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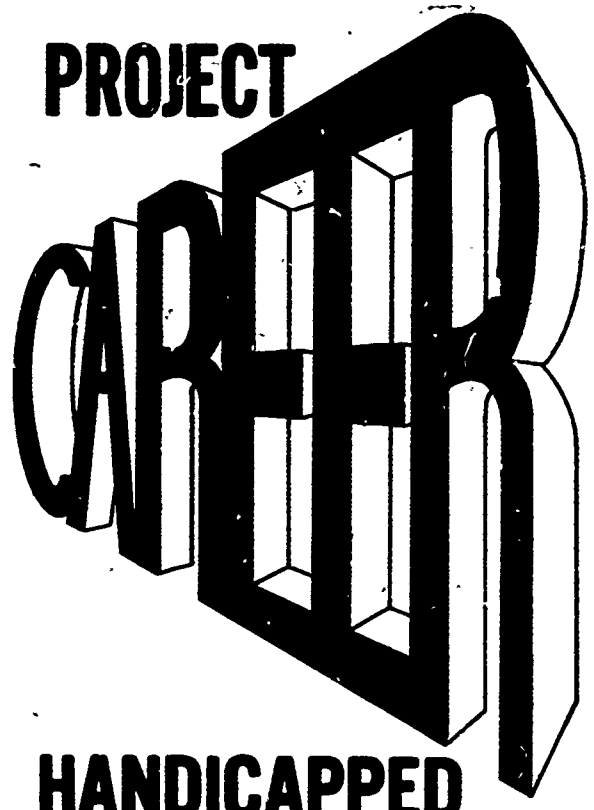
IDENTIFIERS Massachusetts; *Project CAREER

ABSTRACT

Project CAREER is a federally funded program to develop computerized behavioral objectives which will have relevance for career education in the 15 Office of Education occupational clusters for a multi-faceted approach in teaching marketable skills. The computerized data bank will be made available to all Massachusetts school systems. One element of this project is Project CAREER/Handicapped, which is assembling data based on the six major groups identified as handicapped: mentally retarded, blind, emotionally disturbed, hearing impaired, physically impaired, and speech impaired. In examining the approximately 17,000 behavioral objectives validated by Project CAREER, Project CAREER/Handicapped ascertained that every skill could be taught to handicapped students. Use of the data bank is illustrated by the behavioral objective and lesson plan for a particular skill, that of changing oil and oil filter, which represents the occupational cluster identified as transportation and the occupational area demonstrated as automotive, with the occupation using the skill as service station attendant. When handicapped students are regarded as productive persons capable of learning and applying marketable skills, rather than as individual with special needs, the label or grouping of "handicapped" loses its significance and should be eliminated from the educational system. A related document is available as ED 070 824. (MF)

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The Commonwealth
of Massachusetts
Department of Education



PROJECT
HANDICAPPED
PRESENTATION OF THE
PROJECT CAREER PROCESS

APRIL 27, 1973

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Division of Occupational Education

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Project CAREER Process
As it Relates Particularly to
Project CAREER/Handicapped

Council of Exceptional Children's

51st Annual Convention

Dallas Convention Center

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Order of Presentation

- I. Narrative Presentation
- II. Live Demonstration- with mock-up
- III. Appendices
 - A. 7-Part Project CAREER Behavioral Objectives
 - B. Project CAREER Process Chart
 - C. Career Development Lesson Plan I.D. # 004277
 1. Overview of lesson plan format
 2. Specific lesson demonstrated
 3. Career education team plans
 4. Students general instructions sheet

Project CAREER
for the Handicapped

I. Introductory Comments

On behalf of the Director of Project CAREER, Vincent P. Lamo, and the entire administrative staff of Project CAREER, I am pleased to present to you the principles and mechanics of Project CAREER/Handicapped. Before you can understand though the latter Project, it is necessary for you to comprehend the mission and activities of Project CAREER.

Project CAREER is a three year, 7/1/71 - 6/30/74, federally funded program whose major task is to develop, in a computerized basis, behavioral objectives, in 75-100 occupational areas based on the fifteen USOE occupational clusters, which will have relevance from K-14. The construction and validation of the behavioral objectives has been designed to represent a multi-faceted approach in teaching marketable skills to students. A sample of a completed behavioral objective is noted in Appendix A.

Within the state of Massachusetts, the Division of Occupational Education and its Associate Commissioner, Dr. Charles H. Buzzell functions as the prime architect of Project CAREER. In essence, the entire computerized data bank will be made available to the Commonwealth School Systems, through the Regional Supervisory Staff of the Division of Occupational Education. Dr. Charles H. Buzzell, Project Officer of Project CAREER, designed the Project in a way that the Project's products will be reproduced in a form (computer tape) that will be most feasible for any school system to relate to and benefit from the research and development data.

The Project is divided into three elements, Project CAREER/Development, Project CAREER/Guidance, and Project CAREER/Handicapped. The Guidance and Handicapped Components provide the base project with more options to prove the viability of the Process. Specifically, the parent project, Project CAREER/Development, is the heart and substance of the entire operation, for the behavioral objectives have been generated and will expand in numbers due to the effective design of the Project CAREER Process mechanics. In Appendix B you can note the extent of the facets which characterize the Project CAREER Process. The flow chart reflects the thoroughness and viability of the Project CAREER behavioral objectives.

The Project and all its elements are being piloted in three different educational settings in Massachusetts. These environments are: Springfield Public Schools, Springfield, Massachusetts, urban setting; Milford Public Schools, Milford, Massachusetts, comprehensive setting; Blue Hills Regional Technical High School District and its feeder (sending) School Systems. The rationale for the selection of these settings indicates that upon the completion of the projected period 6/30/74, every type of school system would be able to identify with the methodology and product.

The Project's first year 7/1/71 - 6/30/72, was primarily organized in terms of developing the pilot LEA staffing patterns and the personnel systems of the base project - Project CAREER/Development. The second year 7/1/72 - 6/30/73, was focused mainly on production and storage of the behavioral objective. The third and final year of the project, 7/1/73 - 6/30/74, will represent selected implementation efforts within the three local educational agencies.

II. Relevance of Project CAREER/Handicapped to the Project CAREER Process

As you know, the task of delineating those marketable skills which can be achieved by handicapped students has always been clouded by the assumption that skill development practices are foreign to the potential of handicapped individuals.

The basic philosophy of Project CAREER/Handicapped is that contingent upon the articulation of which skills can in fact be taught to handicapped students, such students can actually become a productive employee, and their handicapped conditions become a memory of the past.

In the examination of the existing data being assembled by Project CAREER, approximately 17,000 behavioral objectives, Project CAREER/Handicapped ascertained that every skill could be taught to one of the groups identified as handicapped. The Project is assembling its data based upon the following six major groups: mentally retarded, blind, emotionally disturbed, hearing impaired, physically impaired, and speech impaired.

The primary reason for the latter discovery is that when one examines marketable skills in microcosm, the specific tasks, resources, and pre-requisite learnings, do not appear to be a formidable obstacle. The Project CAREER approach provides several "validated" (by industrial representatives) options by which the local instructor could teach the specific skill.

Project CAREER/Handicapped has devised a series of 17 different levels of handicapped groups, and within each item identified as a Project CAREER behavioral objective, judgements are made as to determine the feasibility of handicapped students achieving that particular skill. The judgements are made by six teams of renown Special Needs Consultants, who receive assistance in the interpretation of occupational language by industrial representatives.

In conclusion, the base Project provides Project CAREER/Handicapped with the validated behavioral objectives and the adaptation as noted above appears on every single computerized behavioral objective.

III. Usefulness of the Project CAREER Data

Project CAREER/Handicapped is currently in the process of designing simulated experiences within each of the three LEAs to implement the "attainable" skills judged feasible for the handicapped. The settings presently exist in an elementary and junior high environment. There are active plans to conduct broad based implementation activities within three senior high levels of the above three school systems. The skill development focus of Career Development would quickly acknowledge the utility and practicality of the Project CAREER data bank.

IV. Live Demonstration of the Project CAREER Data

Upon completion of this paper, Ms. Patricia Leonard will formally acquaint you with the versatility of the Project CAREER data as to its relevance for the educable mentally retarded.

The particular skill in question is referred to as:

Identification No. 004277

"Changing oil and oil filter."

Ms. Leonard will introduce and highlight the exploratory sequence of teaching this particular skill.

The Project CAREER data bank is being developed as noted above with technical skills which represent the 15 USOE clusters. The specific cluster in question is identified as transportation and the particular occupational area being discussed is automotive. A particular occupation within the family

of automotive skills that is relevant for this lesson is service station attendant. The skill known as I.D. #004277 - changing oil and oil filter is particularly important to the marketability of a service station attendant's competency.

Within the school systems associated with Project CAREER, the above skill is being discussed in career awareness terms at the elementary school, it is further being reviewed at the junior high level in career exploration procedures, and by next year, the students will have actual opportunities to perform the skill in a format prescribed by career development procedures.

The staffing system within the elementary and junior high systems is as follows:

Occupational Resource Specialist

A person who communicates to school administration, industry, home, civic organization.

Master Teacher

Special education teacher who develops the daily "delivery" systems.

Academic Teacher

Communicates to all academic departments the need to assist the master teacher in the design and implementation of the lesson plan format.

Vocational Teacher

Communicates to all vocational departments the need to assist the Master Teacher in the design and implementation of the lesson plan format.

Ms. Leonard will therefore function as a Master Teacher who has had considerable assistance from all her team members. Within Appendix C is a complete lesson plan designed for I.D. #004277. Ms. Leonard with the able aid of the students from the Dallas Public School System, will demonstrate the skill in exploration terms. For your further consideration, the lesson plan format also suggests activities for a career awareness and career development procedure.

V. Concluding Comments

This paper represents an extremely brief description of a dynamic and revolutionary process of identifying the positive strengths of handicapped students. The demonstration process will provide you with a clear

understanding of the usefulness and innovative aspects of such a data bank. It should be noted again, based upon the delineation and successful application of marketable skills, the term handicapped loses its meaning. Project CAREER/Handicapped is actively planning and implementing Project CAREER's data bank in a manner that would enable and assure handicapped students the opportunity to be regarded first and foremost as productive persons rather than continue to be referred to as special needs or handicapped individuals. In essence upon successful mastery of occupational skills the label or categorical grouping loses its value and should be eliminated from the educational system.

Appendix A

Project CAREER 7-Part Behavioral Objective

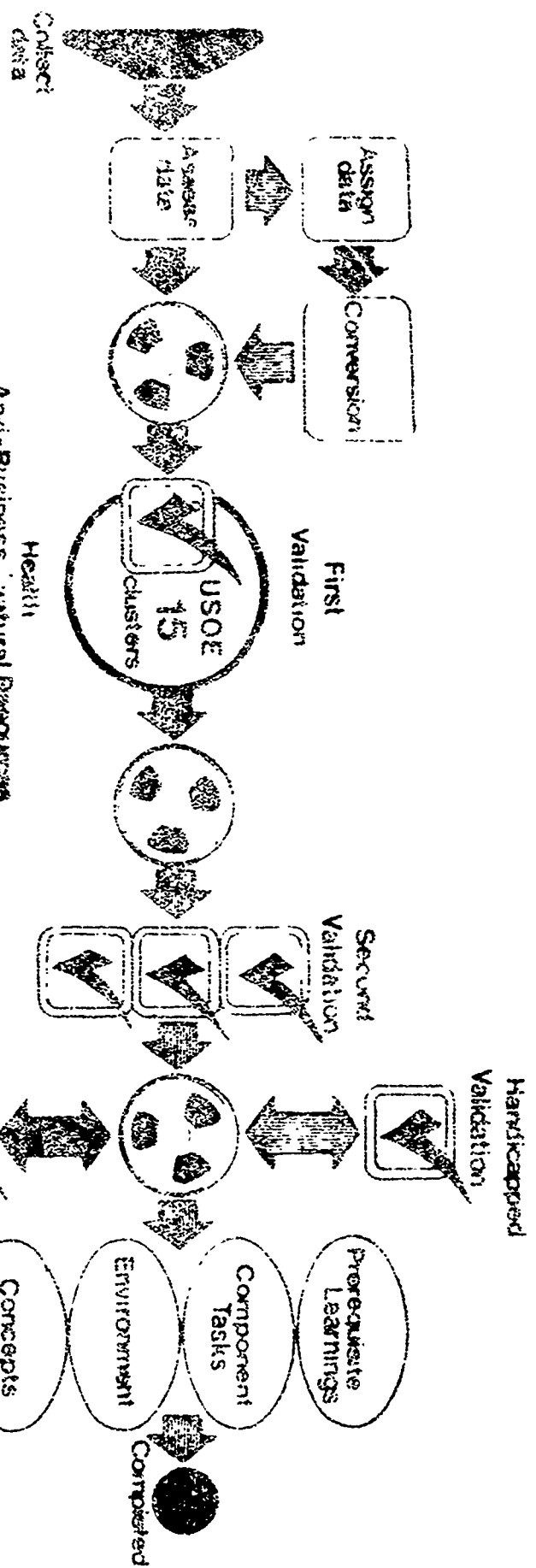
Appendix B

Project CAREER - Process Chart

CONVERSION

VALIDATION

FOUR COLUMNS



Appendix C

Career Development Lesson Plan

Format for I.D. # 004277

Project CAREER - Career Development Instructional Design

ORS _____
 Master Teacher _____
 Vocational Teacher _____
 Academic Teacher _____

Sample of Instructional Activities Relating to Service Station Occupations (Trans.)	Resources (Equipment and Community Setting)	Interdisciplinary Teacher Involvement
A. Awareness		
I. Introduction to basic tools	A1 Automotive hand tools A1 Visuals	Special education and Arts Teacher
II. Study of liquid measurement (quart, gallon)	A2 Quarts and gallon containers A2 Charts A2 Liquids	Science and Math Academic Assistants
III. Demonstrate nature and function of lubricants	A3 Oil, vaseline, grease A3 Hinges	Science Academic Assistant
B. Exploratory		
i. Field trip to service station followed by discussion of tasks observed: Lifting automobile Locating drain plug Removal of drain plug Locating oil filter Remove and replace oil filter Check for leaks	B1 Gas Station B1 Student Observation Sheets	Social Studies Assistant and Special Education

CAREER - Career Development Instructional Design

LEA School System _____
 Individual School _____
 For Week of _____
 Project CAREER I.D. #004277

Resources (Equipment and Community Setting)	Interdisciplinary Team Involvement	To Which Part of 7-Part B.O. Strategy Relates
A1 Automotive hand tools A1 Visuals	Special education and/or Arts Teacher	Prerequisite Learnings
A2 Quarts and gallon containers A2 Charts A2 Liquids	Science and Math Academic Assistants	Prerequisite Learnings
A3 Oil, vaseline, grease A3 Hinges	Science Academic Asst.	Concept
B1 Gas Station B1 Student Observation Sheets	Social Studies Assistant and Special Education	Prerequisite Learning and Environment

B. Exploratory (con'td)

* II. Student exploration of oil and oil filter change

- B2 Slide-tape presentation
- B2 Visual aids
- B3 Jars and covers
- B4 Nuts and bolts
- B5 Hand tools
- B6 Automotive mock-up

Special Education
Teacher and Includ
Arts Teacher, Sc
Teacher

C. Skill Development

I. Selection of proper oil and oil filter for automobile

- C1 Career Resource Center -
Comprehensive High School
On-the-job location
Vocational-Technical School
- C1 Oil filter chart
- C1 Various types of oil

Special Education
Academic Teacher
Vocational Teacher

II. Change oil and oil filter

- C2 Career Resource Center -
Comprehensive High School
On-the-job location
Vocational-Technical School
- C2 See "Environment" on B.O.
No. 004277

* This sequence is expanded in greater detail on the following page.

2	Slide-tape presentation	Special Education	Component Tasks
2	Visual aids	Teacher and Industrial	
3	Jars and covers	Arts Teacher, Science	
4	Nuts and bolts	Teacher	
5	Hand tools		
6	Automotive mock-up		

1	Career Resource Center - Comprehensive High School On-the-job location Vocational-Technical School	Special Education Teacher Academic Teacher Vocational Teacher	Extent
7	Oil filter chart		
3	Various types of oil		

2	Career Resource Center - Comprehensive High School On-the-job location Vocational-Technical School		Extent
2	See "Environment" on B.O. No. 004277		

the following page.

Project CAREER - Career Development Instructional Design

Career Exploration Procedures

Instructional Activities	Resources	Interdisciplinary Teacher Involvement
1. General discussion of students' awareness of transportation cluster, automotive occupations, and in particular, service station attendant skills.	Students' general instruction sheet	Special Education Teacher
2. Overview of changing oil and oil filter	Slide tape presentation	Special Education Teacher I.A. Teacher, Media Teacher
3. Introduction of major steps in changing oil and oil filter	Visuals (posters)	Special Education Teacher I.A. Teacher, Media Teacher Math Teacher, Science Teacher
4. Development of manipulative skills	Plastic jars and covers Nuts and bolts Hand tools	Special Education Teacher Physical Education Teacher Science Teacher
5. Simulation of changing oil and oil filter	Mock up of automobile's drain plug and oil filter	Special Education Teacher I.A. Teacher

ER - Career Development Instructional Design

Career Exploration Procedures

Sources	Interdisciplinary Team Involvement	To Which Part of 7-Part Behavioral Objective Strategy Relates
Students' general instruction sheet	Special Education Teacher	Pre-requisite Learnings
Tape presentation	Special Education Teacher , I.A. Teacher, Media Specialist	Component Tasks
Materials (posters)	Special Education Teacher, I.A. Teacher, Media Specialist Math Teacher, Science Teacher	Performance, Pre-requisite Concepts
Metric jars and covers and bolts and tools	Special Education Teacher, Physical Education Teacher Science Teacher	Pre-requisite Learnings
Diagram of automobile's drain and oil filter	Special Education Teacher, I.A. Teacher	Component Tasks

MASTER TEACHER'S PLAN

1. How you plan to integrate the team's comments.
 - a. Use slide tape presentation on changing oil and oil filter
 - b. Use visual aids suggested by Vocational Education Teacher
 - c. Work with science teacher in development of manipulative skills
 - d. Work with Vocational Teacher with all aspects of teaching Behavioral Objective # 004277
 - e. Work on mimeographed handouts for students

2. Individual strategy to each particular problem students.

Master teacher has made a determination as to which students need individual help. This assessment is based on pre-test regarding student general knowledge of "changing oil and oil filter". Students requiring more help will be given individual attention. Students who have some ability in this particular skill will help their classmates.

3. Record the methods regarding assessment of student growth.

Refer to student checklist on understanding of all parts of I.D. #004277. Competency of the skill will be based on the four points in the general instructions for students.

ACADEMIC TEACHER

1. Individual contribution of the Academic Teacher.

Social Studies Assistant

- A. Planned and assisted with field trip to Randolph Gas Station
- B. Recruited science and math teacher's to aid in teaching students.

Math Assistant

- A. Worked with students on liquid measurement.

2. Relationship to other Academic departments.

Science teacher - worked with students in developing manipulative skills planned for future lessons centered around ideas in concept column of behavioral objectives #004277.

3. Specific time allocated to teaching your ideas. (If you cannot teach the students yourself, what provisions are made to insure that your contribution are being followed through?)

Social studies teacher - five hours, includes time spent for field trip and planning session with math and science teachers.

Math assistant - 1½ hours, two class lessons on liquid measurement

Science teacher - 3 hours, two class lessons on manipulative skills (1½hr) planning future lessons (1½ hr)

VOCATIONAL TEACHER

1. Individual contribution of the Vocational teacher

Made automotive mock-up

Provided tools necessary for teaching behavioral objective #004277

Explained and demonstrated procedures used in changing oil and oil filter to special education teacher. Also aided in student presentation.

2. Relationship to other vocational departments.

Worked with media specialist in designing visuals.

3. Specific time allocated to teaching your ideas. (If you cannot teach the students yourself, what provisions are made to insure that your contributions are being followed through?)

Worked with class for 45 minutes, demonstrated proper use of tools needed in changing oil and oil filter, worked with special education teacher in designing student checklist to insure students are following a logical sequence.

GENERAL INSTRUCTIONS TO STUDENTS

I am Ms. Patricia Leonard from Randolph, Massachusetts. Today we will work together and learn an automotive skill used in most service stations. This skill is called "Changing oil and oil filter" and is done by a person known as a service station attendant.


























After learning the important parts of this skill, there will be a checklist which you and I will talk about to see if you understand what we have done.

Someday you may want to become a service station attendant. This skill is very important for you to understand and be able to do.

I. General Discussion

1. What is meant by the word transportation?
2. Discuss the variety of occupations that make up the automotive family.
3. Does anyone know what a service station attendant does?

II. Slides on changing oil and oil filter (25 slides)

- | | | | | |
|--|---|---|--|---|
| 1.  | 6.  | 11.  | 16.  | 21.  |
| 2.  | 7.  | 12.  | 17.  | 22.  |
| 3.  | 8.  | 13.  | 18.  | 23.  |
| 4.  | 9.  | 14.  | 19.  | 24.  |
| 5.  | 10.  | 15.  | 20.  | 25.  |

III. Seeing pictures on oil and oil filter

1. lifting a car (list three ways)
2. types of wrenches (list two types)
3. oil drain plug (which wrench is used)
4. oil filter (which wrench is used)

1. Which of the following is a function of the cell membrane?

- A. To provide structural support for the cell
- B. To regulate the movement of substances in and out of the cell
- C. To store genetic information
- D. To produce energy for the cell

2. Which of the following is a function of the nucleus?

- A. To store genetic information
- B. To regulate the movement of substances in and out of the cell
- C. To produce energy for the cell
- D. To provide structural support for the cell

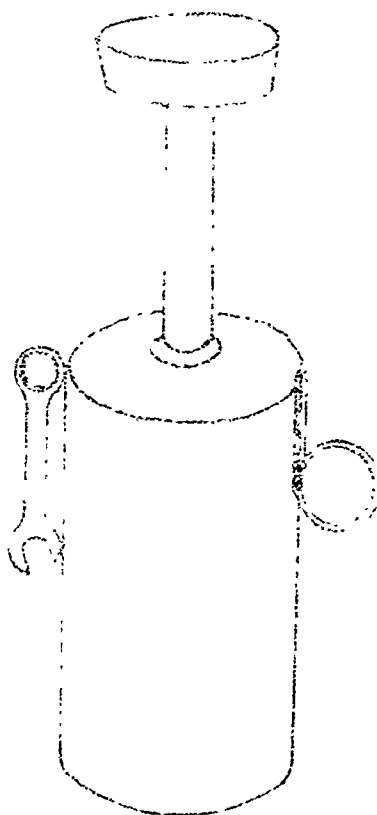
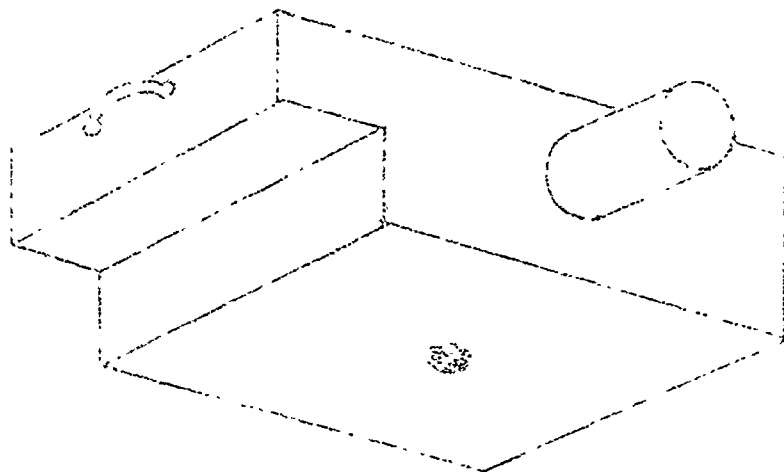
organelle is a structure within a cell that performs a specific function.

organelle is a structure within a cell that performs a specific function.

organelle is a structure within a cell that performs a specific function.

Signature: _____

Date: _____



DEMONSTRATION UNIT FOR TEACHING I.D. NO. 004277-CHANGING OIL AND

OIL FILTER