to, but not exactly like, those given in step (a).

45. (a) Show retention of three of the percepts comprising the concept old and older by being able to recognize the sequence of old to older in each of three given sets with each set consisting of progressive older ages in year numbers.

(b) Show comprehension of three percepts comprising the concept old and older by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept old and older by being able to interpret the concept of old and older, draw conclusions, and translate by physical action at least three old and older requests which are similar to, but not exactly like, those given in step (a).

46. (a) Show retention of three of the percepts comprising the concept youngest by being able to recognize the youngest aged in each of three given sets with each set consisting of children, parents, and grandparents.

(b) Show comprehension of three percepts comprising the concept youngest by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept youngest by being able to interpret the concept of youngest, draw conclusions, and translate by physical action at least three youngest requests which are similar to, but not exactly like, those given in step (a).

47. (a) Show retention of three of the percepts comprising the concept oldest by being able to recognize the oldest aged in each of three given sets with each set consisting of children, parents, and grandparents.

(b) Show comprehension of three percepts comprising the concept oldest by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept oldest by being able to interpret the concept of oldest, draw conclusions, and translate by physical action at least three oldest requests which are similar to, but not exactly like, those given in step (a).

48. Show comprehension of the relationship between the concepts youngest and oldest by being able to interpret the concepts, draw conclusions, and translate by physical action at least three youngest and oldest requests which are similar to, but not exactly like, those given in previous youngest and oldest exercises.

49. Be able to tell who is youngest and who is oldest in the class by age comparison.

50 (a) Show retention of three of the percepts comprising the concept clock by being able to recognize the clock in each of three given sets with each set consisting of a clock and a calendar.

(b) Show comprehension of three percepts comprising the concept clock by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept clock by being able to interpret the concept of clock, draw conclusions, and translate by physical action at least three clock requests which are similar to, but not exactly like, those given in step (a).

51. (a) Show retention of three of the percepts comprising the concept o'clock hour by being able to recognize the o'clock hour shown in each of three given sets with each set consisting of a clock with the short hand pointing to an hour number and the long hand pointing to twelve.

(b) Show comprehension of three percepts comprising the concept o'clock hour by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept o'clock hour by being able to interpret the concept of o'clock hour, draw conclusions, and translate by physical action at least three o'clock hour requests which are similar to, but not exactly like, those given in step (a).

52. Be able to tell time by the o'clock hour.

53. Be able to associate important daily activities with an o'clock hour.

54. Be able to associate early or late with before and after an o' clock hour.

55. Be able to associate morning, noon, and afternoon with o'clock hours.

G.D.I. #2 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

PLATEAU 3.1

56. (a) Show retention of three of the percepts comprising the concept o'clock half hour by being able to recognize the o'clock half hour shown in each of three given sets with each set consisting of a clock with the short hand pointing to an hour number and the long hand pointing to six.

(b) Show comprehension of three percepts comprising the concept o'clock half hour by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept o'clock half hour by being able to interpret the concept of o'clock half hour, draw conclusions, and translate by physical actions at least three o'clock half hour requests which are similar to, but not exactly like, those given in step (a).

57. Be able to tell time by the o'clock half hour.

58. Be able to associate important daily activities with an o'clock time to nearest half hour.

59. Be able to associate early or late with before and after an o'clock half hour.

60. Show comprehension of the relationship between the concepts slow, slower, slowest by being able to interpret the concepts, draw conclusions, and translate by physical action at least three slow, slower, and slowest requests which are similar to, but not exactly like, those given in previous slow or slower exercises.

61. Show comprehension of the relationship between the concepts fast, faster, fastest by being able to interpret the concepts, draw conclusions, and translate by physical action at least three fast, faster, fastest requests which are similar to, but not exactly like, those given in previous fast or faster exercises.

62. (a) Show retention of three of the percepts comprising the concept late and later by being able to recognize the late, later sequence in each of three given sets with each set consisting of on-time, late and later o'clock hours.

(b) Show comprehension of three percepts comprising the concept late and later by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concepts late and later by being able to interpret the concept of late and later, draw conclusions, and translate by physical action at least three late and later requests which are similar to, but not exactly like, those given in step (a).

63. (a) Show retention of three of the percepts comprising the concept early and earlier by being able to recognize the early, earlier sequence in each of three given sets with each set consisting of on-time, early and earlier o'clock hours.

(b) Show comprehension of three percepts comprising the concept early and earlier by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept early and earlier by being able to interpret the concept of early and earlier, draw conclusions, and translate by physical action at least three early and earlier requests which are similar to, but not exactly like, those given in step (a).

64. (a) Show retention of three of the percepts comprising the concept spring by being able to recognize the spring scene or activity in each of three given sets with each set consisting of winter, spring, summer, and fall scenes or activities.

(b) Show comprehension of three percepts comprising the concept spring by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept spring by being able to interpret the concept of spring, draw conclusions, and translate by physical action at least three spring requests which are similar to, but not exactly like, those given in step (a).

65. (a) Show retention of three of the percepts comprising the concept fall by being able to recognize the fall scene or activity in each of three given sets with each set consisting of winter, spring, summer, and fall scenes or activities.

(b) Show comprehension of three percepts comprising the concept fall by being able to translate by physical action the three retained percepts.

(c) Show comprehension of the concept fall by being able to interpret the concept of fall, draw conclusions, and translate by physical action at least three fall requests which are similar to, but not exactly like, those given in step (a).

66. Show comprehension of the relationship between the concept spring and fall by being able to interpret the concepts, draw conclusions, and translate by physical action at least three spring and fall requests which are similar to, but not exactly like, those given in previous spring or fall exercises.

67. Show comprehension of the relationship between the concepts spring, summer, fall and winter by being able to interpret the concepts, draw conclusions, and translate by physical action at least three spring, summer, fall and winter requests which are similar to, but not exactly like, those given in previous spring, summer, fall or winter exercises.

68. (a) Show retention of the percepts comprising the concept week by being able to recognize a week as consisting of Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, and Saturday in each of three given sets with each set consisting of the seven days in correct sequence, four days in sequence, and a two day sequence.

(b) Show comprehension of the percepts comprising the concept week by being able to translate by physical action the retained percepts in any order.

(c) Show comprehension of the concept week by being able to translate on a one-month calendar at least three week requests.

69. Be able to name the days of the week in any order.

70. Be able to name the days of the week in correct sequence; i.e. Sunday, is the first day, etc.

71. Be able to name the days of the school week in correct sequence; i.e. Monday is the first day; etc.

72. Be able to name the current day of the week.

73. Be able to name yesterday.

74. Be able to name tomorrow.

75. (a) Show retention of the percepts comprising the concept month by being able to recognize a month as consisting of at least four weeks and at least 28 days in each of three given sets with each set consisting of a one week sequence, a two week sequence, a three week sequence and a four week sequence.

(b) Show comprehension of the percepts comprising the concept month by being able to translate by physical action the retained percepts.

(c) Show comprehension of the concept month by being able to interpret the concept of month, draw conclusions, and translate on a year calendar at least three month requests.

76. Be able to count the days in a given month by reading a calendar.

77. Be able to tell the current day of the month; i.e. "this is the fifth day," etc.

78. Be able to tell the current week of the month; i.e. "this is the 3rd week," etc.

79. (a) Show retention of the percepts comprising the concept year by being able to recognize a year as consisting of January, February, March, April, May, June, July, August, September, October, November and December in each of three given sets with each set consisting of a 12 month sequence, a six month sequence and a three month sequence.

(b) Show comprehension of the percepts comprising the concept year by being able to translate by physical action the retained percepts in any order.

(c) Show comprehension of the concept year by being able to interpret the concept of year, draw conclusions, and translate by physical action at least three year requests.

80. Be able to tell the number of months in a year.

81. Be able to name the months of the year in correct sequence.

82. Be able to tell the name of the current month.

83. Be able to tell the name of the next month.

84. Be able to tell the name of last month.

85. Be able to tell one's birthday by month of year and day of month; i.e. September 13th or 13th day of September, etc.

G.D.I. #3 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

PLATEAU 4.1

86. (a) Show retention of three of the percepts comprising the concept midnight by being able to recognize the midnight scene in each of three given sets with each set consisting of three different presentations only one of which is correct. (Emphasize hour hand with color).

(b) Show comprehension of three percepts comprising the concept midnight by being able to translate by physical actions the three percepts retained in step (a).

(c) Show comprehension of the concept midnight by being able to interpret the concept, draw conclusions, and translate by a physical action each of three specific performance requests which are similar to, but not exactly like, those given in step (a).

87. Show comprehension of the relationship between the concepts midnight and noon by being able to interpret the concepts, draw conclusions, and translate by physical actions at least three midnight and noon requests which are similar to, but not exactly like, those given in previous midnight or noon exercises.

88. (a) Show retention of three of the percepts comprising the concept A.M. (as before noon) by being able to recognize the A.M. hours in each of three given sets with each set consisting of three different presentations only one of which is correct. (Emphasize hour hand with color).

(b) Show comprehension of three percepts comprising the concept A.M. by being able to translate by physical actions the three percepts retained in step (a).

(c) Show comprehension of the concept A.M. by being able to interpret the concept, draw conclusions, and translate by a physical action each of three specific performance requests which are similar to, but not exactly like, those given in step (a).

89. (a) Show retention of three of the percepts comprising the concept P.M. (as after noon) by being able to recognize the P.M. scene in each of three given sets with each set consisting of three different presentations only one of which is correct. (Emphasize hour hand with color).

(b) Show comprehension of three percepts comprising the concept P.M. by being able to translate by physical actions the three percepts retained in step (a).

(c) Show comprehension of the concept P.M. by being able to interpret the concept, draw conclusions, and translate by a physical action each of three specific performance requests which are similar to, but not exactly like, those given in step (a).

90. Show comprehension of the relationship between the concepts A.M. and P.M. by being able to interpret the concepts, draw conclusions, and translate by physical actions at least three A.M. and P.M. requests which are similar to, but not exactly like, those given in previous A.M. or P.M. exercises.

91. (a) Show retention of three of the percepts comprising the concept 24 hours in a day by being able to recognize the correct number of hours in a day in each of three different presentations only one of which is correct. (Emphasize hour hand with color).

(b) Show comprehension of three percepts comprising the concept 24 hours in a day by being able to translate by physical actions the three percepts retained in step (a).

(c) Show comprehension of the concept 24 hours in a day by being able to interpret the concept, draw conclusions, and translate by a physical action each of three specific performance requests which are similar to, but not exactly like, those given in step (a).

92. (a) Show retention of three of the percepts comprising the concept one clock face equals 60 minutes by being able to recognize the correct number of minutes which equal one clock face in each of three given sets with each set consisting of three different presentations only one of which is correct. (Emphasize the minute hand with color).

(b) Show comprehension of three percepts comprising the concept one clock face equals 60 minutes by being able to translate by physical actions the three percepts retained in step (a).

(c) Show comprehension of the concept one clock face equals 60 minutes by being able to interpret the concept, draw conclusions, and translate by a physical action each of three specific performance requests which are similar to, but not exactly like, those given in step (a).

93. (a) Show retention of three of the percepts comprising the concept 60 minutes equal one hour by being able to recognize the correct number of minutes which equal one hour in each of three given sets with each set consisting of three different presentations only one of which is correct. (Emphasize the minute hand with color).

(b) Show comprehension of three percepts comprising the concept 60 minutes equal one hour by being able to translate by physical actions the three percepts retained in step (a).

(c) Show comprehension of the concept 60 minutes equal one hour by being able to interpret the concept, draw conclusions, and translate by a physical action each of three specific performance requests which are similar to, but not exactly like, those given in step (a).

94. (a) Show retention of three of the percepts comprising the concept 30 minutes equal one-half hour by being able to recognize the correct number of minutes which equal one-half hour in each of three given sets with each set consisting of three different presentations only one of which is correct. (Emphasize the minute hand with color).

(b) Show comprehension of three percepts comprising the concept 30 minutes equal one-half hour by being able to translate by physical actions the three percepts retained in step (a).

(c) Show comprehension of the concept 30 minutes equal one-half hour by being able to interpret the concept, draw conclusions, and translate by a physical action each of three specific performance requests which are similar to, but not exactly like, those given in step (a).

95. (a) Show retention of three of the percepts comprising the concept 15 minutes equal one quarter hour by being able to recognize the correct number of minutes which equal one quarter hour in each of three given sets with each set consisting of three different presentations only one of which is correct. (Emphasize the minute hand with color).

(b) Show comprehension of three percepts comprising the concept 15 minutes equal one quarter hour by being able to translate by physical actions the three percepts retained in step (a).

(c) Show comprehension of the concept 15 minutes equal one quarter hour by being able to interpret the concept, draw conclusions, and translate by a physical action each of three specific performance requests which are similar to, but not exactly like, those given in step (a).

96. (a) Show retention of three of the percepts comprising the concept the short hand of the clock tells the hour by being able to recognize the approximate hour by the short hand's position on a clock in each of three given sets with each set consisting of three different presentations only one of which is correct. (Emphasize the short hand with color).

(b) Show comprehension of three percepts comprising the concept the short hand of the clock tells the hour by being able to translate by physical actions the three percepts retained in step (a).

(c) Show comprehension of the concept the short hand of the clock tells the hour by being able to interpret the concept, draw conclusions, and translate by a physical action each of three specific performance requests which are similar to, but not exactly like, those given in step (a).

97. (a) Show retention of three of the percepts comprising the concept the long hand of the clock tells the minutes by being able to recognize the number of minutes past an hour by the long hand's position on a clock in each of three given sets with each set consisting of three different presentations only one of which is correct. (Emphasize the long hand with color).

(b) Show comprehension of three percepts comprising the concept the long hand of the clock tells the minutes by being able to translate by physical actions the three percepts retained in step (a).

(c) Show comprehension of the concept the long hand of the clock tells the minutes by being able to interpret the concept, draw conclusions, and translate by a physical action each of three specific performance requests which are similar to, but not exactly like, those given in step (a).

98. Show comprehension of the relationship between the concepts the short hand tells the hour and the long hand tells the minutes by being able to interpret the concepts, draw conclusions, and translate by physical actions at least three hour and minute requests which are similar to, but not exactly like, those given in previous short hand or long hand exercises.

99. (a) Show retention of three of the percepts comprising the concept each numeral on a clock represents five minutes by being able to recognize the number of minutes several numerals represent when counting by fives in each of three given sets with each set consisting of three different presentations only one of which is correct. (Emphasize the minute hand with color).

(b) Show comprehension of three percepts comprising the concept each numeral on a clock represents five minutes by being able to translate by physical actions the three percepts retained in step (a).

(c) Show comprehension of the concept each numeral on a clock represents five minutes by being able to interpret the concept, draw conclusions, and translate by a physical action each of three specific performance requests which are similar to, but not exactly like, those given in step (a).

100. Be able to read a clock clockwise using after the hour by intervals of five minutes. (Example: It is now five minutes after nine; it is now ten minutes after nine; it is now twenty minutes after nine; etc.)

101. Be able to read a clock counter-clockwise using to the hour by intervals of five minutes. (Example: It is now five minutes to ten; it is now ten minutes to ten; it is now twenty minutes to ten; etc.)

102. Be able to tell time by the quarter hour.

103. Be able to read a T.V. schedule.

104. Be able to read a class schedule.

105. Be able to distinguish between a morning time schedule and an afternoon or evening schedule.

106. Be able to write a time schedule for favorite T.V. programs.

107. Memorize and be able to state the ordinal for each month of the year.

108. Be able to read the names of the months on a calendar.

G.D.I. #4 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

THIS ENDS THE TIME & MOTION SEQUENCE

MONEY CONCEPTS

SKILL SEQUENCE OBJECTIVES

PLATEAU 1.1

UNITS

1. Show retention of three of the percepts comprising the concept trade (as meaning to exchange some object or service for something else) by being able to recognize the process of trading in each of three given sets; with each set consisting of trading, buying, and selling activities.

2. Show retention of three of the percepts comprising the concept buy (as meaning to give money for some object or service) by being able to recognize the process of buying in each of three given sets; with each set consisting of trading, buying, and selling activities.

3. Show retention of three of the percepts comprising the concept sell (as meaning to get money in return for some object or service) by being able to recognize the process of selling in each of three given sets; with each set consisting of trading, buying, and selling activities.

4. (a) Show retention of three of the percepts comprising the concept money (as meaning paper bills or metal coins or a combination of bills and coins) by being able to recognize money in each of three given sets; with one set consisting of bills and barter objects, one set of coins and barter objects, and one set of both bills and coins and barter objects.

   (b) Show comprehension of three of the percepts comprising the concept money by being able to translate with physical actions the three retained percepts.

   (c) Show comprehension of the concept money by being able to interpret the concept, draw conclusions, and translate with physical actions at least three money requests which are similar to, but not exactly like, those given in step (a).

5. Show retention of three of the percepts comprising the concept coins (as being round metal money in different sizes) by being able to recognize the coins in each of three given sets; with one set consisting of pennies and bills, one set of nickels and bills, and one set of dimes and bills.

6. (a) Show retention of three of the percepts comprising the concept penny (as being worth 1 cent) by being able to recognize the penny in each of three given sets; with each set consisting of a penny, a nickel, and a dime labeled as 1¢, 5¢, and 10¢.

   (b) Show comprehension of three of the percepts comprising the concept penny by being able to translate with physical actions the three retained percepts.

   (c) Show comprehension of the concept penny by being able to interpret the concept, draw conclusions, and translate with physical actions at least three penny requests which are similar to, but not exactly like, those given in step (a).

7. (a) Show retention of three of the percepts comprising the concept nickel (as being worth 5 cents) by being able to recognize the nickel in each of three given sets; with each set consisting of a penny, a nickel, and a dime labeled as 1¢, 5¢, and 10¢.

   (b) Show comprehension of three of the percepts comprising the concept nickel by being able to translate with physical actions the three retained percepts.

   (c) Show comprehension of the concept nickel by being able to interpret the concept, draw conclusions, and translate with physical actions at least three nickel requests which are similar to, but not exactly like, those given in step (a).

8. (a) Show retention of the concept five pennies equal one nickel by being able to recognize the group of pennies which equal a nickel in each of three given sets with each set consisting of one correct group and two incorrect group of pennies. (Counting permitted).

   (b) Show comprehension of the concept five pennies equal one nickel by being able to interpret at least three requests to match the value of a dime in pennies and then physically choose the correct number and kind of coins from a variety collection of coins.

9. (a) Show retention of three of the percepts comprising the concept dime (as being worth 10 cents) by being able to recognize the dime in each of three given sets; with each set consisting of a penny, a nickel, and a dime labeled as 1¢, 5¢, and 10¢.

   (b) Show comprehension of three of the percepts comprising the concept dime by being able to translate with physical actions the three retained percepts.

   (c) Show comprehension of the concept dime by being able to interpret the concept, draw conclusions, and translate with physical actions at least three dime requests which are similar to, but not exactly like, those given in step (a).

10. (a) Show retention of the concept 10 pennies equal one dime by being able to recognize the group of pennies which equal a dime in each of three given sets with each set consisting of one correct group and two incorrect groups of pennies. (Counting permitted).

(b) Show comprehension of the concept 10 pennies equal one dime by being able to interpret at least three requests to match the value of a dime in pennies and then physically choose the correct number and kind of coins from a variety collection of coins.

11. (a) Show retention of the concept two nickels equal one dime by being able to recognize the group of nickels which equal a dime in each of three given sets with each set consisting of one correct group and two incorrect groups of nickels. (Counting permitted).

(b) Show comprehension of the concept two nickels equal one dime by being able to interpret at least three requests to match the value of a dime in nickels and then physically choose the correct number and kind of coins from a variety collection of coins.

12. Be able to make single exact change "purchases" of pre-priced items from classroom "store" for amounts of one penny, one nickel, one dime, five pennies, ten pennies, and two nickels.

13. Be able to make single "sales" of pre-priced items from classroom "store" for an amount of five cents and give change of a nickel back to "buyer" for a dime given.

G.D.I. #1 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

PLATEAU 2.1

14. (a) Show retention of three of the percepts comprising the concept cents (as represented by pennies, a symbol ¢, and a decimal point) by being able to recognize cents in each of three given sets; with ten pennies and one dollar, 10¢ and one dollar, and .10 and one dollar.

(b) Show comprehension of three of the percepts comprising the concept cents by being able to translate with physical actions the three retained percepts.

(c) Show comprehension of the concept cents by being able to interpret the concept, draw conclusions, and translate with physical actions at least three cents requests which are similar to, but not exactly like, those given in step (a).

15. (a) Show retention of three of the percepts comprising the concept price (as the amount of money it takes to buy an item) by being able to recognize the price of an item in each of three given sets; with each set consisting of priced and unpriced items for sale, (include symbols with prices).

(b) Show comprehension of three of the percepts comprising the concept price by being able to translate with physical actions the three retained percepts.

(c) Show comprehension of the concept price by being able to interpret the concept, draw conclusions, and translate with physical actions at least three price requests which are similar to, but not exactly like, those given in step (a).

16. (a) Show retention of three of the percepts comprising the concept shop (as meaning to check prices of items before one buys) by being able to recognize the process of shopping in each of three given sets; with each set consisting of shopping, paying, and receiving activities.

(b) Show comprehension of three of the percepts comprising the concept shop by being able to translate with physical actions the three retained percepts.

(c) Show comprehension of the concept shop by being able to interpret the concept, draw conclusions, and translate with physical actions at least three shop requests which are similar to, but not exactly like, those given in step (a).

17. (a) Show retention of three of the percepts comprising the concept pay (as meaning to give a requested amount of money for an item one is buying) by being able to recognize the process of paying in each of three given sets; with each set consisting of shopping, paying, and receiving activities.

(b) Show comprehension of three of the percepts comprising the concept pay by being able to translate with physical actions the three retained percepts.

(c) Show comprehension of the concept pay by being able to interpret the concept, draw conclusions, and translate with physical actions at least three pay requests which are similar to, but not exactly like, those given in step (a).

18. (a) Show retention of three of the percepts comprising the concept receive (as meaning to get an item in return for paying a sum of money) by being able to recognize the process of receiving in each of three given sets; with each set consisting of shopping, paying, and receiving activities.

(b) Show comprehension of three of the percepts comprising the concept receive by being able to translate with physical actions the three retained percepts.

(c) Show comprehension of the concept receive by being able to interpret the concept, draw conclusions, and translate with physical actions at least three receive requests which are similar to, but not exactly like, those given in step (a).

19. (a) Show retention of three of the percepts comprising the concept spend (as meaning to pay out a sum of money when buying) by being able to recognize the process of spending in each of three given sets; with each set consisting of spending and looking activities.

(b) Show comprehension of three of the percepts comprising the concept spend by being able to translate with physical actions the three retained percepts.

(c) Show comprehension of the concept spend by being able to interpret the concept, draw conclusions, and translate with physical actions at least three spend requests which are similar to, but not exactly like, those given in step (a).

20. (a) Show retention of three of the percepts comprising the concept save (as meaning to keep part of one's money for future purchases) by being able to recognize the process of saving in each of three given sets; with each set consisting of saving and spending all activities.

(b) Show comprehension of three of the percepts comprising the concept save by being able to translate with physical actions the three retained percepts.

(c) Show comprehension of the concept save by being able to interpret the concept, draw conclusions, and translate with physical actions at least three save requests which are similar to, but not exactly like, those given in step (a).

21. Be able to make ten single exact change "purchases" of pre-priced items from classroom "store" for amounts of one cent, two cents, etc. up to ten cents using pennies only.

22. Be able to make single "sales" of pre-priced items from classroom "store" for amounts of one cent, two cents, three cents, and four cents and give change back to "buyer" for a nickel given.

23. (a) Show retention of the concept six cents equal one nickel and one penny by being able to recognize the group of coins which equal six cents in each of three given sets, with each set consisting of one correct group and two incorrect groups of coins. (Counting permitted).

(b) Show comprehension of the concept six cents equal one nickel and one penny by being able to interpret at least three requests to match the value of six cents in nickels and pennies and then physically choose the correct number and kind of coins from a variety collection of coins.

24. (a) Show retention of the concept seven cents equal one nickel and two pennies by being able to recognize the group of coins which equal seven cents in each of three given sets, with each set consisting of one correct group and two incorrect groups of coins. (Counting permitted).

(b) Show comprehension of the concept seven cents equal one nickel and two pennies by being able to interpret at least three requests to match the value of seven cents in nickels and pennies and then physically choose the correct number and kind of coins from a variety collection of coins.

25. (a) Show retention of the concept eight cents equal one nickel and three pennies by being able to recognize the group of coins which equal eight cents in each of three given sets, with each set consisting of one correct group and two incorrect groups of coins. (Counting permitted).

(b) Show comprehension of the concept eight cents equal one nickel and three pennies by being able to interpret at least three requests to match the value of eight cents in nickels and pennies and then physically choose the correct number and kind of coins from a variety collection of coins.

26. (a) Show retention of the concept nine cents equal one nickel and four pennies by being able to recognize the group of coins which equal nine cents in each of three given sets, with each set consisting of one correct group and two incorrect groups of coins. (Counting permitted).

(b) Show comprehension of the concept nine cents equal one nickel and four pennies by being able to interpret at least three requests to match the value of nine cents in nickels and pennies and then physically choose the correct number and kind of coins from a variety collection of coins.

27. Be able to make five single exact change "purchases" of pre-priced items from classroom "store" for amounts of six cents, seven cents, etc. up to ten cents using nickels and pennies.

28. Be able to make single "sales" of pre-priced items from classroom "store" for amounts of five cents, six cents, seven cents, eight cents, and nine cents and give change in pennies back to "buyer" for a dime given.

29. Be able to make three exact change "purchases" of two pre-priced items at the same time from classroom "store" for amounts totaling up to ten cents using nickels and pennies.

30. Be able to make three "sales" of two pre-priced items at the same time from the classroom "store" for amounts totaling up to nine cents and give change back to "buyer" for a dime given.

31. (a) Show retention of three of the percepts comprising the concept quarter (as being worth 25 cents) by being able to recognize the quarter in each of three given sets; with each set consisting of a penny, a nickel, a dime, and a quarter labeled as 1, 5, 10 and 25 cents.

(b) Show comprehension of the percepts comprising the concept quarter by being able to translate with physical actions the three retained percepts.

(c) Show comprehension of the concept quarter by being able to interpret the concept, draw conclusions, and translate with physical actions at least three quarter requests which are similar to, but not exactly like, those given in step (a).

32. (a) Show retention of the concept 25 pennies equal one quarter by being able to recognize the group of pennies which equal a quarter in each of three given sets with each set consisting of one correct group and two incorrect groups of pennies. (counting permitted).

(b) Show comprehension of the concept 25 pennies equal one quarter by being able to interpret at least three requests to match the value of a quarter with pennies and then physically choose the correct number and kind of coins from a variety collection of coins.

33. (a) Show retention of the concept five nickels equal one quarter by being able to recognize the group of nickels which equal a quarter in each of three given sets with each set consisting of one correct group and two incorrect groups of nickels. (Counting permitted).

(b) Show comprehension of the concept five nickels equal one quarter by being able to interpret at least three requests to match the value of a quarter with nickels and then physically choose the correct number and kind of coins from a variety collection of coins.

34. (a) Show retention of the concept two dimes and one nickel equal one quarter by being able to recognize the group of two dimes and one nickel which equal a quarter in each of three given sets with each set consisting of one correct group and two incorrect groups of nickels and dimes. (Counting permitted).

(b) Show comprehension of the concept two dimes and one nickel equal one quarter by being able to interpret at least three requests to match the value of a quarter with dimes and one nickel and then physically choose the correct number and kind of coins from a variety collection of coins.

35. Be able to make single exact change "purchases" of pre-priced items from classroom "store" for amounts of 10¢, 11¢, etc. up to 25¢ using pennies, nickels, and dimes.

36. Be able to make single "sales" of pre-priced items from classroom "store" for amounts of 10¢, 11¢, etc. up to 24¢ and give change back to buyer for a quarter given.

G.D.I. #2 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

PLATEAU 3.1

37. Be able to make three exact change "purchases" of two pre-priced items at the same time from classroom "store" for amounts totaling up to 25¢ using pennies, nickels, and dimes.

38. Be able to make three "sales" of two pre-priced items at the same time from the classroom "store" for amounts totaling up to 24¢ and give change back to buyer for a quarter given.

39. (a) Show retention of three of the percepts comprising the concept half-dollar (as being worth 50 cents) by being able to recognize the half-dollar in each of three given sets; with each set consisting of a penny, a nickel, a dime, a quarter, and a half-dollar labeled as 1, 5, 10, 25, and 50 cents.

(b) Show comprehension of three of the percepts comprising the concept half-dollar by being able to translate with physical actions the three retained percepts.

(c) Show comprehension of the concept half-dollar by being able to interpret the concept, draw conclusions, and translate with physical actions at least three half-dollar requests which are similar to, but not exactly like, those given in step (a).

40. (a) Show retention of the concept 50 pennies equal one half-dollar by being able to recognize the group of pennies which equal a half-dollar in each of three given sets with each set consisting of one correct group and two incorrect groups of pennies. (Counting permitted).

(b) Show comprehension of the concept 50 pennies equal one half-dollar by being able to interpret at least three requests to match the value of a half-dollar with pennies and then physically choose the correct number and kind of coins from a variety collection of coins.

41. (a) Show retention of the concept 10 nickels equal one half-dollar by being able to recognize the group of nickels which equal a half-dollar in each of three given sets with each set consisting of one correct group and two incorrect groups of nickels. (Counting permitted).

(b) Show comprehension of the concept 10 nickels equal a half-dollar by being able to interpret at least three requests to match the value of a half-dollar with nickels and then physically choose the correct number and kind of coins from a variety collection of coins.

42. (a) Show retention of the concept five dimes equal one half-dollar by being able to recognize the group of dimes which equal a half-dollar in each of three given sets with each set consisting of one correct group and two incorrect groups of quarters. (Counting permitted).

(b) Show comprehension of the concept five dimes equal one-half dollar by being able to interpret at least three requests to match the value of half-dollar with dimes and then physically choose the correct number and kind of coins from a variety collection of coins. (Counting permitted).

43. (a) Show retention of the concept two quarters equal one half-dollar by being able to recognize the group of quarters which equal a half-dollar in each of three given sets with each set consisting of one correct and two incorrect groups of quarters. (Counting permitted).

(b) Show comprehension of the concept two quarters equal one half-dollar by being able to interpret at least three requests to match the value of a half-dollar with quarters and then physically choose the correct number and kind of coins from a variety collection of coins.

44. Be able to make single exact change "purchases" of pre-priced items from the classroom "store" for amounts of 25¢, 26¢, etc. up to 50¢ using pennies, nickels, dimes, and quarters.

45. Be able to make single "sales" of pre-priced items from classroom "store" for amounts of 25¢, 26¢, etc. up to 49¢ and give change back to buyer for a half-dollar given.

46. Be able to make three exact change "purchases" of two pre-priced items at the same time from the classroom "store" for amounts totaling up to 50¢ using pennies, nickels, dimes, and quarters.

47. Be able to make three "sales" of two pre-priced items at the same time from classroom "store" for amounts totaling up to 49¢ and given change back to "buyer" for a half-dollar given.

48. (a) Show retention of three of the percepts comprising the concept bills (as being paper money of different values) by being able to recognize the bills in each of three given sets; with one set consisting of a one dollar bill and a collection of coins, one set of five dollar bills and a collection of coins and one set of ten dollar bills and a collection of coins.

(b) Show comprehension of three of the percepts comprising the concept bills by being able to translate with physical actions the three retained percepts.

(c) Show comprehension of the concept bills by being able to interpret the concept, draw conclusions, and translate with physical actions at least three bills requests which are similar to, but not exactly like, those given in step (a).

49. (a) Show retention of three of the percepts comprising the concept dollar (as being worth 100 cents) by being able to recognize the dollar in each of three given sets; with each set consisting of a penny, a nickel, a dime, a quarter, a half-dollar, and a dollar labeled as 1, 5, 10, 25, 50, and 100 cents.

(b) Show comprehension of three of the percepts comprising the concept dollar by being able to translate with physical actions the three retained percepts.

(c) Show comprehension of the concept dollar by being able to interpret the concept, draw conclusions, and translate with physical actions at least three dollar requests which are similar to, but not exactly like, those given in step (a).

50. (a) Show retention of the concept 100 pennies equal one dollar by being able to recognize the group of pennies which equal a dollar in each of three given sets with each set consisting of one correct group and two incorrect groups of pennies. (Counting permitted).

(b) Show comprehension of the concept 100 pennies equal one dollar by being able to interpret at least three requests to match the value of one dollar with pennies and then physically choose the correct number and kind of coins from a variety collection of coins.

51. (a) Show retention of the concept 20 nickels equal one dollar by being able to recognize the group of nickels which equal a dollar in each of three given sets with each set consisting of one correct group and two incorrect groups of nickels. (Counting permitted).

(b) Show comprehension of the concept 20 nickels equal one dollar by being able to interpret at least three requests to match the value of one dollar with nickels and then physically choose the correct number and kind of coins from a variety collection of coins.

52. (a) Show retention of the concept 10 dimes equal one dollar by being able to recognize the group of dimes which equal a dollar in each of three given sets with each set consisting of one correct group and two incorrect groups of dimes. (counting permitted).

(b) Show comprehension of the concept 10 dimes equal one dollar by being able to interpret at least three requests to match the value of one dollar with dimes and then physically choose the correct number and kind of coins from a variety collection of coins.

53. (a) Show retention of the concept four quarters equal one dollar by being able to recognize the group of quarters which equal a dollar in each of three given sets with each set consisting of one correct group and two incorrect groups of quarters. (Counting permitted).

(b) Show comprehension of the concept four quarters equal one dollar by being able to interpret at least three requests to match the value of one dollar with quarters and then physically choose the correct number and kind of coins from a variety collection of coins.

54. (a) Show retention of the concept two half-dollars equal one dollar by being able to recognize the group of half-dollars which equal a dollar in each of three given sets with each set consisting of one correct group and two incorrect groups of half-dollars. (Counting permitted).

(b) Show comprehension of the concept two half-dollars equal one dollar by being able to interpret at least three requests to match the value of one dollar with half-dollars and then physically choose the correct number and kind of coins from a variety collection of coins.

55. Be able to make single exact change "purchases" of pre-priced items from classroom "store" for amounts of 50¢, 51¢, etc. up to $1.00 using pennies, nickels, dimes, quarters, and half-dollars.

56. Be able to make single "sales" of pre-priced items from classroom "store" for amounts of 50¢, 51¢, etc. up to 99¢ and give change back for a dollar given.

57. Be able to make three "sales" of two pre-priced items at the same time from the classroom "store" for amounts totaling up to 99¢ and give change back for a dollar given.

58. Be able to add a list of three prices with ¢ signs and find a total up to 99¢.

59. Be able to add a list of three prices with decimal points and find a total up to .99.

60. Be able to add a list of three prices with $ signs and decimal points and find a total up to $3.99 (no carrying).

61. Be able to read prices of items shown in catalogs upon request.

62. Be able to read prices of items shown in newspaper advertisements upon request.

63. Be able to state how much money is needed to buy lunch in school cafeteria for one day and for one school week.

64. Be able to state the value by prices of classroom items such as desks, chairs, window panes, instructional materials, etc, which, if damaged or destroyed whould have to be replaced by spending school money.

65. Be able to calculate the sales tax due on items priced $1.00 and less.

66. Be able to calculate savings when buying an item at lower prices by substracting the lower price from the higher price. (No borrowing).

G.D.I. #3 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

THIS ENDS THE MONEY CONCEPTS SEQUENCE

NUMBERS AND GROUPING

The sequence Numbers and Grouping is taught via commercially produced means. Books 1 through 4 are believed to be the approximate maximum needs through elementary special education for level 1, 2, and 3 students. Level 4, 5, and 6 students may not complete more than books 1 and 2 by the end of their 6th year in special education due to their need for concrete means in the other six sequences of arithmetic. If any student proves to be faster than the estimations of the project staff, books 5 and 6 of the Addison-Wesley series could be purchased.

It will be noted that after the third plateau most of the arithmetic sequences except Measurement are taught via the commercial books. It has been the intention of the project proposal and the project staff to not produce instructional objectives for any sequence where there is adequate commercially produced instructional means available. (See basic assumptions on pages 2-4 of the Curriculum Guide for justifications).

The Numbers & Grouping sequence has been divided into plateaus by units so that each plateau of units will correspond reasonably well with the plateaus of the other six or seven sequences.

A student should not move higher in the commercially produced textbooks until he has completed the lower plateaus of the other sequences. When he reaches plateau 4 in the intermediate years, he will need and be allowed more time for the textbooks because the material to be covered will be much harder for him to do in the same amount of time. By then, he will have covered the basic essentials of arithmetic and be able to handle arithmetic exercises and problems in the more abstract forms.

The plateaus for Numbers and Grouping are estimated as follows:

Plateau 1.1	Book 1, Units 1-6
Plateau 2.1	Book 1, Units 7-11
Plateau 3.1	Book 2, Units 1-7
Plateau 4.1	Book 2, Units 8-13
Plateau 5.1	Book 3, Units 1-10
Plateau 6.1	Book 3, Units 1-11

The teacher's editions exactly duplicates the student's textbooks. Students should not be "turned loose" to work in the textbooks unless they can read well and have a good comprehension of the terms and concepts. Each double page of the textbook should be started and checked by the teacher to insure that the student understands the directions and has done the work correctly before moving on to the next assignment.

The pupil progress record sheet should be maintained for this sequence by units rather than pages of the textbook.

FRACTIONS

SKILL SEQUENCE
OBJECTIVES

PLATEAU 1.1

UNITS

1. (a) Show retention of three of the percepts comprising the concept divide by being able to recognize the divided whole in each of three given sets with each set showing an undivided whole and a whole divided into parts (use 2 part, 3 part, and 4 part divisions of common objects) only.

   (b) Show comprehension of three percepts comprising the concept divide by being able to translate with physical action the three retained percepts.

   (c) Show comprehension of the concept divide by being able to interpret the concept of divide, draw conclusions, and translate with physical action at least three divide requests similar to, but not exactly like, those given in step (a).

2. Be able to divide into two parts whole real objects such as a bar of candy, a piece of fruit, an apple pie, etc. (Exactly equal parts not required at this point.

G.D.I. #1 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

PLATEAU 2.1

3. (a) Show retention of three of the percepts comprising the concept one-half by being able to recognize one-half of a whole object in each of three given sets with each set showing one whole object, two of the whole objects, and one-half the object. (Use a different object in each set.)

   (b) Show comprehension of three percepts comprising the concept one-half by being able to translate with physical action three retained percepts.

   (c) Show comprehension of the concept one-half by being able to interpret the concept of one-half, draw conclusions, and translate with physical action at least three one-half a whole requests similar to, but not exactly like, those given in step (a).

4. (a) Show retention of three of the percepts comprising the concept one-half by being able to recognize one-half a group of common objects in each of three given sets with each set showing the undivided group and the group divided in two equal parts. (Use 2, 4, and 6 in a group).

(b) Show comprehension of three percepts comprising the concept one-half by being able to translate with physical actions the three retained percepts.

(c) Show comprehension of the concept one-half by being able to interpret the concept of one-half, draw conclusions, and translate with physical actions at least three one-half a group requests similar to, but not exactly like, those given in step (a).

5. Be able to divide into one-half parts (as to share equally) whole or groups of real objects such as candy, fruit, instructional materials, etc.

G.D.I. #2 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

PLATEAU 3.1

6. Given three different examples of circles divided in half with one half of the circles shaded for contrast, the learner will be able to duplicate each of the three examples either by tracing or free-hand. (One circle will be divided by a line from top to bottom, one by a line left to right, and one by a line diagonally).

7. Be able to divide a one-dimensional circle in half three different ways by drawing a straight line through the center (a) from top edge to bottom edge, (b) from left edge to right edge, and (c) diagonally once. (Repeat objective 6 if unable to achieve this objective).

8. Given three different examples of squares divided in half with one half of the squares shaded for contrast, the learner will be able to duplicate each of the three examples either by tracing or free-hand. (One square will be divided by a line from one top corner diagonally to one bottom corner, one by a line from the middle point of the top side to the middle point of the bottom side, and one by a line from the middle point of the left side to the middle point of the right side).

9. Be able to divide a one-dimensional square in half three different ways by drawing a straight line (a) from one top corner diagonally to one bottom corner, (b) from the middle point of the top side to the middle point of the bottom side, and (c) from the middle point of the left side to the middle point of the right side. (Repeat objective 8 if unable to achieve this objective).

10. Be able to divide a one-dimensional triangle in half three different ways by drawing a straight line (a) from the middle point of the bottom side to the top angle point, (b) from the middle point of the left side to the bottom right angle point, and (c) from the middle point of the right side to the bottom left angle point. (Show how if unable to do it).

11. Be able to divide a one-dimensional rectangle in half three different ways by drawing a straight line (a) from top left corner diagonally to bottom right corner, (b) from middle point of top side to middle point of bottom side, and (c) from middle point of left side to middle point of right side. (Show how if unable to do it).

12. Be able to divide a one-dimensional diamond in half two different ways by drawing a straight line (a) from the left angle point to the right angle point and (b) from the top angle point to the bottom angle point. (Show how if unable to do it).

13. Be able to associate the equasional representation ½ as meaning the same as the oral word one-half, one-half an object, one-half a group of objects, and one-half in measurements by being able to write and/or match the symbol ½ to identify the one-half in any given set of wholes and halves.

14. (a) Show retention of three percepts comprising the concept one-fourth by being able to recognize one-fourth of a whole object in each of three given sets with each set showing the whole object, one-half of the object, and one-fourth of the object. (Use a different object in each set).

(b) Show comprehension of three percepts comprising the concept one-fourth by being able to translate with physical actions the three retained percepts.

(c) Show comprehension of the concept one-fourth by being able to interpret the concept of one-fourth, draw conclusions, and translate with physical actions at least three one-fourth of a whole requests similar to, but not exactly like, those given in step (a).

15. (a) Show retention of three of the percepts comprising the concept one-fourth by being able to recognize one-fourth of a group of common objects in each of three given sets with each set showing the undivided group, the group divided in two equal parts, and the group divided in four equal parts. (Use 4, 8, and 12 in a group).

(b) Show comprehension of three percepts comprising the concept one-fourth by being able to translate with physical actions the three retained percepts.

(c) Show comprehension of the concept one-fourth by being able to interpret the concept of one-fourth, draw conclusions, and translate with physical actions at least three one-fourth a group requests similar to, but not exactly like, those given in step (a).

16. Be able to divide into one-fourth parts (as to share equally) whole or groups of real objects such as candy, fruit, instructional materials, etc.

17. Be able to divide each of the following one dimensional forms into one-fourth sections by drawing straight lines: (a) a circle, (b) a square, (c) a rectangle, and (d) a diamond. (Show how if unable to do it the first try).

THIS ENDS THE FRACTION'S SEQUENCE

OPTIONAL...FOR STUDENTS THE TEACHER BELIEVES CAPABLE OF SUCCESSFUL ACHIEVEMENT...PERCEPTUALLY HANDICAPPED STUDENTS SHOULD NOT ATTEMPT.

GEOMETRIC FORMS

SKILL SEQUENCE OBJECTIVES

The difference between the objectives of this sequence and those of the Written Communication Skill sequence should be noted.

In this sequence, the eventual use of geometric forms occupationally is the major purpose of learning. In the communication skill sequence, the purpose is communication readiness through perceptual-motor exercises.

This sequence covers the formal vocabulary for the various geometric forms and lines, the variety of possible sizes of the forms, reproduction approximately and exactly of given forms, measurement of sides, perimeter, and area of given forms, construction of forms according to given measurements, and the comprehension and use of angles within forms. The pattern followed is from concrete to abstract, one dimensional to three dimensional.

The assumption is made that perceptual impairments did not exist or have been remediated by the second year for level one students.

PLATEAU 1.1

No formal training in geometric forms on this plateau. Apply this time to the achievement of measurement vocabulary concepts--especially length, width, height, and circumference words.

PLATEAU 2.1

UNITS

1. (a) Show retention of three percepts comprising the concept curved by being able to recognize the curved lines of forms and the curved edges of flat objects among several different shaped forms and objects in each of three given sets of forms and objects.

   (b) Show comprehension of three percepts comprising the concept curved by being able to translate by approximate reproduction the three retained percepts of step (a).

(c) Show comprehension of the concept curved by being able to interpret the concept of curved, draw conclusions, and translate by one-dimensional drawings at least three curved requests using as a guide forms and flat objects similar to, but not exactly like, those given in step (a).

2. (a) Show retention of three percepts comprising the concept straight by being able to recognize the straight lines of forms and the straight edges of flat objects among several different shaped forms and objects in each of three given sets of forms and objects.

(b) Show comprehension of three percepts comprising the concept straight by being able to translate by approximate reproduction the three retained percepts of step (a).

(c) Show comprehension of the concept straight by being able to interpret the concept of straight, draw conclusions, and translate by one-dimensional drawings at least three straight requests using as a guide forms and flat objects similar to, but not exactly like, those given in step (a).

3. (a) Show retention of three percepts comprising the concept circle by being able to recognize the circle among the five basic forms (circle, square, rectangle, triangle, and diamond) in each of three given sets with each set progressively larger than 3" in height, width, or diameter.

(b) Show comprehension of three percepts comprising the concept circle by being able to translate by approximate reproduction the three retained percepts of step (a).

(c) Show comprehension of the concept circle by being able to interpret the concept of circle, draw conclusions, and translate by one-dimensional drawings at least three circle requests using as a guide forms smaller than those given in step (a).

4. (a) Show retention of three percepts comprising the concept square by being able to recognize the square among the five basic forms (circle, square, rectangle, traingle, and diamond) in each of three given sets with each set progressively larger than 3" in height, width, or diameter.

(b) Show comprehension of three percepts comprising the concept square by being able to translate by approximate reproduction the three retained percepts of step (a).

(c) Show comprehension of the concept square by being able to interpret the concept of square, draw conclusions, and translate by one-dimensional drawings at least three square requests using as a guide forms smaller than those given in step (a).

5. (a) Show retention of three percepts comprising the concept triangle by being able to recognize the triangle among the five basic forms (circle, square, rectangle, triangle, and diamond) in each of three given sets with each set progressively larger than 3" in height, width, or diameter.

(b) Show comprehension of three percepts comprising the concept triangle by being able to translate by approximate reproduction the three retained percepts of step (a).

(c) Show comprehension of the concept triangle by being able to interpret the concept of triangle, draw conclusions, and translate by one-dimensional drawings at least three triangle requests using as a guide forms smaller than those given in step (a).

6. (a) Show retention of three percepts comprising the concept rectangle by being able to recognize the rectangle among the five basic forms (circle, square, rectangle, triangle, and diamond) in each of three given sets with each set progressively larger than 3" in height, width, or diameter.

(b) Show comprehension of three percepts comprising the concept rectangle by being able to translate by approximate reproduction the three retained percepts of step (a).

(c) Show comprehension of the concept rectangle by being able to interpret the concept of rectangle, draw conclusions, and translate by one-dimensional drawings at least three rectangle requests using as a guide forms smaller than those given in step (a).

7. (a) Show retention of three percpets comprising the concept diamond by being able to recognize the diamond among the five basic forms (circle, square, rectangle, triangle, and diamond) in each of three given sets with each set progressively larger than 3" in height, width, or diameter.

(b) Show comprehension of three percepts comprising the concept diamond by being able to translate by approximate reproduction the three retained percepts of step (a).

(c) Show comprehension of the concept diamond by being able to interpret the concept of diamond, draw conclusions, and translate by one-dimensional drawings at least three diamond requests using as a guide forms smaller than those given in step (a).

8. (a) Show retention of three percepts comprising the concept single line by being able to recognize the single line among five forms of straight lines (single line, broken line, parallel lines, perpendicular line, and cross) in each of three given sets with each set progressively longer than 3" in length or height.

(b) Show comprehension of three percepts comprising the concept single line by being able to translate by approximate reproduction the three retained percepts of step (a).

(c) Show comprehension of the concept single line by being able to interpret the concept of single line, draw conclusions, and translate by one-dimensional drawings at least three single line requests using as a guide lines shorter than those given in step (a).

9. (a) Show retention of three percepts comprising the concept cross by being able to recognize the cross among five forms of straingt lines (single line, broken line, parallel lines, perpendicular line, and cross) in each of three given sets with each set progressively longer than 3" in length or height.

(b) Show comprehension of three percepts comprising the concept cross by being able to translate by approximate reproduction the three retained percepts of step (a).

(c) Show comprehension of the concept cross by being able to interpret the concept of cross, draw conclusions, and translate by one-dimensional drawings at least three cross requests using as a guide lines shorter than those given in step (a).

10. (a) Show retention of three percepts comprising the concept broken line by being able to recognize the broken line among five forms of straight lines (single line, broken line, parallel lines, perpendicular line, and cross) in each of three given sets with each set progressively longer than 3" in length or height.

(b) Show comprehension of three percepts comprising the concept broken line by being able to translate by approximate reproduction the three retained percepts in step (a).

(c) Show comprehension of the concept broken line by being able to interpret the concept of broken line, draw conclusions, and translate by one-dimensional drawings at least three broken line requests using as a guide lines shorter than those given in step (a).

11. (a) Show retention of three percepts comprising the concept perpendicular line by being able to recognize the perpendicular line among five forms of straight lines (single line, broken line, parallel lines, perpendicular line, and cross) in each of three given sets with each set progressively longer than 3" in length or height.

(b) Show comprehension of three percepts comprising the concept perpendicular line by being able to translate by approximate reproduction the three retained percepts of step (a).

(c) Show comprehension of the concept perpendicular line by being able to interpret the concept of perpendicular line, draw conclusions, and translate by one-dimensional drawings at least three perpendicular line requests using as a guide lines shorter than those given in step (a).

12. (a) Show retention of three percepts comprising the concept parallel lines by being able to recognize the parallel lines among five forms of straight lines (single line, broken line, parellel lines, perpendicular line, and cross) in each of three given sets with each set progressively longer than 3" in length or height.

(b) Show comprehension of three percepts comprising the concept parallel lines by being able to translate by approximate reproduction the three retained percepts of step (a).

(c) Show comprehension of the concept parallel lines by being able to interpret the concept, draw conclusions, and translate by one-dimensional drawings at least three parallel lines requests using as a guide lines shorter than those given in step (a).

13. Be able to draw lines between given points to create three sizes of each of the five basic forms (circle, square,triangle, rectangle, and diamond).

G.D.I. #2 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

PLATEAU 3.1

14. (a) Show retention of three percepts comprising the concept pentagon by being able to recognize the pentagon among six basic forms (circle, square, triangle, rectangle, diamond, and pentagon) in each of three given sets with each set progressively larger than 3" in height, width, or diameter.

(b) Show comprehension of three percepts comprising the concept pentagon by being able to translate by approximate reproduction the three retained percepts of step (a).

(c) Show comprehension of the concept pentagon by being able to interpret the concept, draw conclusions, and translate by one dimensional drawings at least three pentagon requests using as a guide forms smaller than those given in step (a).

15. (a) Show retention of three percepts comprising the concept hexagon by being able to recognize the hexagon among seven basic forms (circle, square, triangle, rectangle, diamond, pentagon, and hexagon) in each of three given sets with each set progressively larger than 3" in height, width, or diameter.

(b) Show comprehension of three percepts comprising the concept hexagon by being able to translate by approximate reproduction the three retained percepts of step (a).

(c) Show comprehension of the concept hexagon by being able to interpret the concept, draw conclusions, and translate by one dimensional drawings at least three hexagon requests using as a guide forms smaller than those given in step (a).

16. (a) Show retention of three percepts comprising the concept octagon by being able to recognize the octagon among eight basic forms (circle, square, triangle, rectangle, diamond, pentagon, hexagon, and octagon) in each of three given sets with each set progressively larger than 3" in height, width, or diameter.

(b) Show comprehension of three percepts comprising the concept octagon by being able to translate by approximate reproduction the three retained percepts of step (a)

(c) Show comprehension of the concept octagon by being able to interpret the concept, draw conclusions, and translate by one dimensional drawings at least three octagon requests using as a guide forms smaller than those given in step (a).

17. Be able to draw lines between given points to create three sizes of each of three forms; the pentagon, the hexagon, and the octagon.

18. (a) Show retention of three percepts comprising the concept length by being able to recognize the length side of three different size rectangles, each of which is progressively longer than 5 inches.

(b) Show retention of three percepts comprising the concept width by being able to recognize the width side of three rectangles, each of which is progressively wider than 4 inches.

(c) Show comprehension of three percepts comprising the concepts length and width by being able to translate by exact one-dimensional drawing the length and width measurements of three retained percepts given in step (a) and (b). (A ruler should be used for measurements)

(d) Show comprehension of the concepts length and width by being able to interpret the concept of length and width, draw conclusions, and translate by exact one-dimensional drawings at least three length and width requests using measurements shorter and narrower than those given in steps (a) and (b).

19. (a) Show retention of three percepts comprising the concept diameter by being able to recognize the diameter of three different sized circles, each of which is progressively greater than 4 inches. (Use a dotted line to show the diameter distance)

(b) Show comprehension of three percepts comprising the concept diameter by being able to translate by exact one-dimensional drawings the three circles, with a dotted line to show the diameter, given in step (a). (The learner may measure the diameter with a compass)

(c) Show comprehension of the concept diameter by being able to interpret the concept, draw conclusions, and translate by exact one-dimensional drawings at least three requests to draw circles with specific diameters. (Request diameters greater than those given in step (a).

20. (a) Show retention of three percepts comprising the concept pentagons do not always have equal sides by being able to recognize the pentagon with unequal sides among four forms (square, rectangle, equal sided pentagon, and unequal sided pentagon) in each of three given sets with each set containing a different type pentagon than in the other two sets.

(b) Show comprehension of three percepts comprising the concept pentagons do not always have equal sides by being able to translate by approximate reproduction the three retained percepts of step (a).

(c) Show comprehension of the concept pentagons do not always have equal sides by being able to interpret the concept, draw conclusions, and translate by one-dimensional drawings at least three requests to draw a pentagon with unequal sides, with none of the three being exactly alike.

21. (a) Show retention of three percepts comprising the concept hexagons do not always have equal sides among six forms (square, rectangle, equal sided pentagon, unequal sided pentagon, equal sided hexagon, and unequal sided hexagon) in each of three given sets with each set containing a different type hexagon than in the other two sets.

(b) Show comprehension of three percepts comprising the concept hexagons do not always have equal sides by being able to translate by approximate reproduction the three retained percepts of step (a).

(c) Show comprehension of the concept hexagons do not always have equal sides by being able to interpret the concept, draw conclusions, and translate by one-dimensional drawings at least three requests to draw a hexagon with unequal sides, with none of the three being exactly alike.

22. (a) Show retention of three percepts comprising the concept octagons do not always have equal sides among eight forms (square, rectangle, equal sided pentagon, unequal sided pentagon, equal sided hexagon, unequal sided hexagon, equal sided octagon, and unequal sided octagon) in each of three given sets with each set containing a different type octagon than in the other two sets.

(b) Show comprehension of three percepts comprising the concept octagons do not always have equal sides by being able to translate by approximate reproduction the three retained percepts of step (a).

(c) Show comprehension of the concept octagons do not always have equal sides by being able to interpret the concept, draw conclusions, and translate by one-dimensional drawings at least three requests to draw an octagon with unequal sides, with none of the three being exactly alike.

23. Be able to draw lines between given points to create three sizes of each of three forms: the unequal sided pentagon, the unequal sided hexagon, and the unequal sided octagon.

G.D.I. #3 When the learner has successfully achieved all the objectives of this plateau, the teacher will mark the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

PLATEAU 4.1

24. (a) Show retention of three percepts comprising the concept face by being able to recognize the face of two-dimensional forms and objects in three given sets of different forms and objects.

(b) Show comprehension of three percepts comprising the concept face by being able to translate by approximate two-dimensional drawings the three retained percepts of step (a).

(c) Show comprehension of the concept face by being able to interpret the concept of face, draw conclusions, and translate by approximate two-dimensional drawings at least three face requests using as a guide forms and objects similar to, but not exactly like, those given in step (a).

25. (a) Show retention of three percepts comprising the concept edge by being able to recognize the edge of two-dimensional forms and objects in three given sets of different forms and objects.

(b) Show comprehension of three percepts comprising the concept edge by being able to translate by approximate two-dimensional drawings the three retained percepts of step (a).

(c) Show comprehension of the concept edge by being able to interpret the concept of edge, draw conclusions, and translate by approximate two-dimensional drawings at least three edge requests using as a guide forms and objects similar to, but not exactly like, those given in step (a).

26. (a) Show retention of three percepts comprising the concept corner by being able to recognize the corner of two-dimensional forms and objects in three given sets of different forms and objects.

(b) Show comprehension of three percepts comprising the concept corner by being able to translate by approximate two-dimensional drawings the three retained percepts of step (a).

(c) Show comprehension of the concept corner by being able to interpret the concept of corner, draw conclusions, and translate by approximate two-dimensional drawings at least three corner requests using as a guide forms and objects similar to, but not exactly like, those given in step (a).

27. Be able to recognize by the face of the form, each of the five basic forms (circle, square, triangle, rectangle, and diamond) when presented in a two-dimensional manner in three given sets of different sizes.

(a) Show retention of three percepts comprising the concept cube by being able to recognize the cube among four three-dimensional forms (cube, cone, sphere, and cylinder) in each of three given sets with each set progressively larger than 3" diameter base.

(b) Show comprehension of three percepts comprising the concept cube by being able to translate by approximate reproduction the three retained percepts of step (a).

(c) Show comprehension of the concept cube by being able to interpret the concept cube, draw conclusions, and translate by three-dimensional models at least three cube requests using as a guide models smaller than those given in step (a).

28. (a) Show retention of three percepts comprising the concept cone by being able to recognize the cone among four three-dimensional forms (cube, cone, sphere, and cylinder) in each of three given sets with each set progressively larger than 3" diameter base.

(b) Show comprehension of three percepts comprising the concept cone by being able to translate by approximate reproduction the three retained percepts of step (a).

(c) Show comprehension of the concept cone by being able to interpret the concept of cone, draw conclusions, and translate by three-dimensional models at least three cone requests using as a guide models smaller than those given in step (a).

29. (a) Show retention of three percepts comprising the concept sphere by being able to recognize the sphere among four three-dimensional forms (cube, cone, sphere, and cylinder) in each of three given sets with each set progressively larger than 3" diameter base.

(b) Show comprehension of three percepts comprising the concept sphere by being able to translate by approximate reproduction the three retained percepts of step (a).

(c) Show comprehension of the concept sphere by being able to interpret the concept of sphere, draw conclusions, and translate by three-dimensional models at least three sphere requests using as a guide models smaller than those given in step (a).

30. (a) Show retention of three percepts comprising the concept cylinder by being able to recognize the cylinder among four three-dimensional forms (cube, cone, sphere, and cylinder) in each of three given sets with each set progressively larger than 3" diameter base.

(b) Show comprehension of three percepts comprising the concept cylinder by being able to translate by approximate reproduction the three retained percepts of step (a).

(c) Show comprehension of the concept cylinder by being able to interpret the concept of cylinder, draw conclusions, and translate by three-dimensional models at least three cylinder requests using as a guide models smaller than those given in step (a).

31. Be able to create three sizes of three dimensional models of each of these forms: cube, cone, sphere, and cylinder.

32. (a) Show retention of three percepts comprising the concept diagonal line by being able to recognize the diagonal line in each of three given sets with one set consisting of 2 diagonal lines across an octagon (to connect two opposite sides) and two non-diagonal lines, one set showing 2 diagonal lines across a hexagon (to connect two opposite sides) and two non-diagonal lines, and one set showing 2 diagonal lines across a pentagon (to connect one side to an opposite corner point) and two non-diagonal lines.

(b) Show comprehension of three percepts comprising the concept diagonal line by being able to translate by approximate reproduction each of the retained percepts given in step (a).

(c) Show comprehension of the concept diagonal line by being able to interpret the concept, draw conclusions, and translate by one-dimensional drawings at least three requests to draw 2 diagonal lines across each of three given forms (a pentagon, a hexagon, and a octagon).

33. Be able to draw all of the possible diagonal lines across each of these sided forms: a square, a rectangle, a pentagon, a hexagon, and an octagon. (A straight edge should be used to make lines exact)

34. (a) Show retention of three of the percepts comprising the concept center point by being able to recognize the center point in each of three given sets with each set consisting of 3 different forms with 2 diagonal lines crossing within one of the forms, one diagonal line within one of the forms, and no diagonal lines within one of the forms. (Use the circle, the square, and the rectangle for this objective)(emphasize the point)

(b) Show comprehension of three percepts comprising the concept center point by being able to translate by exact reproduction the center points in each of the three forms with two diagonal lines given in step (a). (Use the same forms as in (a) but do not show the center points)

(c) Show comprehension of the concept center point by being able to interpret the concept, draw conclusions, and translate by center point placement in at least three different forms with no diagonal lines given and the forms being different from those used in step (a). (The learner is here required to comprehend that a center point is easily discovered by the drawing of diagonal lines)

35. (a) Show retention of three percepts comprising the concept angle by being able to recognize the angle in each of three given forms (square, rectangle, and triangle).

(b) Show comprehension of three percepts comprising the concept angle by being able to translate by exact reproduction the angle in the square, the rectangle, and the triangle given in step (a). (The learner should use a protractor to achieve this objective)

(c) Show comprehension of the concept angle by being able to interpret the concept, draw conclusions, and translate by exact drawings at least three requests to draw a 90 degree angle, a 45 degree angle, and a 30 degree angle. (The teacher should mark the learner's protractor at 90, 45, and 30 degrees and instruct him in the use of the protractor)

36. (a) Given a center point and instructions to draw diagonal lines extending two inches from the center point with equal 45 degree angles between each diagonal line at the center point, the learner will be able to draw the lines correctly.

(b) Using the lines drawn for (b) above, and given instructions to draw lines across the end points of the diagonal lines, the learner will be able to complete the design of an equal sided octagon.

(c) Given the request to draw an equal sided octagon with diagonal lines three inches from the center point, the learner will comprehend the concept that diagonal lines with 45 degree angles form an octagon and be able to complete the request given.

G.D.I. #4 When the learner has successfully achieved all the objectives of this plateau, the teacher will make the Generalization Development Instrument and file it with the student's progress records. Negative items on the G.D.I. should be given attention in practical situations as often as opportunity arises until they can be marked positive.

THIS ENDS THE GEOMETRIC FORMS SEQUENCE
OF THE OPELIKA READINESS PROGRAM.

CONTINUE THIS SEQUENCE IN THE ADDISON-WESLEY BOOK #3 (pages 44-51, 128-125, 190-197, and 246-253) AND BOOK #4 (pages 64-71, 148-155, 192-199, and 244-251).

NOTE that this sequence is called Geometry at the higher levels in the Addison-Wesley books. Some slow learners may be able to master the elementary techniques and skills of geometry and these students should be given the opportunity to learn as many of the practical "construction work" type concepts and skills as they can acquire.

SCIENCE CONCEPTS

EARTH
PLANTS
ANIMALS
PEOPLE with Health & Safety
MATTER & ENERGY

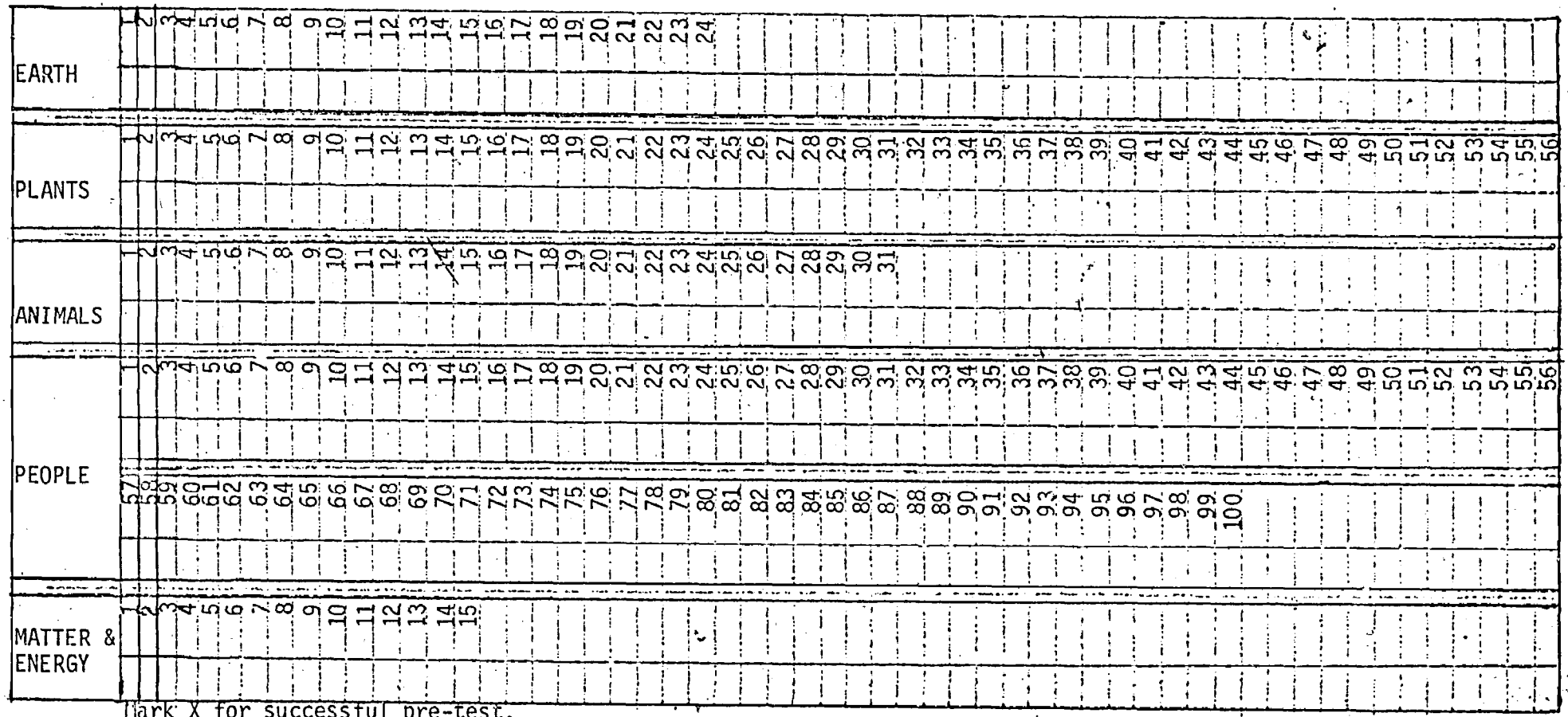
ALL SEQUENCES ARE TAUGHT CONCURRENTLY. COMPLETE ALL OF A PLATEAU OF EACH SEQUENCE BEFORE BEGINNING A HIGHER ONE.

PUPIL PROGRESS RECORD SHEET

SCIENCE CONCEPTS

NAME _____

PLATEAU 1. 1 2 3 4 5 6
(see below)



Mark X for successful pre-test.
Mark / for unsuccessful pre-test.
Mark X for successful post test.

Circle the appropriate pace level above.

PUPIL PROGRESS RECORD SHEET

SCIENCE CONCEPTS

NAME ______________________________

PLATEAU 2. 1 2 3 4 5 6 (see below)

EARTH	25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46
PLANTS	57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107
ANIMALS	32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49
PEOPLE	101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129
MATTER & ENERGY	16 17 18 19 20 21 22 23 24 25 26

Mark X for successful pre-test.
Mark / for unsuccessful pre-test.
Mark X for successful post test.

Circle the appropriate pace level above.

PUPIL PROGRESS RECORD SHEET

SCIENCE CONCEPTS

NAME _____

PLATEAU 3. 1 2 3 4 5 6
(see below)

EARTH	47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66
PLANTS	108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126
ANIMALS	50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68
PEOPLE	130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154
MATTER & ENERGY	27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82
	83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112

Mark X for successful pre-test.
Mark / for unsuccessful pre-test.
Mark X for successful post test.

Circle the appropriate pace level above.

Instructional Means

All science sequences utilize either representational or concrete instructional means. Teacher judgement is required to determine which type of instructional means to utilize. The criteria for such decisions are the limits specified by the objective, the developmental level of the learner, and the availability of appropriate means.

Descriptions, explanations, directions, etc. are presented orally to the learner. The instructional guides provide scripts for most objectives which may be recorded on cassette tapes or read directly to the learner.

Instructional Mode

Two types of instructional modes are utilized. The Stimulus/Response mode is used with either "one-to-one" instruction or small group instruction. Learners working on the same objectives on the same approximate pace level can be grouped for stimulus presentation then allowed to respond individually.

The Personal Discovery mode is utilized for branching activities and in the development of generalizations. This mode is used with most instruction guided by "suggested procedures" since learning through experimentation is a major need in generalizing skill objectives.

The teacher must use her own judgement about how long to stay on an objective if the learner is having trouble with it. Usually, it is best to move on to another objective in the sequence and come back later or occasionally to the troublesome one.

Objectives in each science concepts sequence should be taught plateau-by-plateau. All of one plateau should be completed before beginning another sequence. A higher plateau should not be started for one sequence before the objectives of the other four sequences on the lower plateau are com-

pleted successfully. A suggested procedure is to let small groups work together on different sequences i.e. one group on Earth 1, another group on Plants 1, etc.

Instructional Guides

Each instructional guide sheet in the Teachers' Instructional Guide for each sequence gives the objective (stated to the teacher) and a suggested script for the oral presentation which the learner will receive.

A list of branching activities is provided in each guide and is keyed to appropriate objectives in the sequence.

At the end of this introduction are annotated copies of instructional guide sheets. The instructional guides may be used "as is" or the teacher may utilize other available appropriate resources or means to aid the learner in successful achievement of the objectives.

Pupil Progress Records

Record of achievement is maintained on the colored record sheets (see front of this section). All five sequences of Science Concepts are on a single form. To maintain ease of identification, each plateau of all sequences is printed on the same color paper.

One record sheet for each plateau is set up for each student. Progress is maintained continuously and it should be possible to analyze a student's progress in all curriculum areas at any time during the school year.

The record sheets are stored in a student progress folder and will go to the new teacher whenever a student is transferred from a current class.

It is vital that records of achievement be known continuously in a sequential program. Accuracy is also extremely important since future instruction for a learner is prescribed on the basis of his current progress. Each sequential teacher is dependent upon the information forwarded by a previous teacher.

ALTERNATE SCIENCE PROGRAM

Unfortunately, the instructional means for the Title III project's science program was not completed beyond plateau 1. Since the objectives given in this guide were developed especially for a technological instructional format, and that instruction cannot now be provided; an alternative is suggested for teacher consideration.

Since the beginning of this project, the regular classes in Opelika's elementary schools have adopted and implemented the S.C.I.S. program (a Rand McNally Co. publication). This program is highly "concrete" and has the kind of "experiencing" instruction most special education teachers and students can easily work with. Although the directions and other information in the SCIS program require reading capability, this would not be a handicap in the special classes if the teacher guided the class unit by unit. If the teacher desired, the booklets' printed information could easily be recorded on tapes for individual use.

Check with your principal if you prefer to use the SCIS program.

INVENTORY KEY

the sequenced objectives

ANIMALS I

Prior to beginning a sequence each learner is pre-tested to determine what he already knows and where instruction is to begin.

OBJECTIVE		taped question asked learner	picture shown	correct response
1.	1.	Is this an animal	Bird	Y
	2.	Is this a bird	dog	N
	3.	Is this a bird	bird	Y
	4.	Does this animal live on land	bird	Y
2.	5.	Is this an animal	fish	Y
	6.	Is this a fish	bug	N
	7.	Is this a fish	fish	Y
3.	8.	Is this an animal	snake	Y
	9.	Does this animal live on land and in the water	snake	Y
4.	10.	Is this a snake	lizard	N
	11.	Is this a lizard	snake	N
5.	12.	Is this an animal	turtle	Y
	13.	Is this a turtle	lizard	N
	14.	Is this a turtle	turtle	Y
6.	15.	Is this animal a reptile	snake	Y
	16.	Is this animal a reptile	cow	N
	17.	Is this animal a reptile	turtle	Y
7.	18.	Is this an animal	rabbit	Y
	19.	Is this a rabbit	cat	N
	20.	Is this a rabbit	rabbit	Y
8.	21.	Is this an animal	tree	N
	22.	Is this an animal	bear	Y
	23.	Is this an animal	deer	Y
	24.	Does this animal live on land	BIRD	Y
	25.	Is this a cow	horse	N

These materials will be available to the learner as "extra" activities to reinforce the objective

EARTH I

the sequenced objectives for which branching has been provided

SUGGESTED BRANCHING ACTIVITIES

OBJECTIVE	MATERIALS		TYPE
2.	Our Earth	recorded on cassette tapes	Sound/Slide
3.	What Is The Earth		Book
	Earth		Sound/slide
4.	What Is Air		Book
	What Is The Earth		Book
	How The Weather Effects Us		Sound/Slide
5.	How Things Change		Film Strip
	How A Day Passes		Film Strip
	Sunshine & Shadows		Sound/Slide
6.	Same As 5		
6.	How A Day Passes		Film Strip
7.	What Is Air		Book
	What Is The Earth Made Of?		Film Strip
8. & 9.	What Is Water?		Book
	Water In Our Lives		Sound/Slide
	The Water Cycle		Sound/Slide
10, 11, 12,	What Is Water		Book
13, 14, 15,	What Is Weather		Book
16	How The Weather Effects Us		Sound/Slide
	The Water Cycle		Sound/Slide
	What Will The Weather Be		Film Strip

these words are taped directions and information for the learner

SCRIPT FOR INSTRUCTION

Objective # 3

Earth I

: Each time you hear the signal, change the slide.

In this lesson you are going to learn that the earth goes around the sun in a circle.

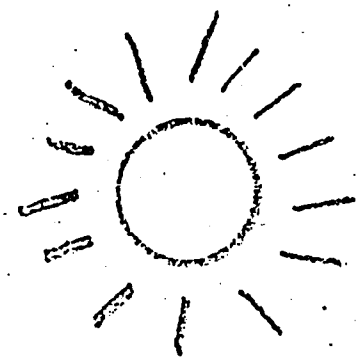
slides the learner sees

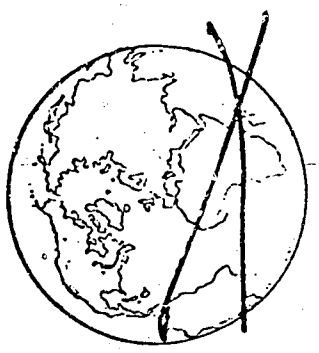
1 In this picture you can see that the earth goes around the sun. It takes the earth 24 hours to go around the sun.

2 This picture shows the sun shining on one part of the earth. It is day on the side the sun is shining.

Now, on the sheet of paper, mark the body that goes around the other body.

see the next sheet as an example of what the learner is given to mark on. His copy is laminated so that it may be used many times.





SCRIPT FOR INSTRUCTION

Animals I

OBJECTIVE 1

"Each time you hear the signal, change the slide."

"In this lesson you are going to learn that birds are animals and live on land. Birds are different from other animals. Birds are animals. Birds are different in that they have feathers on their body and they can fly."

"These are pictures of birds. This is a picture of a hawk. Notice the pictures to see his feathers and how he flys."

1., 2., 3., 4., 5., See Slides for

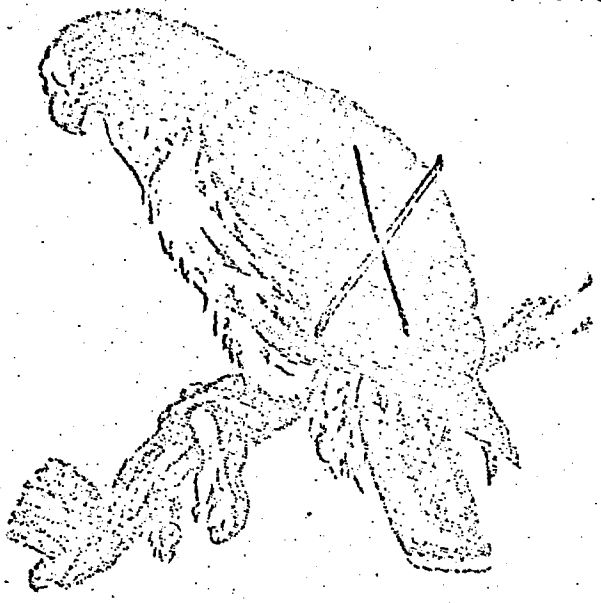
Slides

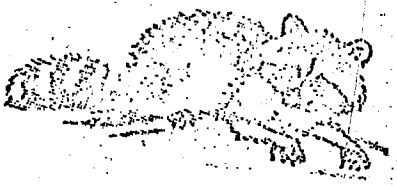
6. This is a picture of a hummingbird.
7. This is a picture of a chimney swift.
8. This is a picture of a duck. It is a bird.
9. This is a picture of a pelican. It is a bird.
10. This is a picture of an owl. It is a bird.

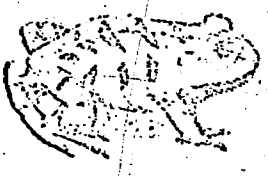
"All of the pictures we have seen are pictures of birds.

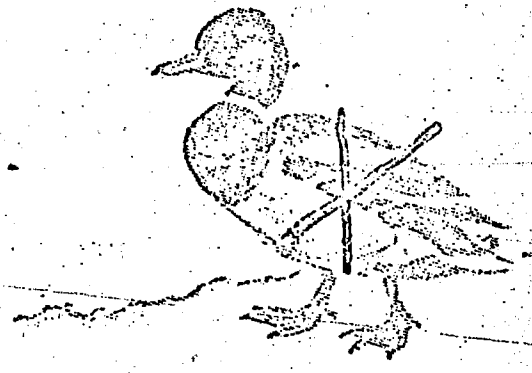
Now, on the sheet of paper you have been given, mark the pictures of birds."

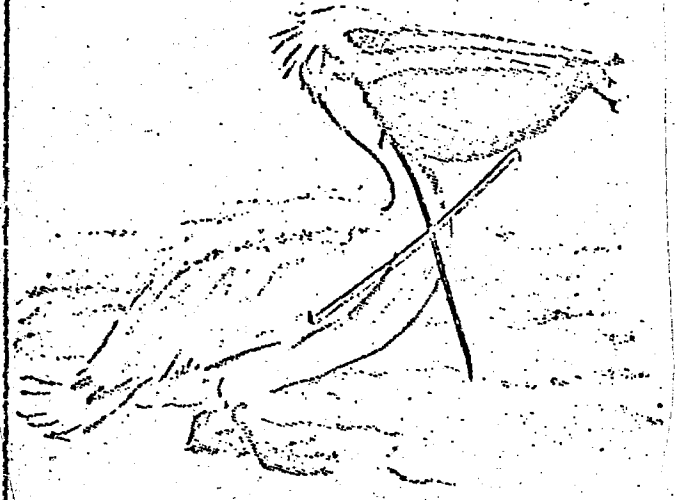
See next sheet

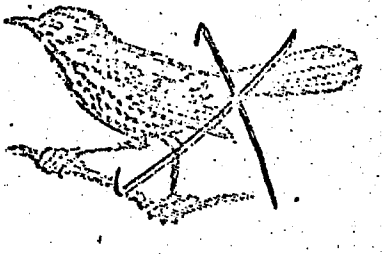












SCRIPT FOR INSTRUCTION

Objective 1

Plants I

Each time you hear the signal, change the slide.

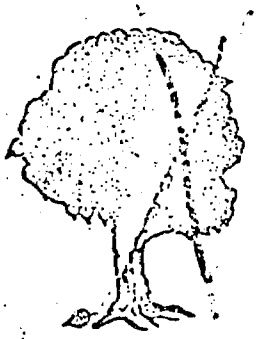
In this lesson you are going to identify the living things. There are three groups of living things. The three groups of living things are plants, animals, and people.

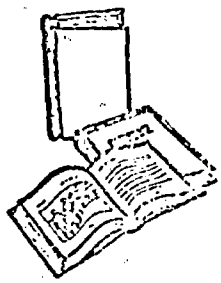
#1: This is a picture of a plant. It is a living thing. A plant is a living thing.

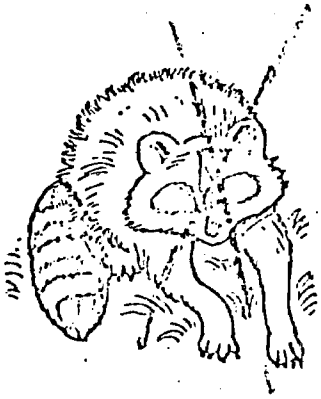
#2: This is a picture of an animal. The animal in this picture is a dog. An animal is a living thing.

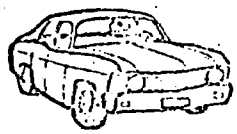
#3: This is a picture of a person. People are living things. This is a picture of a female person.

Now, on the sheet you have been given, mark the pictures of living things with an X.









EARTH
SCIENCE CONCEPTS

PLATEAU 1.1

UNITS

1. Student will be able to identify a round object as the shape of the earth.

2. Student will demonstrate an understanding of the fact that we cannot see through the earth to tell what shape it is and we must accept the fact that it is round.

3. Student will be able to identify the earth as a planet that goes around the sun in a circle.

4. The student will be able to identify air, water, and land as making up the earth.

5. Student will be able to identify the time when the sun is shining on the earth as daytime.

6. Student will be able to identify night time as the time when our side of the earth is not facing the sun.

7. Student will be able to identify air as something that all plants, animals and people must have to live.

8. Student will be able to identify the liquid water state of water as one of the ways we have water.

9. Student will be able to identify the ice state of water as one of the ways we have water. Student will be able to discriminate the ice state of water.

10. Student will be able to identify the water vapor state of water as one of the ways we have water. Student will be able to discriminate the water vapor state of water.

11. Student will be able to identify rain as the occurence when clouds get full of water vapor and cool off.

12. Student will be able to identify water changing into water vapor as the process of evaporation.

13. Student will be able to identify clouds as the destination of water that evaporates.

14. Student will be able to identify weather as moisture in the air and be able to discriminate visuals showing weather as moisture in the air.

15. Student will be able to identify weather as the temperature of the air or the change of the temperature of the air.

16. Student will be able to identify weather as movement of the air.

17. Student will be able to identify the characteristics of summer season.

18. Student will be able to identify the characteristics of fall season.

19. Student will be able to identify the characteristics of winter season.

20. Student will be able to identify the characteristics of spring season.

21. Student will be able to identify scenes characteristics of the 4 seasons.

22. Student will be able to identify heat as the cause of ice turning into water.

23. Student will be able to identify cold as the cause of water turning to ice.

24. Student will identify cold as a state that will turn anything with water in it to ice.

PLATEAU 2.1

25. Student will be able to identify the earth as a round body spinning around the sun on which he lives.

26. The learner will be able to identify the earth as being older than any living thing.

27. Student will be able to identify water as the longest surface on the earth.

28. Student will be able to identify the things the earth is made of as air, water, soil and minerals.

29. Student will be able to identify oxygen as a life giving gas that all people, animals and plants must have by identifying the symbol for air or oxygen.

30. Student will be able to identify water when asked to identify the liquid that is necessary for life in plants, animals and people.

31. Student will be able to identify the use of soil and rocks.

32. Student will be able to identify specific minerals as substance used in constructing roads, houses, automobiles, sidewalks, and money.

33. Student will be able to identify the sun as the source of heat for the earth.

34. Student will be able to identify the position of the earth to the sun as the determinant of the season on the earth.

35. Student will be able to identify the equator as the middle point of the earth and as the point closest to the sun, thus the warmest part on earth.

36. Student will be able to identify the North Pole and South Pole as the coldest position on the earth because they are the furtherest point away from the sun.

37. Student will be able to identify the portion of the earth in between the equator and the North and South Poles as a portion of the earth in which the temperature is warmer in the direction of the equator and colder in the direction of the poles.

38. Student will be able to identify rain as moisture which falls from clouds when the temperature is warm or hot.

39. Student will be able to identify snow or sleet as moisture which falls from clouds when the temperature is cold.

40. Student will be able to identify the changing of the seasons from spring to summer, summer to fall, fall to winter, and winter to spring as a way in which the earth changes.

41. Student will be able to identify the number of times the earth turns in 24 hours as once.

42. Student will be able to identify one revolution of the earth every 24 hours as the reason for our day and night and identify 12 hours as day time and 12 hours as night time.

43. Student will be able to identify the 12 hours our side of the earth faces the sun as day.

44. Student will be able to identify the 12 hours when our side does not face the sun as night.

45. Student will be able to identify gravity as the force that pulls everything toward the center of the earth and keeps us from falling off of the earth.

46. Student will be able to identify the time which it takes for the earth to travel around the sun as our year.

47. Student will be able to identify the earth is a planet.

48. Student will be able to discriminate that only part of the round earth can be in the sun's light at any time.

49. Student will be able to discriminate that the earth casts a shadow just as each of us has a shadow.

50. Student will be able to identify the part of the earth rotating through the sunshine as daytime.

51. Student will be able to identify the part of the earth rotating through earth's shadow as night time.

52. Student will be able to demonstrate an understanding that the roundness of the earth puts parts of the earth closer to the sun and parts farther away.

53. Student will be able to demonstrate an understanding that the earth rotates on its axis once every 24 hours.

54. Student will be able to identify one end of the axis as the north pole and that the direction north is toward this pole.

55. Student will be able to identify the other end of the axis as the South pole and that the direction south is toward this pole.

56. Student will be able to demonstrate that he knows the earth revolves around the sun every 365 1/4 days, and that this is a year.

57. Student will be able to demonstrate he knows that the conditions of the air around the earth vary and demonstrate an understanding that this makes our weather.

58. Student will be able to discriminate that different places on the earth have different types of weather.

59. Student will be able to demonstrate an understanding that the same place on the earth may have different types of weather.

60. Student will be able to identify day as a warmer time.

61. Student will be able to identify night as a cooler time.

62. Student will be able to demonstrate an understanding that summer days are longer and warmer.

63. Student will be able to demonstrate an understanding that winter days are shorter and cooler.

64. Student will be able to discriminate that gravity pulls all things toward the center of the earth.

65. Student will be able to identify down as toward the center of the earth.

66. Student will be able to identify up as away from the center of the earth.

PLANTS
SCIENCE CONCEPTS

PLATEAU 1.1

UNITS

1. Student will be able to identify plants, animals, and people as things that are alive.

2. Student will be able to identify the "not alive" things.

3. Student will be able to identify plants as one of the living things.

4. Student will be able to identify the needs of plants.

5. Student will be able to identify such plants as grass, rose bush, and other flowers as little plants.

6. Student will be able to identify the plants used for food by humans.

7. Student will be able to identify the use of food by animals as one of the uses of plants. The student will be able to identify the use of plants such as grass, flowers and corn as food by horses, hummingbirds, cows, and other animals.

8. Student will be able to identify the tree as the plant wooden things come from.

9. Student will be able to identify wood as something which many useful things are made of and will be able to identify wood as coming from trees.

10. Student will be able to identify the fact that trees growing in groups are called forrests.

11. Student will be able to identify the steps involved in man's changing trees into wood for his use.

12. Omitted

13. Student will be able to identify the tree as the plant used to build homes and will be able to identify the pine tree as the plant most commonly used in Alabama.

14. Student will be able to identify the tree as a plant that is used for shade.

15. Student will be able to identify flowers and trees as two types of plants useful to man because of their beauty.

16. Student will be able to identify green as the color of most plants when they are growing.

17. Student will be able to identify the time when fruits begin to ripen as the time when they change from green to another color.

18. Student will be able to identify the mushroom as a plant that is not green when it is growing.

19. Student will be able to identify plants as producers of flowers and seeds.

20. Student will be able to identify seeds as the thing from which most plants grow.

21. Student will be able to identify seeds as living things and will be able to identify at least 6 plants that grow from seeds.

22. Student will be able to identify the seeds of at least six plants.

23. Student will be able to demonstrate an understanding of the fact that plants have their own kind of seeds.

24. Student will be able to identify seeds as a thing from which plants grow.

25. Student will be able to identify the things needed for a seed to grow as air, soil (or food), light and water.

26. Student will be able to identify seeds that are carried to new places for planting by the wind, as the maple and elm tree seed, milkweed seeds, and dandelion seed.

27. Student will be able to identify the seeds of the cattail and the coconut as seeds that are carried from place to place for planting by the water.

28. Student will be able to identify seeds of the water lilly, mistletoe and other berries and the nuts as seeds that are carried from place to place for new planting by animals.

29. Student will be able to identify seeds usually carried to new places for planting by humans as the seeds of the watermelon, orange, apple, corn, bean, pecan plant.

30. Student will be able to identify the corn, bean and pecan plant seed as seeds of plants used for food by humans.

31. Student will be able to identify the corn and the acorn plant seed as plants whose seeds are used for food by animals.

32. Student will be able to identify the cow, chicken, and pig as animals who eat the seeds of plants and give us useful things.

33. Student will be able to identify the leaves as a part of the plant and to identify the function of the leaves as being that of breathing and making food.

34. Student will be able to identify leaves of three different plants as being leaves.

35. Student will be able to distinguish between plants whose leaves stay green all winter and plants whose leaves change color and fall to the ground from season to season.

36. Student will be able to identify the lettuce, cabbage, and turnip plant as a plant whose leaves are used for food.

37. Student will be able to identify flowers as parts of plants and will be able to identify and associate three flowers with the correct plant.

38. Student will be able to identify the reason plants have flowers as being for the purpose of producing new seeds and then new plants.

39. Student will be able to identify the reason we consider flowers as beautiful because they are pleasing to the eye and smell good.

40. Student will be able to identify the bee, the butterfly and the hummingbird as animals that flowers are useful to as food.

41. Student will be able to identify the stem as a part of the plant found on all plants.

42. Student will be able to identify the work of the stem as that of supportive and providing for the circulation of the plant.

43. Student will be able to match the appropriate size of the stem with the size of the plant.

44. Student will be able to identify plants with big stems as trees such as the pine tree, pecan tree and magnolia tree.

45. Student will be able to identify plants with little stems as plants such as the rose bush, daisy and dandelion.

46. Student will be able to identify the root of three different drawings of plants.

47. Student will be able to identify one job of the root of the plant as being to hold the plant in the ground.

48. Student will be able to identify one job of the root as that of taking up food and water for the plant.

49. Student will be able to identify the job of storing food made by the plant as a job of the root.

50. Student will be able to identify plants like the pine tree, apple tree, pecan tree as plants that have big roots.

51. Student will be able to identify the potatoe, carrot and turnip plants as plants from which we use the root for food.

52. Omitted.

53. Student will be able to identify the three parts of the plant which it may grow from as seeds, bulbs, and roots.

54. Student will be able to identify the rose bush, tomatoe plant, bean and corn plant as plants which grow from seeds.

55. Student will be able to identify potatoes and beets as plants which grow from roots.

56. Student will be able to identify tulips and onions as plants that grow from bulbs.

PLATEAU 2.1

57. Student will be able to identify the Spring season as the time of new birth, new growth and awakening of plants and animals.

58. Student will be able to identify the end of Spring as the time of year when most petals have fallen from plants and new fruit is beginning to grow.

59. Student will be able to identify the beginning of Summer as the time small green fruit begins to grow on the apple tree, the peach tree and other fruit trees.

60. Student will be able to identify the Summer as the time when the apple and peach tree fruit grows.

61. Student will be able to identify the green apple that is growing in the Summer as one that is not ready to eat.

62. Student will be able to identify the red apple as natures signal that the seeds are ripe and ready to fall from the tree.

63. Student will be able to identify late summer and the fall as the time of year when the apple turns red and the fruit becomes sweet and ready to eat.

64. Student will be able to identify the apple as a seed case, or a holder of the seeds of the apple tree.

65. Student will be able to identify the fact that once the apple is ripe it will fall to the ground and a new apple tree may grow from the seeds.

66. Student will be able to identify the pine, oak, pecan and magnolia tree as trees which produce seeds like the apple tree.

67. Student will be able to identify the fall as the time when most seeds fall to the ground.

68. Student will be able to demonstrate an understanding of the fact that seeds are carried to new places for planting by the wind, water, animals and people.

69. Student will be able to identify the dandelion as a plant whose seed is carried from place to place by the air.

70. Student will be able to identify the water lilly, mistletoe and other berries, pecan tree and oak tree as plants that are carried from place to place for planting by animals.

71. Student will be able to identify the fall season as the dying season for most plants.

72. Student will be able to identify the fall as the time when most trees and grass change colors.

73. Student will be able to identify the colors of leaves in the fall as being red, brown, yellow, orange and other colors.

74. Student will be able to identify the fall and spring as the most beautiful times of the year.

75. Student will be able to identify winter as a time of rest for most plants.

76. Student will be able to identify the winter as a time when trees live off of food stored during the summer and fall.

77. Student will be able to identify the winter season as the cold season.

78. Student will be able to identify the characteristics of each of the four seasons.

79. Student will be able to demonstrate an understanding of the fact that seeds from one kind of plant produce the same kind of plant.

80. Student will be able to identify the spring time as the time when new plants are born.

81. Student will be able to identify the summer as the season when plants and especially the fruit of plants matures.

82. Student will be able to identify the fall as the time when seeds ripen.

83. Student will be able to identify the winter as the time when seeds rest.

84. Student will be able to demonstrate an understanding of the fact that plants of the same kind resemble each other but are different in color.

85. Student will be able to identify the pine tree as a pine tree when given different size pine trees.

86. Student will be able to identify plants even though there might be variation in color, size, and type.

87. Student will be able to identify rose flowers as being red, white, pink and yellow.

88. Student will be able to identify camelias as flowers that are usually red and white.

89. Student will be able to identify the leaves of the spinach plant, the leaves of the turnip plant, the leaves of the lettuce plant, and the leaves of the cabbage plant as a source of food.

90. Student will be able to identify seeds as a part of the plant that is used for food by people and will be able to name the seed of the corn and bean, as seeds that are used by people as a source of food.

91. Student will be able to identify the fruit of the apple tree, orange tree and plum tree as a seed case for the seed.

92. Student will be able to identify the stems of the celery and the asparagus plant as stems of plants that we use for food.

93. Student will be able to identify the change in size of plants and the different size plants as being caused by the plants growing.

94. Student will be able to identify the needs of plants as food, (soil), water, air and light.

95. Student will be able to identify big plants as plants that need more food, water and air than little plants.

96. Student will be able to identify the reason why certain plants grow in certain places and do not grow in other places.

97. Student will be able to demonstrate that he understands that plants grow in one place and that food, water, air, warmth and light must be brought to the plant.

98. Student will be able to identify trees and some vines as plants which can grow to find light.

99. Student will be able to identify the root of the plant as the part of the plant through which the plant takes in water and food.

100. Student will be able to identify small roots as belonging to small plants and big roots as belonging to big plants.

101. Student will be able to identify the root of at least three different plants.

102. Student will be able to classify the four seasons of the year.

103. Student will be able to identify the spring as the season when leaves and animals begin to grow.

104. Student will be able to identify pollen as something produced by flowers of plants in the spring and something that plants must have before they can have fruit.

105. Student will be able to identify the bee, butterfly, and hummingbird as animals that help the pollen to get from one flower to another.

106. Student will be able to identify the time that the new seeds begin to grow as being after the pollen has been taken from one flower to another.

107. Student will be able to identify the spring season as lasting from March 21 to June 21.

PLATEAU 3.1

108. Student will be able to identify weeds as a plant that grows wild and has many seeds.

109. Student will be able to identify the way weeds travel as the way they insure new plants.

110. Student will be able to identify weeds as food for birds and small animals.

111. Student will be able to identify weeds as plants that provide ground cover in uncultivated places.

112. Student will be able to identify wheat and other cereals, beans, peas and corn as plants that are grown for their seeds.

113. Student will be able to identify the fruits as plants which are grown for their seed cases.

114. Student will be able to identify the lettuce plant as a plant we grow in order that we might use the leaves for food.

115. Student will be able to identify the beet and carrot as plants we grow for the use of their roots for food.

116. Student will be able to identify the rose and carnation plant as plants that are grown for their flower.

117. Student will be able to identify trees as plants that have seeds and will be able to identify trees as plants that are useful to humans because they give us shade and are ornamental.

118. Student will be able to identify trees as plants that give nuts, acorns and cones that are useful to humans and animals.

119. Student will be able to identify trees as plants that give us fruits to eat.

120. Student will be able to identify seeds with hard shells as seeds that ripen in the fall and sprout the next spring.

121. Student will be able to identify seeds with thick fruit coverings which protect them through winter and furnish food for growth another season may ripen in the summer or fall.

122. Student will be able to demonstrate an understanding that seeds with thick covering ripen in early spring and sprout soon so the young tree can grow enough to withstand the winter.

123. Student will be able to demonstrate knowledge that cultivated plants have seeds which may all mature at the same time or over an expanded period of time.

124. Student will be able to identify cereals as plants that are usually harvested at one time: wheat, corn, oats.

125. Student will be able to identify crops harvested repeatedly as more seeds mature: as beans, tomatoes.

126. Student will be able to identify wild plants that have seeds which ripen all at once or during any period of warmer weather.

ANIMALS
SCIENCE CONCEPTS

PLATEAU 1.1

UNITS

1. Student will be able to identify birds as animals and will be able to identify the place that they live as being on land.

2. Student will be able to identify fish as animals and will be able to identify the place that fish live as being in the water.

3. Student will be able to identify snakes as animals and will be able to tell that they live on land and in the water.

4. Student will be able to identify lizards as animals and will be able to identify their place of habitat as land and water.

5. Student will be able to identify the turtle as an animal and will be able to identify the habitat as both land and water.

6. Student will be able to identify snakes, lizards, and turtles as being animals that are alike and are called reptiles.

7. Student will be able to identify the rabbit as an animal and will be able to identify his habitat as being land.

8. Student will be able to identify the coon, bear, and deer as animals and will be able to identify their place of living as land.

9. Student will be able to identify the cow, pig, and horse as animals and will be able to identify their place of living as land.

10. Student will be able to identify the dog and the cat as animals and will be able to identify their habitat as being usually the home of humans.

11. Student will be able to identify the dog, cat, rabbit, squirrel, deer, horse, cow and pig as mammals.

12. Student will be able to demonstrate that he understands that animals of each kind are not the same size and color.

13. Student will be able to identify the bear, the ostritch, tne giraff, the horse and the elephant as large animals.

14. Student will be able to identify the rabbit, spider, grasshopper, frog, bee, and bird as small animals.

15. Student will be able to identify baby animals as animals of the same kind but smaller than big animals.

16. Student will be able to identify animals of the same kind even though they are different colors.

17. Student will be able to identify the animals that have fur.

18. Student will be able to identify the function of fur on animals as being that of keeping them warm.

19. Student will be able to demonstrate that he knows that all types of animals have baby animals.

20. Student will be able to demonstrate an understanding that all baby animals do not look like their mothers.

21. Student will be able to identify feeding birds bread crumbs as a way people can help wild animals.

22. Student will be able to identify the planting of plants for animals to eat during the winter as a way people can provide food for wild animals which they cannot provide themselves during the winter.

23. Student will be able to identify the building of shelters for animals to use during the winter as a way people can help wild animals when there is no shelter available.

24. Student will be able to identify prevention of forest fires as a way people can help wild animals take care of themselves.

25. Student will demonstrate an understanding of the fact that animals have feelings.

26. Student will be able to identify not surprising birds and squirrels when they are feeding in our yards as something we should do to keep from hurting the feelings of animals.

27. Student will be able to identify frightening our pets as something we should not do.

28. Student will be able to identify butter and milk as two foods that we get from the cow.

29. Student will be able to identify eggs as an item of food the chicken provides for people.

30. Student will be able to identify cows, chickens, turkeys, and pigs as animals that give people meat to eat.

31. Student will be able to identify the lamb as the animal we get wool from to make warm clothing.

32. Student will be able to identify animals as living things which move from place to place.

33. Student will be able to identify different animals as living in places that are good for them.

34. Student will be able to identify the fish as an animal which lives in water as water is good for him.

35. Student will be able to identify trees as a habitat which is best for the bird.

36. Student will be able to identify several animals and their habitats.

37. Student will be able to identify taking food and water by mouth as a definite need of animals.

38. Student will be able to identify breathing air as a definite need of all animals.

39. Student will be able to identify the need for warmth and light as a definite need of all animals.

40. Student will be able to identify the ways in which animals protect themselves from enemies.

41. Student will be able to identify animals whose young are hatched from eggs by marking each of the animals whose young are hatched from eggs with an X after viewing the series of slides and the audio tape depicting which animals are hatched from eggs.

42. Student will be able to identify rabbits, cows, horses, dogs, and other animals as animals which give birth to their young.

43. Student will be able to identify animals as being different in the same way the people are different.

44. Student will be able to identify the different characteristics of the animals at different seasons.

45. Student will be able to identify the animals which hybernate during the cold season.

46. Student will be able to identify birds as animals which migrate or move to more favorable locations during the cold season.

47. Student will be able to identify the different ways animals act during the warm season as (1) they build homes and have their young; (2) they eat a lot; (3) they store up for the cold season; (4) they shed their heavy coats.

48. Student will be able to identify the bear as an animal which eats a lot in the warm season.

49. Student will be able to identify the squirrel as an animal which stores food for the cold season.

PLATEAU 3.1

50. Student will be able to identify at least 5 animals which make their homes under the ground.

51. Student will be able to identify at least 5 animals which make their homes above the ground.

52. Student will be able to identify animals which make their homes in trees and bushes.

53. Student will be able to identify 5 animals which make their homes in or near the water.

54. Student will be able to identify feeding milk to their young and feeding food they collect as the way animals take care of their babies when they are young.

55. Student will be able to identify kittens, puppies, hampsters and mice as mammals whose mothers feed milk to when they are young.

56. Student will be able to identify cows, horses, sheep and pigs as animals whose mothers feed milk to them when they are young.

57. Student will be able to identify the bat, rabbit, squirrel, deer and bear as wild mammals who take care of their babies by feeding them milk.

58. Student will be able to identify birds as animals which feed their babies food they collect.

59. Student will be able to identify ducks, chickens and turkeys as animals who feed their babies food they collect.

60. Student will be able to identify animal parents who give little or no care for their young.

61. Student will be able to identify insects that put their eggs on plants desirable for food and leave them.

62. Student will be able to identify insects that put their eggs in a protected place over the winter and leave them.

63. Student will be able to identify fish as an animal that protects eggs but allows the young to take care of themselves.

64. Student will be able to identify the turtle as an animal who lays eggs and leaves them to take care of themselves.

65. Student will be able to identify animals which stay safe and protect themselves by using the protective coloring of their body.

66. Student will be able to identify animals which stay safe and protect themselves by hiding.

67. Student will be able to identify animals which stay safe and protect themselves by being still.

68. Student will be able to identify animals which stay safe and protect themselves by running or flying away.

PEOPLE
SCIENCE CONCEPTS

PLATEAU 1.1

UNITS

1. Student will be able to identify people as living things.

2. Student will be able to identify babies and small children as people who become grown up people.

3. Student will be able to identify mother and father as grown ups who take care of children at home.

4. Student will be able to identify cooking, bathing, cleaning up the house, buying groceries and taking care of the family as the way mother cares for children.

5. Student will be able to identify the function of the father in taking care of the child as earning the money, fixing things around the house, helping mother and taking the family on outings.

6. Student will be able to identify the teacher as a person who cares for him in his classroom by helping him learn.

7. Student will be able to identify the way a principal cares for the student while he is in school by identifying his function as being the boss of the school and the person who will praise the student if they do a good job, but may punish student if he does not behave.

8. Student will be able to identify the lunchroom workers as people who care for us by providing food for us while we are at school.

9. Student will be able to identify the janitor as the person who keeps the school clean.

10. Student will be able to identify himself as the person who must help the janitor keep the school clean by picking up paper and being neat in the restroom and his classroom.

11. Student will be able to identify the school nurse as a person who can help you when you are sick.

12. Student will be able to identify the M. D. as a person who helps us get well if the nurse cannot help us.

13. Student will be able to identify the Dentist as one who helps us take care of our teeth.

14. Student will be able to identify the policeman as one who protects us by keeping us safe and preventing crime.

15. Student will be able to identify the fireman as one who protects us by fighting and helping protect fires.

16. Student will be able to identify the time in life when he starts to school as a time when he must begin to take care of himself.

17. Student will be able to demonstrate the proper use of the knife.

18. Student will be able to demonstrate the proper use of the scissors.

19. Student will be able to identify the knife as an item which will cut us if we do not use it properly and identify proper ways to cut.

20. Student will be able to identify the scissors as an item which will cut him if he isn't careful.

21. Student will be able to identify the proper way to plug in an electric plug.

22. Student will be able to demonstrate the proper way to plug in an electric outlet.

23. Student will be able to show that he understands that we should never handle electricity (wires) when we are wet.

24. Student will be able to show that he knows that we should never put anything in the electrical outlet but the plug.

25. Student will be able to identify electricity as something which can hurt us if we do not use it with care.

26. Student will be able to identify the time when something hits or cuts your body as a time when you are in pain.

27. Student will be able to identify babies as little people who will become grown up.

28. Student will be able to identify a mother, father, and teacher as grown up people.

29. Student will be able to identify progressive changes in a person as he grows up.

30. Student will be able to identify food as the thing that helps us grow.

31. Student will be able to identify milk, eggs, meats, vegetables, fruits, and breads as good food which help you to grow in the best way.

32. Student will be able to identify milk shakes, ice cream, hot chocolate and a glass of milk as ways we consume milk.

33. Student will be able to identify boiled eggs (at Easter and other) and eggs fried or scrambled as ways we eat eggs.

34. Student will be able to identify cakes as something made from eggs.

35. Student will be able to identify good food as a necessity for growth.

36. Omitted.

37. Student will be able to identify fruits such as apples, oranges, peaches, grapefruit, lemons, plums, grapes, and pears as fruit and being good for you.

38. Student will be able to identify beans, corn, peas, squash, lettuce, tomatoes, rice, as vegetables and as food that is good for us.

39. Student will be able to identify potatoes, turnip greens, okra, carrots, spinach, cabbage, broccoli, radishes, celery, onion and beets as vegetables good for us.

40. Student will be able to identify hot dogs, chicken, hamburgers, roast beef, roast pork, pork chops, bacon, sausage, and fish as meats we eat.

41. Student will be able to identify white bread as being good for our growth.

42. Student will be able to identify corn bread as well as white bread as being good for our growth.

43. Student will be able to identify going to bed early as good health habits.

44. Student will be able to identify the time when a body is resting as a time of growth.

45. Student will be able to identify a rest period during the day as a healthy practice.

46. Student will be able to identify running, walking, and playing games as exercises which are good for us.

47. Student will be able to identify exercise as action in which the body uses food.

48. Student will be able to identify exercising as a way to help keep us from getting fat.

49. Student will be able to identify exercise as a contributing factor to a healthy body.

50. Student will be able to identify the state of feeling good and liking to do things as being a time when he is well.

51. Student will be able to identify a state of not wanting to do things because you do not feel good as feeling bad.

52. Student will be able to identify the concept of being sick as the state of feeling bad because the body hurts.

53. Student will be able to identify clothes as items we wear to protect us from the elements.

54. Student will be able to demonstrate an understanding of the fact that the fewer the clothes we have on the cooler we will be.

55. Student will be able to identify spring and summer as a time when we wear clothes which will help us stay cool.

56. Student will be able to identify warm clothing as a jacket, a cap and long pants.

57. Student will be able to identify the fall and winter seasons (cold time) as a time to wear warm clothes.

58. Student will be able to identify the time when we get too wet or too cold as a time when our bodies are weak.

59. Student will be able to identify germs as the cause of colds.

60. Student will be able to identify getting wet from the rain and snow as a cause of getting sick.

61. Student will be able to identify sneezing, coughing, and a running nose as characteristics of a cold.

62. Student will be able to identify cold germs as being in your body when you are sick.

63. Student will be able to demonstrate an understanding that cold germs escape from your body into the air when you sneeze.

64. Student will be able to demonstrate an understanding that cold germs escape from your body into the air when you cough.

65. Student will be able to identify the time when we get too wet and too cold, as a time when our bodies are weak.

66. Student will be able to identify the raincoat, hat, umbrella, and boots as items we should wear in rainy weather.

67. Student will be able to demonstrate an understanding that we will get fewer colds if we get the right amount of food.

68. Student will be able to identify getting proper rest as a way to get fewer colds.

69. Student will be able to identify exercise as a way to help protect your body from colds.

70. Student will be able to identify dressing to suit the weather as a way to prevent colds.

71. Student will be able to identify touching as a way germs are spread.

72. Student will be able to identify eating after a person as a way to catch his cold germs.

73. Student will be able to identify covering one's mouth when you sneeze as a way to prevent germs from spreading or cough.

74. Student will be able to identify the tooth brush as the instrument which we clean our teeth with and tooth paste as the cleaner needed.

75. Student will be able to demonstrate the proper use of a tooth brush in cleaning his teeth.

76. Student will be able to identify at least two times a day the time we should brush our teeth.

77. Student will be able to identify a tub bath and a shower as two ways to take a bath.

78. Student will be able to identify soap and water and washrag as items which must be used to keep our body clean.

79. Student will be able to identify drying off as an important part of cleaning your body.

80. Student will be able to identify athletic feet as a skin problem which occurs when we do not clean our feet.

81. Student will be able to identify our eyes as the organ used by us to see.

82. Student will be able to identify what we could see if he did not have the use of his eyes.

83. Student will be able to identify our eyes as the organ which allows us to enjoy television.

84. Student will be able to identify our eyes as the organ through which we learn about near and far and shape and color.

85. Student will be able to identify his eyes as an organ which helps him to be safe.

86. Student will be able to identify his eyes as an organ which helps him have fun.

87. Student will be able to identify his eyes as an organ which helps him learn.

88. Student will be able to identify our eyes as helpful to us in many things.

89. Student will be able to identify loss of eyesight with putting something in their eye.

90. Student will be able to identify his ears given a picture of a person.

91. Student will be able to identify hearing as a help to us when we learn to talk.

92. Student will be able to identify things we learn by sound.

93. Student will be able to identify hearing as a protection from danger by giving us warnings.

94. Student will be able to identify communication as a process we must have hearing for.

95. Student will be able to identify hearing as an aid to use in watching television and listening to the radio.

96. Student will be able to identify the sense of touch as the way something feels.

97. Student will be able to identify glue and tape as sticky items.

98. Student will be able to identify ice as an item which feels cold.

99. Student will be able to identify his hand as a warm item.

100. Student will be able to identify a kitten's fur as something which as a soft touch.

PLATEAU 2.1

101. Student will be able to identify people as living things.

102. Student will be able to identify a characteristic of a living thing as that of breathing.

103. Student will be able to identify physical growth as growth in which the body changes.

104. Student will be able to identify the physical growth of people from the age 12 through adulthood.

105. Student will be able to identify the changes which take in the child mentally.

106. Student will be able to identify actions which are characteristic of children who are between the ages of 6 through 12.

107. Student will be able to identify the characteristic of being alive as that of being capable of moving.

108. Student will be able to identify at least 4 ways in which people move.

109. Student will be able to identify characteristics of being alive as a need for food and dress.

110. Student will be able to identify the need for many different kinds of food as a characteristic of being alive.

111. Student will be able to identify the need for water which is safe from dirt to drink and to clean our bodies as a characteristic of being alive.

112. Student will be able to identify fresh air as a need of people.

113. Student will be able to identify the need for rest after exercise as a characteristic of a well and alive person.

114. Student will be able to identify the need for rest when we are sick as a characteristic of people.

115. Student will be able to identify a doctor, nurse, dentist and parents as four people who help us to be healthy.

116. Student will be able to identify the doctor as a friend who helps us get well when we are sick by caring for us and helps keep us from getting sick by giving us medicine.

117. Student will be able to identify the school nurse as a friend who helps us stay well.

118. Student will be able to identify the school nurse as a friend who helps us to be sure we are ready to be at school by helping us while we are at school.

119. Student will be able to identify the nurse as a person who helps us know about our eyes, ears, weight and our height by giving us check ups.

120. Student will be able to identify the dentist as one who helps take care of our teeth.

121. Student will be able to identify his parents as the one who helps him in many ways to keep him healthy.

122. Student will be able to identify parents as the ones who provide food and clothing and shelter and medicine for children.

123. Student will be able to identify the ways he helps himself to be healthy.

124. Student will be able to identify the proper brushing of his teeth as a way he can help take care of his teeth.

125. Student will be able to identify the proper foods to have strong teeth, as a way he can insure that his teeth will be taken care of.

126. Student will be able to identify competency of brushing his teeth properly.

127. Student will be able to identify proper foods a person must have in order to have strong teeth.

128. Student will be able to identify the need to keep his feet clean as a way that he can help care for his feet.

129. Student will be able to identify the need to wear shoes appropriate to the weather as a way he can help care for his feet.

PLATEAU 3.1

130. Student will be able to discriminate that the heart pumps blood through the body.

131. Student will be able to demonstrate an understanding that the heart must work all the time.

132. Student will be able to discriminate that the heart works automatically.

133. Student will be able to demonstrate an understanding that the heart does not work as hard when we lie down.

134. Student will be able to discriminate that we have a pair of lungs for breathing.

135. Student will be able to demonstrate an understanding that we have a mouth and teeth for eating.

136. Student will be able to demonstrate an understanding that we have muscles for strength and movement.

137. Student will be able to demonstrate an understanding that we have bones to support our bodies.

138. Student will be able to demonstrate an understanding that our eyes and ears help us know many things and keep us safe and healthy

139. Student will be able to demonstrate an understanding that to be really healthy, we need to be happy.

140. Student will be able to demonstrate an understanding that sometimes fears bother us.

141. Student will be able to demonstrate an understanding everyone gets scared sometime.

142. Student will be able to demonstrate an understanding that different things frighten different people.

143. Student will be able to demonstrate an understanding that we behave differently when we are frightened.

144. Student will be able to demonstrate how we can learn different ways of overcoming fear.

145. Student will be able to demonstrate that he has learned to identify things in nature which are dangerous, such as poison ivy and the few poisonous snakes.

146. Student will be able to demonstrate an understanding that we should learn to do those desirable but unknown tasks we feel afraid of trying.

147. Student will be able to demonstrate a desire to find out the causes of unfamiliar noises.

148. Student will be able to demonstrate progress in learning safe procedures in regard to strange animals, bullies.

149. Student will be able to demonstrate a willingness to talk with an older person who can help you understand fear.

150. Student will be able to demonstrate an understanding that sometimes anger bothers us.

151. Student will be able to demonstrate an understanding that when we are angry it causes changes inside our bodies.

152. Student will be able to demonstrate an understanding that we cannot think as well and thus should not act quickly when we are angry.

153. Student will be able to demonstrate an understanding that when we feel angry or unfairly treated we should talk it over with an older person who understands us.

154. Student will be able to discriminate ways we can work for happy feelings.

MATTER AND ENERGY
SCIENCE CONCEPTS

PLATEAU 1.1

UNITS

1. Student will be able to identify rocks as non living things.
2. Student will be able to identify rocks as being found on top of and under the earth.
3. Student will be able to identify crystals or the material called minerals from which all rocks are made.
4. Student will be able to use a magnifying glass and group 5 rocks in 3 groups of rocks according to crystals.
5. Student will be able to identify 5 rocks as being made of minerals.
6. Student will be able to match rocks by colors and shapes.
7. Student will be able to descriminate 3 ways rocks may break into pieces.
8. Student will be able to identify soil as a non living thing.
9. Student will be able to identify soil as where plants grow and a source of water and minerals.
10. Student will be able to identify soil as being softer than sand.
11. Student will be able to identify liquids as non living things.
12. Student will be able to identify water as a liquid poured into many shapes and will be able to identify wet things.
13. Student will be able to discriminate 3 ways we know that air is all around us.
14. Student will be able to identify 4 ways man moves air.
15. Student will be able to identify the wind as a way that we know that air itself can move.

PLATEAU 2.1

16. Student will discriminate that air takes up space, has weight and can be squeezed.

17. Student will be able to identify cooling air as the way to make the amount smaller and heating air as a way to make the amount greater.

18. Student will be able to demonstrate an understanding that squeezed air pushes.

19. Student will be able to identify air in motion as wind.

20. Student will be able to identify wind as helpful to us when we are flying a kite, when the weather is hot, when we are sailing in our boat, and when the wind carries seeds of plants to new planting places.

21. Student will be able to identify ways the wind can destroy things.

22. Student will be able to demonstrate an understanding of the fact that when wind moves we can feel the wind.

23. Student will be able to demonstrate an understanding of the fact that we can see things that the air moves.

24. Student will be able to identify hand tools as items which help us in our work.

25. Student will be able to identify sports equipment such as ball bats, golf clubs, tennis rackets, and wheel toys which increase our strength and allow us to move more quickly and more easily.

26. Student will be able to identify our muscles as tools which are part of our body which furnish power for us to do work such as lifting, throwing, walking, running, and jumping.

PLATEAU 3.1

27. Student will be able to demonstrate an understanding that when many materials stay in the same shape most of the time, we say they are solid.

28. Student will be able to identify rocks as solid materials.

29. Student will be able to demonstrate an understanding that rocks may vary in size, shape, color, hardness, textures, ease of scratching or breaking, and how they were formed.

30. Student will be able to demonstrate an understanding that rocks are used for special purposes.

31. Student will be able to identify the use of hard strong rocks for steps, walks, buildings, and statues.

32. Student will be able to identify the use of easily split rocks for shingles (slate roof).

33. Student will be able to identify cement as a hard rock.

34. Student will be able to demonstrate an understanding that talcom is made from the softest rock.

35. Student will be able to demonstrate an understanding that salt is made from a rock.

36. Student will be able to demonstrate an understanding that small rocks, gravel, are used to strengthen cement, asphalt, and on roads and paths.

37. Student will be able to demonstrate an understanding that rocks were not always solid.

38. Student will be able to demonstrate an understanding that volcanoes erupt melted rock materials.

39. Student will be able to demonstrate an understanding that oceans and lakes have materials in them which settle and become rocks.

40. Student will be able to identify iron as a solid material.

41. Student will be able to identify an understanding that iron is strong and it can be shaped many ways for special purposes.

42. Student will be able to demonstrate an understanding that iron may rust.

43. Student will be able to identify wood as a solid material.

44. Student will be able to discriminate that wood is lighter than iron or stone.

45. Student will be able to discriminate that wood can be easily cut into desired shapes.

46. Student will be able to identify wood as being strong enough for many things.

47. Student will be able to identify glass as a solid material.

48. Student will be able to demonstrate an understanding that glass lets light show through it.

49. Student will be able to discriminate glass that can be seen through. We say it is transparent.

50. Student will be able to identify glass shaped in many ways: windows, doors, dishes, and bottles.

51. Student will be able to discriminate that glass is easily broken.

52. Student will be able to discriminate that glass does not rust.

53. Student will be able to identify ice as a solid material.

54. Student will be able to demonstrate an understanding that ice stays solid only in a cold place.

55. Student will be able to discriminate that ice can be made from water on a cold day, or in a freezer.

56. Student will be able to discriminate that heat may be helpful or harmful.

57. Student will be able to discriminate that useful heat comes from many sources.

58. Student will be able to demonstrate an understanding that fires may be made from wood, gas, oil, kerosene, and candles.

59. Student will be able to demonstrate an understanding that fire needs fuel, fire needs air, fire needs a kindling temperature before it burns.

60. Student will be able to discriminate that electricity may come from house currents, batteries, or dry cells.

61. Student will be able to demonstrate an understanding that sunshine gives much heat. It helps living things to grow.

62. Student will be able to discriminate that some heat can be put where it is very useful.

63. Student will be able to discriminate that houses are warmed by furnaces, stoves, fireplaces, and heaters.

64. Student will be able to discriminate that water is warmed for personal and household cleanliness.

65. Student will be able to discriminate that stoves, ovens, and other appliances cook foods.

66. Student will be able to discriminate that irons make clothing more presentable.

67. Student will be able to discriminate that torches help with welding and soldering materials.

68. Student will be able to discriminate that fires destroy unwanted trash.

69. Student will be able to discriminate that trees, umbrellas, and buildings furnish shade.

70. Student will be able to discriminate that fans, air conditioning, and refrigeration reduce or remove heat.

71. Student will be able to discriminate an understanding that insulating materials keep heat in or out, or deseved.

72. Student will be able to discriminate that some colors are used to reflect heat, rather than to absorb it.

73. Student will be able to demonstrate an understanding that the amount of heat present in a given situation can be measured with a thermometer.

74. Student will be able to demonstrate an understanding that materials can be measured for temperature.

75. Student will be able to discriminate how persons can take their temperature.

76. Student will be able to discriminate that the weather's temperature is easy to measure.

77. Student will be able to discriminate that some materials change temperature faster than others.

78. Student will be able to discriminate that air temperature is easily controlled.

79. Student will be able to demonstrate an understanding that circulating air will heat or cool rapidly.

80. Student will be able to demonstrate that materials with trapped air respond slowly to temperature change.

81. Student will be able to demonstrate an understanding that metals conduct temperature rapidly.

82. Student will be able to discriminate that most metals will tolerate extreme changes in temperature.

83. Student will be able to demonstrate an understanding that metals are used for cooking utensils.

84. Student will be able to demonstrate an understanding that heat and fires need careful control to prevent harm and injuries.

85. Student will be able to demonstrate an understanding that fires may be put out by removing the air.

86. Student will be able to discriminate that air may be shut out by covering fire with dirt and sand.

87. Student will be able to discriminate that a blanket will help smother fire.

88. Student will be able to discriminate that removing fuel or potential fuel will stop a fire.

89. Student will be able to discriminate that forrest fire barriers are made by removing litter through plowing or controlled burning.

90. Student will be able to demonstrate that homes may be kept safer by removing combustibles.

91. Student will be able to demonstrate an understanding that all moving things must be started and stopped by some energy or force.

92. Student will be able to identify inertia as the force which keeps a thing moving or resting, which ever it is doing.

93. Student will be able to discriminate that inertia of rest must be overcome to start anything moving.

94. Student will be able to discriminate that the inertia of motion must be overcome to stop any moving things.

95. Student will be able to discriminate friction makes it harder to start things moving and easier to stop them.

96. Student will be able to demonstrate an understanding that friction is caused when two surfaces rub together.

97. Student will be able to discriminate that rough surfaces cause more friction than smooth surfaces.

98. Student will be able to discriminate that we can apply friction by putting on brakes or dragging our feet.

99. Student will be able to discriminate friction makes things warmer.

100. Student will be able to identify that rope climbing burns hands.

101. Student will be able to identify that friction may give a kindling temperature.

102. Student will be able to demonstrate an understanding that smooth round shapes are used to move things.

103. Student will be able to identify wheels as simple machines that are round and help move things.

104. Student will be able to identify gears as round things that help us move things.

105. Student will be able to identify ball bearings as round things that help us move things.

106. Student will be able to identify pulleys as round things that help us move things.

107. Student will be able to demonstrate an understanding that oil and grease reduce friction between moving parts of wheels, gears, and axles.

108. Student will be able to demonstrate an understanding that much friction is avoided when things are moved on water.

109. Student will be able to demonstrate an understanding that friction is reduced to a minimum when things are moved in air.

110. Student will be able to identify gravity as a natural force which always pulls toward the center of the earth.

111. Student will be able to discriminate that gravity pulls moving things downward.

112. Student will be able to discriminate that gravity holds down things which are not moving and gives them weight.

PHYSICAL EDUCATION I

P. E. ABOVE THE PLATEAU OF FUNDAMENTAL MOVEMENTS IS PROVIDED BY THE REGULAR SCHOOL P.E. PROGRAM. THE TEACHER SHOULD BE SURE EACH STUDENT CAN PERFORM THE FUNDAMENTAL MOVEMENTS BEFORE MOVING THE STUDENT INTO ORGANIZED GAMES WHERE COORDINATION AND OTHER BASIC PERCEPTUAL-MOTOR SKILLS ARE REQUIRED.

PUPIL PROGRESS RECORD SHEET

PHYSICAL EDUCATION

NAME ______________________________

PLATEAU 1. 1 2 3 4 5 6

BALANCE AND POSTURE

1A	1B	1C	2A	2B	2C	3A	3B	3C	4A	4B	4C	5A		5B		5C		6A			6B			6C			7A		7B		7C	
												a	b	a	b	a	b	a	b	c	a	b	c	a	b	c	a	b	a	b	a	b

BODY IMAGE AND DIFFERENTIATION

8A									8B									8C								
a	b	c	d	e	f	g	h	i	a	b	c	d	e	f	g	h	i	a	b	c	d	e	f	g	h	i

9C																	9B																	9C																
a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q

10A			10B			10C			11A		11B		11C		12A										12B										12C									
a	b	c	a	b	c	a	b	c	a	b	a	b	a	b	a	b	c	d	e	f	g	h	i	j	a	b	c	d	e	f	g	h	i	j	a	b	c	d	e	f	g	h	i	j

PERCEPTUAL-MOTOR MATCH

13A	13B	13C	14A	14B	14C

Mark X for successful pre-test (steps A,B,C first time)
Mark / for unsuccessful pre-test (step A or B or C inadequate)
Mark X for successful post test (steps A,B,C after instruction)

Circle appropriate pace level opposite plateau above

INSTRUCTIONAL MEANS AND MODE

Introduction

The physical education program for Opelika Special Education students is intended to be sequential, individualized, and developmental.

It is again emphasized here (as it has been throughout this guide) that the philosophy accepted as the basis for instruction in this curriculum is to find out where the learner is developmentally, begin his training at his developmental stage, and insure by a sequential structure that he continues to have the opportunity to grow physically, perceptually, and conceptually at his own natural pace. Physical Education instruction is based upon this same philosophy.

It is a false assumption to believe that the EMR is delayed only in intellectual development. A review of the research leaves little doubt that development of adequate generalized motor responses is a concomitant of adequate perceptual and conceptual development.

Thus; the Physical Education program for the EMR begins with a sequence of objectives designed to evaluate each learner's gross motor coordination capabilities and direct training to those stages of inadequate development.

Objectives for plateau 1 are stated in performance terms and are derived from The Purdue Perceptual-Motor Survey (Kephart & Roach). Each objective specifies the activity, the manner of performance, the degree of acceptable performance, and the materials and/or equipment required.

At the end of plateau 1, the Frostig Program is recommended for perceptual-motor training after gross motor coordination and along with fine motor coordination activities. (Fine muscle training is included in the communication skills sequences).

Plateau 2-6 physical education will follow the regular school sequence and learners can be integrated with appropriate regular classes if the elementary school program has a developmental design. The general sequential stages of development after the fundamental movements of plateau 1 are:

P-2 Rhythms and Dance; P-3 Games of Low Organization; P-4 Object Handling; P-5 Seasonal Sports Activities; P-6 Stunts, Tumbling, and Apparatus Activities.

Keep in mind that not all slow learners will be ready for regular school physical education at the same time. It is essential that physical education be as individualized as other learning activities are designed to be in this curriculum.

There is no justifiable reason why all special class students must participate in the same activities at the same time in physical education or any other development of sequence; but, as in other sequences, several learners can be grouped if they are working on the same or similar objectives.

It is suggested that when the EMR is ready for regular physical education he be placed with a physical education group on the basis of his ability to successfully participate. This procedure could mean a "scattering" of EMR's throughout the elementary physical education schedule.

Instructional Means

Most of the instructional means needed for the plateau 1 sequence is concrete. All materials and equipment is specified in the objective and can be either hand-made or purchased. (Opelika special teachers will find all of the necessary materials, equipment, and reference books located in their classroom).

Suggested instructional activities are provided in abundance in Motoric Aids To Perceptual Training (Chaney and Kephart), in Developing Learning Readiness (Getman etal), and from the physical education resource teacher. (Motoric Aids describes 126 different activities to develop balance and posture, for example).

Instructional Mode

The instructional mode for plateau 1 is described by the chart on page 301 of this section.

Although individualized instruction is most desirable, grouping on the same objective is possible if the teacher can also maintain adequate evaluation of an individual student's performance. For example, instruction to develop balance by walking the board can be done in sequence by several learners (a "take turns" type of procedure).

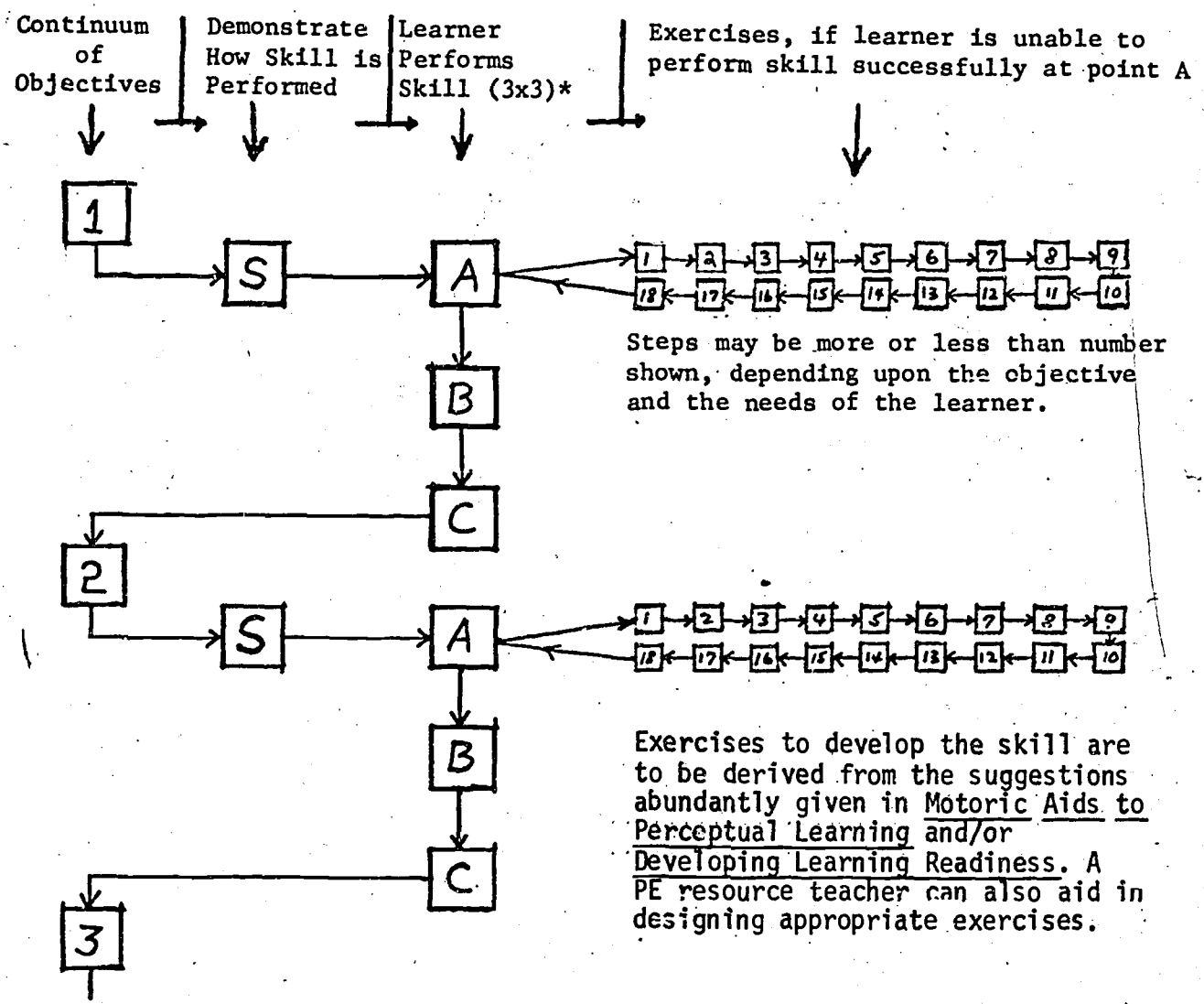
Practice by individuals could be allowed at various times within the classroom on some activities or just outside the room in the hall or in the yard for other skills.

Pupil Progress Records

Records of evaluation and progress should be maintained on the Pupil Progress Record sheet.

The record form should be kept with other student achievement records and forwarded to a future teacher if the learner transfers.

CHART OF
OBJECTIVES/EVALUATION/REMEDIATION
FOR PHYSICAL EDUCATION



* The rule of 3 is employed to minimize unnecessary activity and permit the learner to advance more rapidly according to capability to achieve. (The rule of 3 states: "if an activity can be performed well three successive times on three consecutive days, it can be assumed that further practice would not be needed.") Thus; B and C performance steps are reviews to insure correct evaluation. The teacher must be sure that the activity is done successfully each time it is evaluated because skips in sequenced development can lead to later failure.

FUNDAMENTAL MOVEMENTS

SKILL SEQUENCE
OBJECTIVES

Follow exact sequence of objectives.. Follow the charted steps (S,A,B,C) with each objective unless otherwise stated. Utilize the exercises only if the learner cannot achieve the objective at step A on the chart. (Where an objective has more than one part (a,b,c, etc.), all parts are evaluated before exercises are prescribed).

PRIMARY 1.1
(Exercises designed for C.A. 6 to 7)

UNIT I

1. Given a standard walking board (with the 4 inch flat side up and about 6 inches off floor) located in an area free of touchable objects, the learner will be able to walk forward on the board to the far end easily and maintain dynamic body balance throughout. (If the learner steps off the board more than once, or pauses frequently and has difficulty regaining balance or has more than one-fourth of his performance out of balance, or cannot perform at all; he must complete the series of prescribed exercises before trying step A again.)
2. Given a standard walking board (with the 4 inch flat side up and about 6 inches off the floor) located in an area free of touchable objects, the learner will be able to walk backward on the board easily and maintain balance throughout without looking behind him. (If the learner steps off the board more than twice, or pauses frequently, or cannot perform without looking behind him, or if he must feel with toe, or if more than one half of his performance is out of balance, or if he cannot perform at all; he must complete the series of prescribed exercises before trying step A again.)

3. Given a standard walking board (with the 4 inch flat side up and about 6 inches off the floor) located in an area free of touchable objects, the learner will be able to walk on the board sidewise to the far end and return to the starting point without turning body position and without losing balance. (If the learner steps off the board more than twice in one direction, or pauses frequently and has difficulty regaining balance, or if his performance in one direction is markedly better than in the other, or if he cannot perform at all; he must complete the series of prescribed exercises before trying step A again.)
4. In a space free of furniture or other obstacles, the learner will be able to place both feet together and jump one step forward, keeping both feet together and keeping both sides of the body parallel throughout the jump. (If the learner is unable to perform this task smoothly and easily, he must complete the series of prescribed exercises before trying step A again.)
5. In a space free of furniture or other obstacles, the learner will be able to:
   a. stand on the right foot with the left foot off the floor and jump one step forward, without putting the left foot down, and maintain balance on the right side; (Do part b. before final evaluation.)
   b. Stand on the left foot with the right foot off the floor and jump one step forward, without putting the right foot down, and maintain balance on the left foot. (If the learner is unable to maintain balance when jumping on either foot, he must complete the series of prescribed exercises before trying step A again.)
6. In a space free of furniture or other obstacles, the learner will be able to:
   a. skip from one side of a room or similar space to the other side with good free rhythmic movement; (Do parts b and c before final evaluation.)
   b. hop once on the right foot, once on the left foot, once on the right foot, etc. for 30 seconds without stopping, without moving forward or backward as in walking, and with smooth rhythm and balance symmetrically; (Do part c. before final evaluation.)

c. hop twice on the right foot, twice on the left foot, twice on the right foot, etc. for 30 seconds without stopping, without moving forward or backward as in walking, and with smooth rhythm and balance symmetrically. (If there is a marked pause between each shift from one foot to the other, or a noticeable shifting from one side to the other, or if the learner cannot stay in one place while hopping at b. or c., or if he is unable to sustain performance for at least 30 seconds at b. or c., or if he cannot perform at all ; he must complete the series of prescribed exercises before trying step A again.)

7. In a space free of furniture or other obstacles, the learner will be able to:

a. hop twice with the right foot and then once with the left, twice with the right and then once with the left, etc. for 30 seconds without stopping, without moving forward or backward as in walking, and with rhythm and balance symmetrically. (If the learner spontaneously begins with twice on the left foot, reverse tasks a. and b.) (Do part b. before final evaluation.)

b. hop twice with the left foot and then once with the right, twice with the left foot and then once with the right, etc. for 30 seconds without stopping without moving forward or backward as in walking, and with rhythm and balance symmetrically. (If there is a marked pause between each shift from one foot to the other, or a noticeable inability to maintain balance when shifting from one side to the other, or if the learner cannot stay in one place while hopping, or if he cannot sustain performance for at least 30 seconds, or if he cannot perform at all; he must complete the series of prescribed exercises before trying step A again.)

8. In a space free of distractions, with the learner facing the teacher, without the aid of step S demonstrations, and given verbal requests only; the learner will be able to:

a. touch both shoulders promptly and with bilateral response; (Do parts b through i. before final evaluation.)

b. touch both hips promptly and with bilateral response;

c. touch any part of his head promptly with either or both hands;

d. touch both ankles promptly by either bending over or squatting and with bilateral response;

e. touch both ears promptly and with bilateral response;

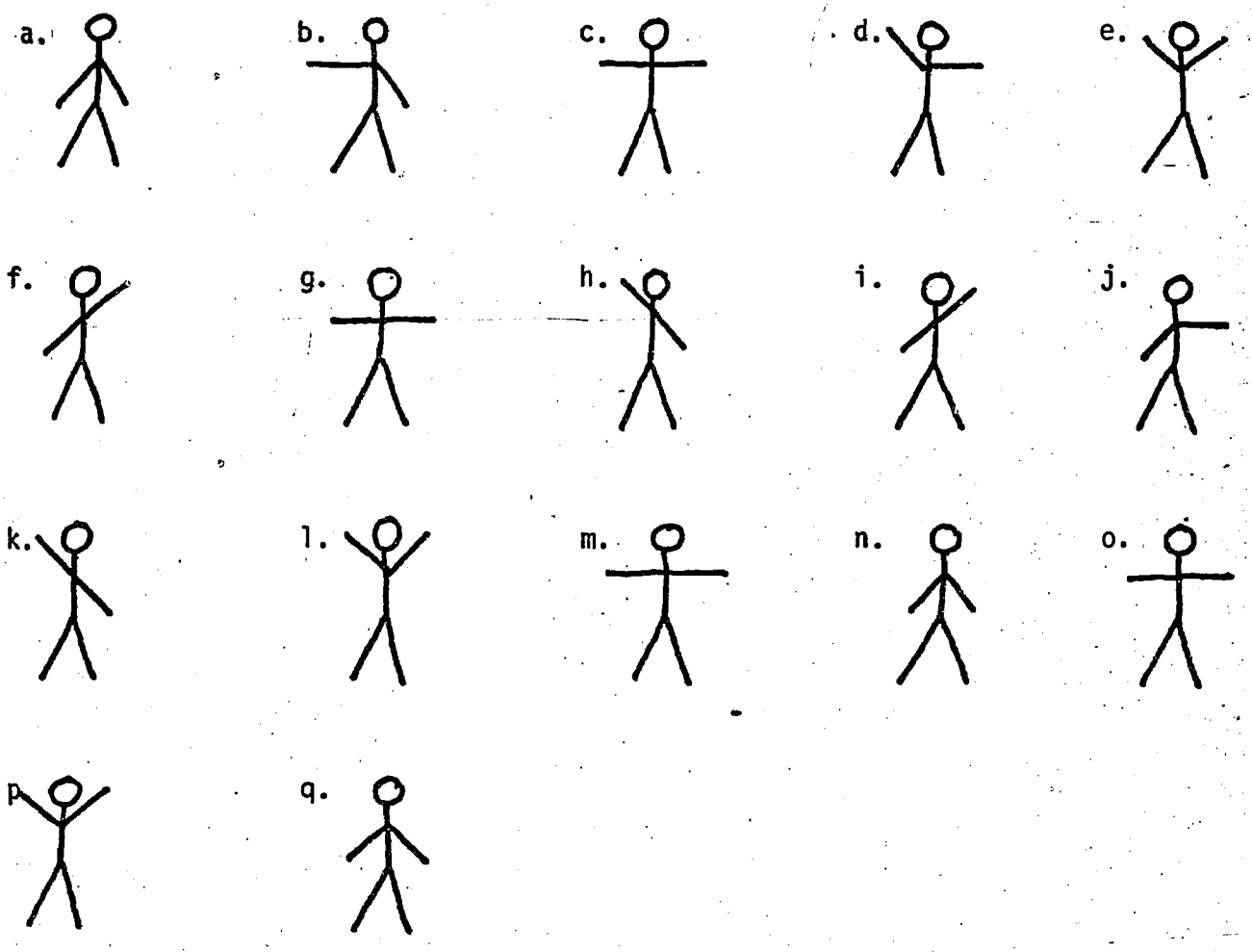
f. touch both feet promptly by either bending over or squatting and with bilateral response;

g. touch both eyes (or close proximity)

h. touch both elbows promptly and with bilateral response after no more than two attempts;

i. touch his mouth promptly with either or both hands. (If the learner shows any hesitation, need to "feel around" to locate part, or confusion in locating more than two body parts; or if he points to only one part in more than two of the bilateral requests; or if he cannot identify one or more of his body parts; he must complete the series of prescribed exercises before trying step A again.)

9. In a space free of distractions, with the learner facing the teacher, without the aid of step S demonstrations, and given physical movements to either parallel or mirror; the learner will be able to perform promptly in sequence each of the following arm positions:



(If the learner shows any hesitation or lack of certainty, or makes more than one error, or if there is an abortive movement in several patterns; he must complete the series of prescribed exercises before trying stip A again.)

10. In an area free of furniture, but near a wall, the learner will be able to:

a. step over a stick (or similar obstacle), which is at or about the learner's knee height and is parallel to the floor, without grossly over-estimating or under-estimating the space required for achievement; (Do part b. and c. before final evaluation.)

b. duck under a stick (or similar obstacle), which is at or about two inches below the learner's shoulder height, without grossly over-estimating or under-estimating the space required for achievement;

c. go between the wall and the end of a stick (or similar obstacle) without touching either the stick or the wall and without being told that the task can only be achieved by turning the boy sidewise. (If the learner over-estimates or under-estimates by more than two and one-half inches or makes any error he cannot quickly correct without repetition of the task, he must complete the series of prescribed exercises before trying step A again.)

11. Lying face down on a gym mat or rug, with a small pillow under the hips, the learner will be able to:

a. raise his head, shoulders, and chest off the mat for about 10 seconds with his hand's clasped behind his head and with the teacher holding his legs; (Do part b. before final evaluation.)

b. raise his legs about 10 inches off the mat without bending his knees for 10 seconds with his head lying on his hands and with the teacher holding his chest down. (If the learner cannot achieve a., he must complete the series of prescribed exercises before trying step A again.)

12. Lying on his back in an area free of distractions and obstacles, the learner will be able to perform the following requests in sequence on command without marked hesitation, without overflow to limbs not required, and without tactual information: (one repetition is allowed if makes an error.)

a. "move just this arm along the floor to above your head." (Point to right arm.) "Now move it back to your side." (Do parts b. through before final evaluation.)

b. "move just this arm." (Point to left arm.) "Now move it back to your side."

c. "move just this leg along the floor out as far as you can." (Point to right leg.) "Now move it back."

d. "move just this leg" (Point to left leg.) "Now move it back."

e. "move both arms." "Now back."

f. "move both legs." "Now back."

g. "move this arm and this leg." (Point to left arm and left leg." "Now back."

h. "move this arm and this leg." (Point to right arm and right leg.) "Now back."

i. "move this arm and this leg." (Point to left arm and right leg.) "Now back."

j. "move this arm and this leg." (Point to right arm and left leg.) "Now back."

(If learner shows marked hesitation in beginning a movement, or if any movement is restricted and not corrected in <u>one</u> repetition, or if there is an overflow to limbs not required and not corrected in one repetition, or if tactual information is needed to identify a limb, or if one or more tasks cannot be performed; the learner must complete the series of prescribed exercises before trying step A again.)

13. Given a standard school chalkboard, a piece of chalk in the preferred hand and a request to "stand at the chalkboard and draw a circle" (without the aid of step S demonstrations); the learner will be able to draw a circle of about 20 inch diameter directly in front of himself, with the correct circular motion, and with no more than three trials to achieve proper size, shape, direction, or position. (If learner is righthanded, the circular direction is counter-clockwise; if left handed, the direction is clockwise.) (If after three trials, the learner shows marked difficulty in producting the proper size or shape, or

is unable to draw in the correct direction, or is unable to remain in one spot and draw across his midline; he must complete the series of prescribed exercised before trying step A again.)

14. Given a standard school chalkboard, a piece of chalk in each hand, and a request to "stand at the chalkboard and draw two circles at the same time" (without the aid of step S demonstr ation); the learner will be able to draw two circles (each of which is about 20 inches in diameter and about 1 to 2 inches apart at the learner's midline) with the correct circular motion and with no more than three trials to achieve proper size, shape, directions, or position. (If learner is right handed, the circular direction is counter-clockwise with right hand and clockwise with left hand. If left handed, these directions are reversed.) (If, after three trials, the learner shows marked difficulty in producting the proper size or shape, or is unable to draw in the correct directions, or attends to only one hand at a time, or is unable to move both hands at the same time and at the same rate of speed; he must complete the series of prescribed exercises before trying step A again.

WHEN LEARNER HAS COMPLETED THIS SEQUENCE OF GROSS MOTOR SKILLS SUCCESSFULLY, BEGIN REGULAR CLASS FUNDAMENTAL MOVEMENT EXPERIENCES.

NOTE: Perceptual-motor training at the level of visual coordination and discrimination (i.e. visual forms, figure-ground, etc.) is listed as objectives of the written communication sequences.