

## DOCUMENT RESUME

ED 438 461

CE 079 785

AUTHOR Gaither, Linda  
TITLE Murder They Wrote. A Cross-Curricular Cooperative Learning Experience.  
PUB DATE 1999-12-13  
NOTE 110p.; Presented at the Annual Meeting of the Association for Career and Technical Education (Orlando, FL, December 12-15, 1999). Presented with Larry Higgins and Karen Blessman.  
PUB TYPE Guides - Classroom - Teacher (052) -- Speeches/Meeting Papers (150)  
EDRS PRICE MF01/PC05 Plus Postage.  
DESCRIPTORS Academic Education; Behavioral Objectives; \*Career Education; Communication Skills; \*Cooperative Learning; Critical Thinking; \*Education Work Relationship; Equipment Utilization; Experiential Learning; \*Fused Curriculum; High Schools; Laboratory Equipment; Laboratory Procedures; Learning Activities; Lesson Plans; Problem Solving; Simulation; \*Vocational Education  
IDENTIFIERS \*Criminal Investigations; \*Forensic Science

## ABSTRACT

This document contains a cross-curricular cooperative learning experience that is designed to give high school students career and technical educational experiences in the areas of forensic sciences and criminalistics by doing the forensic work to "solve" a fictitious murder. The activities included in the cooperative learning experience are designed to enable students to accomplish the following objectives: (1) see the interrelationships between various academic disciplines; (2) learn to manipulate various laboratory equipment used in forensic settings; (3) see the connection between high school and the professional world; (4) see the importance of various communication skills (writing, reporting, interviewing) used in the professional world; and (5) learn to use critical thinking and problem solving in a cooperative learning setting. The document begins with objectives, an outline of the phases of a criminal investigation and brief overviews of the fields of forensic sciences and criminalistics. Presented next are student assignment sheets, including forms for the journal that students are required to keep throughout the learning experience, which consists of interviews with "suspects," deduction from "clues," and five lab sessions. A section of teacher resources contains assignment guidelines and detailed teacher notes and transparency masters for use in for guiding students through each laboratory experience. Concluding the document are a glossary and list of forensic organizations that have student members. (MN)



# MURDER THEY WROTE

A Cross-curricular cooperative learning experience

Presented by:

Linda Gaither

With

Dr. Larry Higgins

Karen Blessman

For:

Association for Career and Technical Education  
Annual Convention

December 13, 1999  
Orlando, Florida

PERMISSION TO REPRODUCE AND  
DISSEMINATE THIS MATERIAL HAS  
BEEN GRANTED BY

*L. Gaither*

TO THE EDUCATIONAL RESOURCES  
INFORMATION CENTER (ERIC)

U.S. DEPARTMENT OF EDUCATION  
Office of Educational Research and Improvement  
EDUCATIONAL RESOURCES INFORMATION  
CENTER (ERIC)

This document has been reproduced as  
received from the person or organization  
originating it.

Minor changes have been made to  
improve reproduction quality.

• Points of view or opinions stated in this  
document do not necessarily represent  
official OERI position or policy.

CE 079785



**OBJECTIVES:  
CO-CURRICULAR ACTIVITY  
"MURDER THEY WROTE"**

1. Students will see the interrelationships between various academic disciplines.
2. Through experiments and a professional visit, students will learn to manipulate various lab equipment used in a forensic setting.
3. Student will see the connection between high school and the professional world.
4. Students will see the importance of various communication skills (writing , reporting and interviewing) used in the professional world.
5. Students will learn to use critical thinking and problem solving in a cooperative learning setting.

## PHASES OF AN INVESTIGATION

- I. Preliminary investigation
  1. Attend to existing emergencies
  2. Secure the crime scene
  3. Measuring, photographing, sketching, etc.
  4. Searching for evidence
  5. Physical evidence-identify, collect, process
  6. Questioning victims, witnesses, and suspects
  7. Recording all statements and observations
    - a. Notes
    - b. Police reports

Many people believe this is the most critical phase of a criminal investigation.

- II. Follow-up investigation
  1. Where did it occur?
  2. Victim, witness reinterviews
  3. Suspect interrogations—accusatory
  4. Fingerprints
  5. Line-ups
  6. Mug shot viewing
  7. Composite/criminal artist
  8. Lab comparisons/analysis
  9. DNA
  10. Lie detector

- III. Warrant application

---

# **Forensic Sciences**

---

The forensic sciences form a vital part of the entire justice system. Still, some of its disciplines have become identified primarily with law enforcement, an image enhanced by television and movies. This is misleading because forensic scientists may be involved in all aspects of a criminal case, and the results of their work may serve either the defense or the prosecution.

Though closely identified with the criminal justice system, the forensic scientist plays an increasingly active role in the civil justice arena. Issues of law and/or fact which may require forensic science expertise range from questions of the validity of a signature on a will, to a claim of products liability, to questions of whether a corporation is complying with environmental laws.

The work of the forensic scientist reduces the number of cases entering the overloaded court system by assisting the decision-makers before a case reaches the court. The facts developed by forensic scientists often show either the prosecuting attorney or defense attorneys that an issue does not merit a court hearing. This decision is based on scientific investigation, not circumstantial evidence or the sometimes unreliable testimony of witnesses.

The legal system is based on the belief that the legal process results in justice. The forensic scientist uses science and technology in the search for facts in civil, criminal, and regulatory matters.

---

# CRIMINALISTICS

---

Criminalistics is the analysis, comparison, identification, and interpretation of physical evidence. The main role of the criminalist is to objectively apply the techniques of the physical and natural sciences to examine physical evidence, and thereby prove the existence of a crime or make connections. The criminalist provides information to investigators, attorneys, judges, or juries. This information is helpful in determining the innocence or guilt of the suspect.

Because of the variety of human activity which may surround a crime, the range of material which may be physical evidence is almost limitless. Evidence may be so small that a microscope is needed to see it, or it may be as large as a truck. It may be as subtle as a whiff of a flammable gas at an arson scene or as obvious as a pool of blood at a homicide scene. The enormous range of material challenges the ingenuity of the criminalist. He or she examines and identifies hair, fibers, blood, and seminal stains, alcohol, drugs, paint, glass, botanicals, soil, flammable gases and explosives, identifies firearms and compares bullets, tool markings, and footprints.

Using analytical skill and practical experience, the criminalist separates significant evidence from that having little or no probative value. Next, the criminalist sorts, compares, or identifies the evidence, developing useful information for an investigation or trial. It may be established, for example, that a bullet has been fired from a particular gun or that a fragment of plastic from the scene of a hit-and-run accident has broken off a particular car. This type of analysis is difficult; it requires an eye for detail, a broad practical scientific background, and the ability to apply these skills in court with full knowledge of the ethical responsibilities involved.

Perhaps the most important task of the criminalist lies in interpreting the results of findings to determine the circumstances at the time a crime occurred, or perhaps to support a witness' statement.

Reconstructing the events of a crime is often very difficult. It requires an understanding of human behavior, of the physical laws and processes involved, and the recognition of how they interact.

Finally, any findings must be conveyed to the other elements of the criminal justice system. This is usually done by written reports or expert testimony. The criminalist must express conclusions so that technical details are understood by the court and the jury. The criminalist undertakes a serious challenge on behalf of society and, by fulfilling this responsibility, derives great personal satisfaction.

**STUDENT**

**ASSIGNMENTS**

## STUDENT ASSIGNMENTS

1. **Journal**

Each unit is required to keep a detailed journal of ALL that they do. Each day must be dated and all entries must be clearly labeled.  
All your interviews will be recorded in the journal.  
All data from the tests you run will be recorded in the journal.  
In other words, this journal is your life. EVERYTHING you do will be recorded in this document.
2. **Evidence Request Forms**

You must fill out an evidence request form for any piece of evidence you need to see, and present it to the Evidence Clerk. The completed form goes in your notebook on the proper day.
3. **Job Descriptions**

Lab Tech: Gets materials together for labs  
Runs the lab—directs others in the group  
Makes sure the lab is cleaned up

Recorder: In charge of the notebook. It is your responsibility to keep this notebook up to date

Interviewer: Person who conducts all the interviews

Lawyer: Your responsibility to present the case to the judge
4. **Writing warrant**

When your team has all the evidence and is ready to issue a warrant, fill out the end of case report.  
Present warrant to Chief of Police for review, she will accept or reject your request.
5. **The Last Day**
  1. **What you need:**

End of case report  
Final journal  
Warrant  
Group evaluations—1 for each team member including yourself
  2. **Written Presentation**

Organized—20 points  
Deductions—25 points  
Clearly explained—20 points  
Diligence on written journal—15 points  
Badges—20 points  
Journal Cover—20 points

GOOD LUCK!

## ALTERNATIVE ASSIGNMENT

If you miss more than four days, you must write a research paper.

### REQUIREMENTS:

- 10 typed, double spaced pages
- 5 sources using MLA documentation (only **one** source may be from the Internet, the rest must be books, articles, newspapers, magazines, etc.)
- must include works' cited page

### REMEMBER:

I am an English teacher. I recognize plagiarism when I see it.

### TOPICS:

- DNA fingerprinting  
OR
- History of forensics

## SUGGESTIONS FOR OUTLINE

### Introduction

Define

Discuss cases

Etc.

### Ideas

Do by chronological order

Technical Knowledge

Stress any area or time

Conclusions

These are just ideas to give you some direction. Good luck!

## JOURNAL PAGES

Explanations and examples

### Daily entry:

Each day you will have an interview page or a lab page. Be sure to put date and hour on both pages EVERYDAY. You will also have a daily summary page to fill out EVERYDAY! This is just a summary of what you did each day.

### Interview page outline: 10 points

Suspect's name: 2 points

Questions asked with responses immediately following each question: 2 points

Body language observed (i.e. eyes, hands, tone, etc.): 2 points

Overall evaluation: 2 points

Relate answers to facts you already know: 2 points

Make some type of note if the suspect is still a suspect: 2 points

### Lab page outline: 10 points

Title of lab: 2 points

Reason performed experiment: 2 points

Results are clear and concise: 2 points

Conclusions—interpret the results: 2 points

Relate to facts you already know: 2 points

Use data to possibly eliminate some suspects from your list

### Written Presentation: 100 points

Organized: 20 points

Deductions: 25 points

Clearly explained: 20 points

Diligence on written journal: 15 points

Badges: 20 points

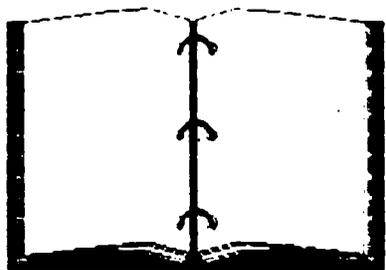
Journal Cover: 20 points

\*\*\*\*\*Be sure to check what the suspects tell you against all the factual information you gain from evidence and labs. Remember facts usually do not lie, people do.

Every day you will turn in these two pages with the lab page first and the interview page second. If you only work on one on a certain day, write that on the one you did not use with the date and hour.

# Daily Summary

Names \_\_\_\_\_



Date \_\_\_\_\_

Lab Title \_\_\_\_\_ Date \_\_\_\_\_

# LAB DATA

Results:

Conclusions:

How does this prove or disprove your ideas on the murder?

Person Interviewed \_\_\_\_\_ Date \_\_\_\_\_

# INTERVIEW JOURNAL

Question:

Answer:

Question:

Answer:

Question:

Answer:

Question:

Answer:

Question:

Answer:

Question:

Answer:

How did this interview prove or disprove your ideas about the murder? (I.e. body language, etc.)

Evidence Request Form

Date \_\_\_\_\_ Time \_\_\_\_\_

Describe Evidence \_\_\_\_\_ # \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Reason for Request \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Officer's Signature

\_\_\_ Approved

\_\_\_ Disapproved

\_\_\_\_\_/\_\_\_\_\_  
Official Signature /Date

Evidence Request Form

Date \_\_\_\_\_ Time \_\_\_\_\_

Describe Evidence \_\_\_\_\_ # \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Reason for Request \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Officer's Signature

\_\_\_ Approved

\_\_\_ Disapproved

\_\_\_\_\_/\_\_\_\_\_  
Official Signature /Date



## MAKING TEAMS

Date \_\_\_\_\_

You will be assigned to a team of 4.

Day one assignment:

1. Pick a team name.
2. Assign jobs to each member

Lawyer \_\_\_\_\_

Recorder \_\_\_\_\_

Lab Techs \_\_\_\_\_

Interviewer \_\_\_\_\_

3. Badges

Design a badge using your team name and a logo. Be sure to include your personal name and hour on the badge. Draw your badge below.

These badges must be worn AT ALL TIMES during this project. We will provide paper and markers and laminate the badges for each team. Cord will be provided for around the neck wearing period. They may be left in the room each day.

Congratulations! You are now an official FZN Detective. Use your power wisely.

**ARREST WARRANT**  
**ISSUED BY**  
**“MURDER THEY WROTE”**  
**TO**

---

**FOR THE MURDER OF**  
**LINDA GAITHER**

**DETECTIVES** \_\_\_\_\_

---

---

---

---

---

---

---

---

END OF CASE REPORT

Date \_\_\_\_\_

Case Number \_\_\_\_\_

Detective \_\_\_\_\_

Detective \_\_\_\_\_

Detective \_\_\_\_\_

Detective \_\_\_\_\_

Detective \_\_\_\_\_

Suspect \_\_\_\_\_

Crime \_\_\_\_\_

Summarize briefly (Details, details, details—date, time, what, where, when, you get it?)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(HINT—fill all the lines)

Means HOW (Method they commit crime—HOW did they do it?) For each item give us the proof---FACTS, HINT< HINT AGAIN—lab findings interview info.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Motive Why (Interviews mostly)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Received by \_\_\_\_\_

Date \_\_\_\_\_ Time \_\_\_\_\_

\_\_\_ Accepted

\_\_\_ Rejected

Received by \_\_\_\_\_

Date \_\_\_\_\_ Time \_\_\_\_\_

\_\_\_ Accepted

\_\_\_ Rejected

BEST COPY AVAILABLE

# GRAND JURY REPORT

Case Number \_\_\_\_\_

Date \_\_\_\_\_

Detective \_\_\_\_\_  
Detective \_\_\_\_\_  
Detective \_\_\_\_\_  
Detective \_\_\_\_\_  
Detective \_\_\_\_\_

\_\_\_\_ Suspect \_\_\_\_\_

\_\_\_\_ Crime \_\_\_\_\_

\_\_\_\_ When \_\_\_\_\_

\_\_\_\_ Where \_\_\_\_\_

\_\_\_\_ What \_\_\_\_\_

\_\_\_\_ Means (How) \_\_\_\_\_

## Labs

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Interviews

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_ Motive-Why \_\_\_\_\_

## Oral Presentation:

- \_\_\_\_ Organized (20 points)
- \_\_\_\_ Diligence on journal (15 points)
- \_\_\_\_ Deduction (25 points)
- \_\_\_\_ Clearly explained (20 points)
- \_\_\_\_ All members present (20 points)

ALABAMA Y100 1073

# CONCLUSIONS

WHO \_\_\_\_\_

WHAT \_\_\_\_\_

WHEN \_\_\_\_\_

WHERE \_\_\_\_\_

HOW \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

WHY \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

OFFICERS \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# GROUP EVALUATION

Evaluator's Name \_\_\_\_\_

Group Member Evaluated \_\_\_\_\_ Job \_\_\_\_\_

Scale 1-5 with 5 being the best, and 1 being the worst

\_\_\_\_ Attendance (Take away 1 point per absence)

\_\_\_\_ Worked on labs (How many?)

\_\_\_\_ Worked on interviews (How?)

\_\_\_\_ Did assigned job

\_\_\_\_ Was a team player

\_\_\_\_ Overall performance

Written comments \_\_\_\_\_

---

---

---

---

**TEACHER**

**RESOURCES**

## ASSIGNMENT GUIDELINES—TEACHER

### Details on the assignment

#### 1. Interviews-

Must do at least five. More are allowed, but no less.

#### 2. Labs

Must run 5 different labs—more details to follow.

#### 3. Evaluation and Reports

#### 4. Preliminary Assignments

Divide into teams first

Make badges, pick names, and set up journal

English teacher—work on interview questions, recording data

Science teacher—lab techniques, practice labs, (dry run)

#### 5. Mind preparation (Deductive reasoning/critical thinking)

Find the difference

Just the facts

That's my story

Mindbender (the game)

#### 6. Visit crime scene

Provide preliminary police report

Draw a picture with scale—details, details, details

Write a verbal description in paragraph form

Make a preliminary evidence list from scene

NOTE: NEED to provide measuring devices and lines for written info.

Video and pictures of crime scene available after visit.

#### 7. Guided practice

Check journal daily

Must wear badges to leave room

Keep ALL papers in journal especially lab results and interview info

#### 8. THE LAST DAY—Issuing the warrant

Model for students last day presentation

Every member present and participate in presentation

Do this in the back room, tape for reference (audio only)

List of items needed

1. End of Case Report

2. Completed journal at the end of presentation

3. Warrant

#### 4. Group Evaluation

Options you can give the students:

1. Turn in a written copy of all their conclusions for comments from you; then second submission is oral
2. Every group make oral presentation 1 time
3. Could just accept written conclusions.

#### 9. Winning presentation

Pick the best one or two groups to present their case before a judge (we use a principal) in front of all the students who participated.

Have the accused present for rebuttal or confession and arrest.

#### 10. Post evaluation session

Meet with the classes to discuss pros and cons of the experience.

Get student input on what worked and what didn't and why

Was a good way to break the dependency that had developed between the two classes.

## SOLVE THE CRIME FROM THE CLUES

When he was discovered dead, Mr. Kelley had a bullet hole in his thigh and a knife wound in his back.

Mr. Jones shot an intruder in his apartment building at 12:00 midnight.

The elevator operator reported to police that he had seen Mr. Kelley at 12:15 a.m.

The bullet taken from Mr. Kelley's thigh matched those used in the gun owned by Mr. Jones.

Only one bullet had been fired from Mr. Jones' gun.

When the elevator man saw Mr. Kelley, Mr. Kelley was bleeding slightly, but he did not seem too badly hurt.

A knife with Mr. Kelley's blood on it was found in Miss Smith's yard.

The knife found in Miss Smith's yard had Mr. Scott's fingerprints on it.

Mr. Kelley had destroyed Mr. Jones' business by stealing his customers.

The elevator man saw Mr. Kelley's wife go to Mr. Scott's apartment at 11:30 p.m.

The elevator operator said that Mr. Kelley's wife frequently left the building with Scott.

Mr. Kelley's body was found in the park.

Mr. Kelley's body was found at 1:30.

Mr. Kelley had been dead for only hour when his body was found, according to the police report.

The elevator man saw Mr. Kelley go to Mr. Scott's room at 12:25 a.m.

It was obvious from the condition of Mr. Kelley's body that it had been dragged a long distance.

Miss Smith saw Mr. Kelley go to Mr. Jones' apartment at 11:55 p.m.

Mr. Kelley's wife disappeared after the murder.

Police were unable to locate Mr. Scott after the murder. When police tried to locate Mr. Jones after the murder, they discovered that he had disappeared.

The elevator man said that Miss Smith was in the lobby of the apartment building when he went off duty.

Miss Smith often followed Mr. Kelley.

Mr. Jones had told Mr. Kelley that he was going to kill him.

Mr. Kelley's bloodstains were found in Mr. Scott's car.

Mr. Kelley's bloodstains were found on the carpet in the hall outside Mr. Jones' apartment.

Miss Smith said that nobody left the apartment building between 12:25 and 12:45 a.m.

BEST COPY AVAILABLE

## CAN YOU SOLVE THE CRIME?

1. Who was murdered?
2. Who was the murderer?
3. When was the murder?
4. Where was the murder?
5. What was the motive?
6. What was the murder weapon?

## SUSPECT CLUES

*L. Thro:*

Met C. Cook for breakfast on the morning of Friday, May 2. If you are asked, you were to meet at 6:45, but C. was a little late, which is perfectly normal for her.

\*If you are asked about the new wing on the building, tell them you believe the English Department deserves it. You may add anything else to your story.

*S. Toll:*

You don't know anything about the murder, but you have heard the Social Studies Department is going to get the new wing. This makes you very angry because English teachers deserve windows!!

You may embellish your story any way you wish.

*J. Balsavias:*

During your sixth hour class, you noticed that your favorite purple pen is missing. You are sure that St. Pierre took it because he is always stealing your pens. You asked St. Pierre for the pen back, but he swears he doesn't have it. You know better and are sure he has that pen somewhere!

\*If you are asked about the new wing on the building, tell them you believe the English Department deserves it. You may add anything else to your story.

*H. St. Pierre:*

You are always at school by 6:45 so you know who is usually here early and you noticed that Ms. Cook was at school when you got there. You were shocked. Of all the teachers, she is never early. You swear you haven't seen Balsavias' purple pen—you hate purple!

\*If they ask you about your conversation with J. Allen about being glad Mrs. Gaither is dead because maybe Science won't get your classroom now—stall. Tell them you didn't really mean it. You were having a bad day, etc., improvise as best you can. However, you do think English at least deserves the new wing, you're afraid you might have to travel next year.

*W. Prakop:*

You found a strange purple pen in your desk on Monday morning and you promptly turned it over to the police. You would never own a purple pen!

*J. Jost:*

You overheard H. St. Pierre talking to J. Allen in the hallway before school. He told Mr. Allen that Mrs. Gaither was supposed to get his classroom, so he is glad that Mrs. Gaither is gone. Maybe this way he will get to keep his classroom.

\*Feel free to ad lib anything you wish. If they ask you about the new wing, tell them you feel your department deserves it.

*T. Crogan:*

You heard the side doors shut at about 6:40, but when you looked in the hall, you did not find anyone in the building.

\*Feel free to add anything else you wish.

*D. Sharkey:*

You decided to sneak out of the faculty meeting early. You saw Mrs. Gaither headed down to the outdoor classroom. She had a paper bag in her hand and looked preoccupied.

\*Feel free to add anything else you wish.

*M. Chrisler, T. Kester, B. Brueggeman, K. Cornish & C. Hallemeier:*

You were all late to the faculty meeting on Friday. While you were headed down the hall, you almost ran into Mrs. Gaither. She had a paper bag and a note in her hand. She seemed to be headed out the doors in the 100 hall, but she looked aggravated. She did not even stop to talk (which is unlike her); in fact she just looked right through you.

\*Feel free to add anything else you wish.

*E. Brown:*

Yes you did tell Mrs. Doering you would do anything to get a room, but you certainly didn't mean murder. You would willingly teach freshman for the rest of your life to stay in one room with windows, but not kill someone. Although you did notice something strange the other day. Mr. St. Pierre, who is usually so quiet, was angry that the Science Department is taking his room away. As they say, "Still waters run deep!"

*C. Guida:*

If you are asked about finding a note from Mr. St. Pierre in your mailbox on Friday, tell them you did not receive a note.

*D. Cocciola:*

Mrs. Gaither was at the teachers' mailboxes right after school, so you stopped and asked her about the birds. She just mumbled something about an envelope in her hand and left the room.

\*Feel free to embellish this story as you wish.

*C. Cook:*

You went by your mailbox before you went to your sixth hour (you were a few minutes late) and noticed Mr. St. Pierre by the “G” section of the mailboxes. You asked him what he needed, and he looked a little startled. He said he was leaving a note for Mrs. Guida, so you thought nothing of it.

- If they ask you about being late for breakfast with Mrs. Thro, tell them you overslept, so you were about 15 minutes late.
- If they ask you about Mr. St. Pierre claiming you were at school at 6:45 a.m. on Friday, tell them you were not at school then. You never get to school early—he must have seen someone else.
- You may embellish your story if you wish, just don’t give them that extra information unless they ask for it.

*D. Tharp:*

You sure were glad those birds were missing—even if it was only for one day. Maybe Mr. Brennen will take them home for good now. Mrs. Gaither always brought them into class—they disrupted everyone. You really did not hear or see anything unusual on Friday, although Mrs. Gaither was talking about the plans to expand the Science classes into the English hall.

\*Feel free to add anything else you wish.

*S. Doering:*

On the way to the faculty meeting on Friday, Ms. Brown told you she would do anything to get a new classroom in the new wing. She hates to travel and use other teacher’s classrooms. But Ms. Brown also heard there is a chance that Social Studies will get that wing instead. You agree with Ms. Brown, the English Department deserves to have the new wing.

\*Feel free to embellish this story as you wish.

*J. Gibbs:*

You ran into Mrs. Gaither (literally) after school on Friday. You opened the door to the teachers lounge and she was walking out. She looked right through you and didn’t even apologize for almost running you over. You asked about the birds, and she didn’t even answer.

\*Feel free to embellish this story as you wish.



## THAT'S MY STORY AND I'M STICKING TO IT

### QUESTIONS

1. Describe the sex and hair color of each criminal.
2. What color and type clothing did the criminal(s) wear?
3. Did the criminal have a weapon? If so, describe it.
4. Describe the crime and the place where it was committed.
5. Did you hear any conversation during the crime? Write it down.
6. Describe any other features of the criminal.

## TEACHER NOTES FOR “THAT’S MY STORY”

**Objective:** To demonstrate to students how various people view the same event differently.

**Time:** 15-20 minutes. The first three to five minutes for the criminal to run into the room and commit the crime. The last twelve to seventeen minutes for each student to fill out the questionnaire—WITHOUT communicating with the other “witnesses”.

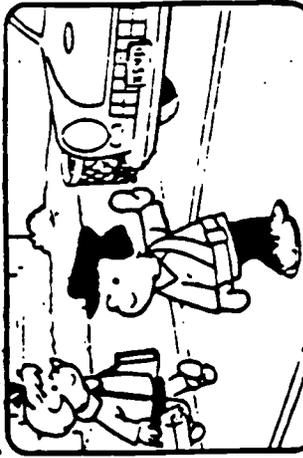
**Procedure:** During one of the early days of the project have another staff member (who is disguised) run into the classroom, grab your notebook, and yell “Give me that”, and run out again. Immediately hand out the questionnaire and have each student answer all the questions from what they saw and heard. No discussion.

Collect all papers and read off the answers. Then have a discussion about the reliability of “eye-witnesses”.

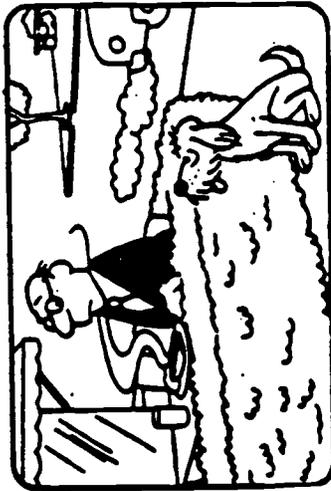
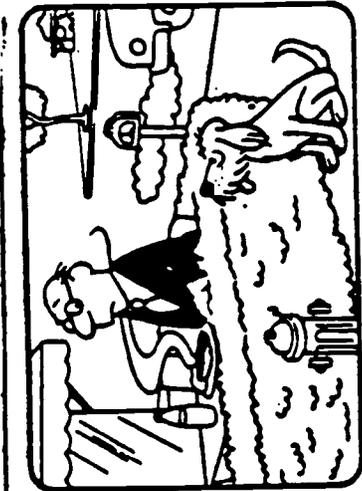
**Suggestion:** Bring disguises (old clothes, wigs, ties, etc.) from home for your suspects to use. Have a different person each hour and give general guidelines but not specifics so that each hour is different and the students cannot compare notes.

WHAT'S THE DIFF?

1.

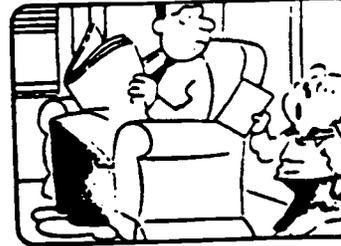


4.



5.

WHAT'S THE DIFF



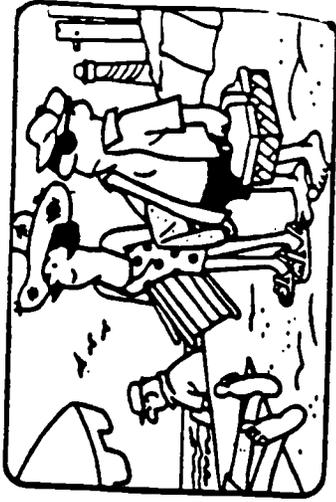
2.



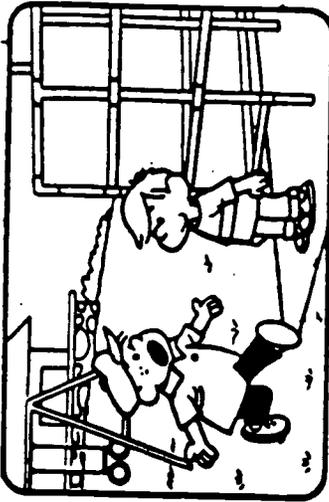
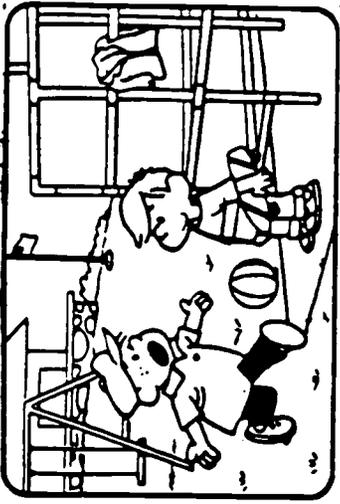
6.

3

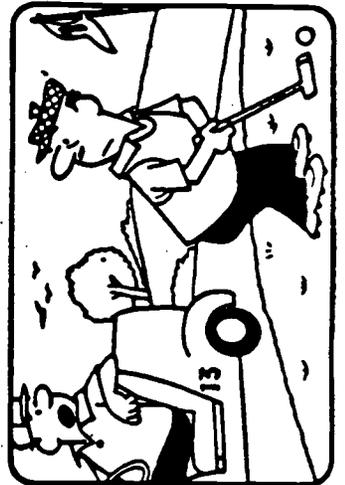
9.



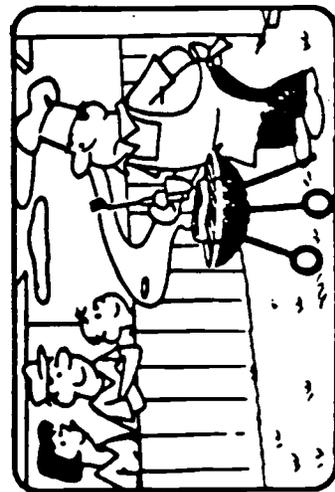
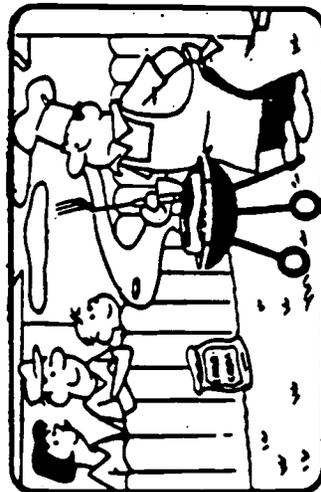
12



11



8.



10

35

WHAT'S THE DIFF - ANSWER KEY

1. **WHAT'S THE DIFF:** 1. Earflap on boy's cap is shorter. 2. His mitten is missing. 3. Girl's lunchbox is missing. 4. Zipper is missing from her sweater. 5. Trash basket is missing. 4. Numbers and letters on the license plate have been changed.

2. **WHAT'S THE DIFF?:** 1. Awning edge is shorter. 2. Bottle is now a glass. 3. Fireplug is missing. 4. Parking meter is missing. 5. Dog's tail is shorter. 6. Car's bumper is shorter.

3. **WHAT'S THE DIFF?:** 1. Wall chart is shorter. 2. Envelope is missing. 3. Standing man's right hand is moved. 4. His tie is now a bow tie. 5. Pocket is missing from his jacket. 6. Picture is missing.

4. **WHAT'S THE DIFF?:** 1. Picture is missing. Bib is shorter. 3. Spilled glass is missing. 4. Towel is missing. 5. Woman's neckline is different. 6. Bowl (on counter) is smaller.

5. **Differences:** 1. Bird is missing. 2. Man's foot is moved. 3. Picture is missing from newspaper. 4. Man's elbow is moved. 5. Report card is moved. 6. Boy's cap is missing.

6. 1. hat has 2 feathers 2. package missing a bow 3. sweater neck is "V" 4. coat is shorter 5. hat box is smaller 6. lamp shade is more narrow.

7. **WHAT'S THE DIFF:** 1. The leaves on the tree are fuller. 2. The boy's cap is missing. 3. The kiddie pool is missing. 4. The whistle is missing. 5. The shovel has been moved. 6. The door has two panels. 6. The picnic basket is smaller.

8. **WHAT'S THE DIFF:** 1. Swing changed to rings. 2. Flag is missing. 3. Skateboard is missing. 4. Ball is missing. 5. Jacket is missing. 6. Boy's arm is moved.

9. **WHAT'S THE DIFF:** 1. Fishing pole is missing. 2. Truck is missing. 3. Top of woman's bathing suit curves. 4. Trash can is missing. 5. Lighthouse is smaller and the top has been cut off. Also, there are more lines on it. 6. Picnic basket is smaller.

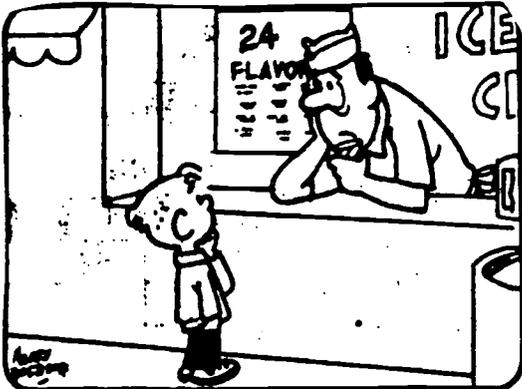
10. **WHAT'S THE DIFF:** 1. Fence top is flat. 2. Charcoal is missing. 3. Cloud is smaller. 4. Steak is smaller. 5. Fork is smaller. 6. Apron is shorter.

11. **WHAT'S THE DIFF?:** 1. Bag of clubs is missing. 2. Glove is missing. 3. Number is reversed. 4. Flag is smaller. 5. Sand trap is missing. 6. Putter handle is shorter.

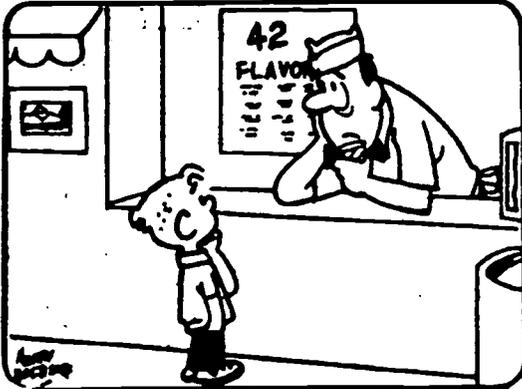
12. **WHAT'S THE DIFF?:** 1. Jack-o'-lantern is missing. 2. Boy's cap is reversed. 3. Snake is shorter. 4. Fence is shorter. 5. Basketball hoop is missing. 6. Girl's arm is moved

"What's the Diff?"

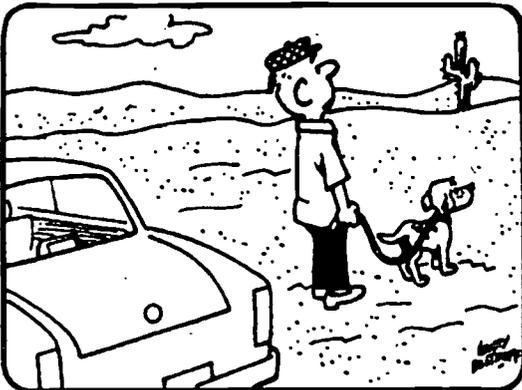
#1



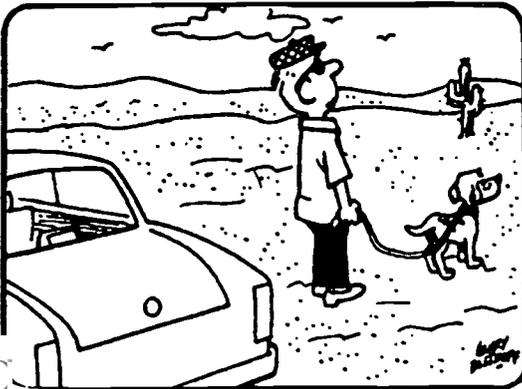
Find at least six differences in details between panels.



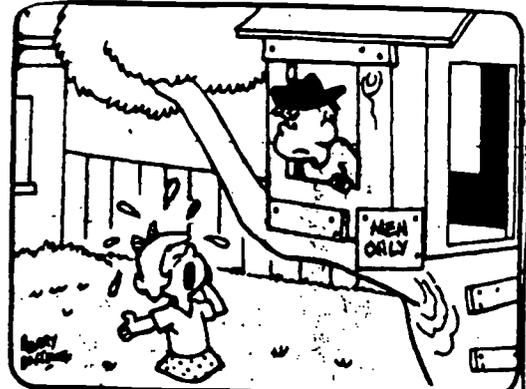
#2



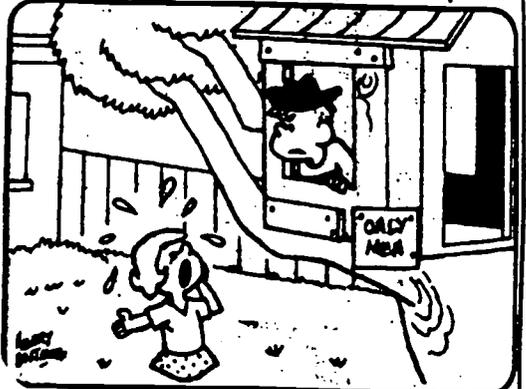
Find at least six differences in details between panels.



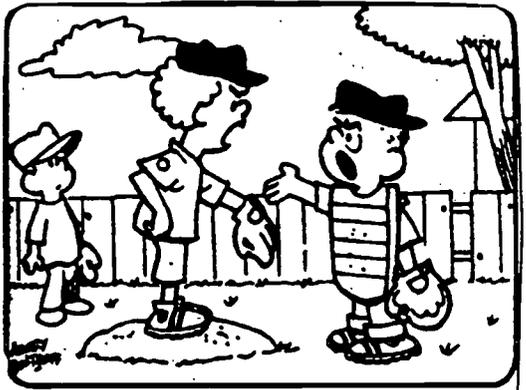
#3



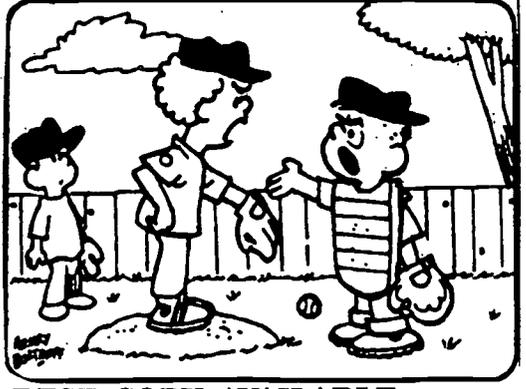
Find at least six differences in details between panels.



#4



Find at least six differences in details between panels.



**"What's the Diff?"**  
**. Answer Key**

1. **What's the Diff?: 1. Picture has been added. 2. Boy's sleeve is different. 3. Man has a bow tie. 4. Napkin dispenser is larger. 5. Number of flavors has changed. 6. Partial window sign is missing.**

2. **What's the Diff?: 1. Cloud has moved. 2. Sunglasses have been added. 3. License plate is missing. 4. Dog's leash is longer. 5. Birds have been added. 6. Cactus is closer.**

3. **What's the Diff? 1. Girl's bow is missing. 2. Tree limb has been added. 3. Boy's shirt has stripe. 4. Sign is different. 5. Treehouse roof is different. 6. Tree steps are gone.**

4. **What's the Diff?: 1. Baseball has been added. 2. Building is gone. 3. Catcher's shoes are different. 4. Fence has been repaired. 5. Pitcher's pants are longer. 6. Boy's hat is different.**

**BEST COPY AVAILABLE**

JUST THE FACTS, MA'AM  
ADAPTED STORIES

Jack and Jill went up the hill,  
To fetch a pail of water.  
Jack fell down and broke his crown,  
And Jill came tumbling after.

The Jack got up and off did trot,  
As fast as he could caper,  
To old Dame Dobb who patched his nob  
With vinegar and brown paper.

TRUE    FALSE    ?????

- |       |       |       |  |
|-------|-------|-------|--|
| ----- | ----- | ----- | 1. Jack carried the pail.                  |
| ----- | ----- | ----- | 2. Jack and Jill were brother and sister.  |
| ----- | ----- | ----- | 3. Jill tripped over Jack.                 |
| ----- | ----- | ----- | 4. Jack fell down first.                   |
| ----- | ----- | ----- | 5. Jack was wearing his crown on his head. |

A girl brought a cat into the house. The mother heard a loud crash.  
The cat ran out of the kitchen. The mother told her daughter the cat could  
not stay.

TRUE    FALSE    ?????

- |       |       |       |  |
|-------|-------|-------|--|
| ----- | ----- | ----- | 1. The cat belonged to the girl.           |
| ----- | ----- | ----- | 2. The cat broke something in the kitchen. |
| ----- | ----- | ----- | 3. A girl brought a dog home.              |
| ----- | ----- | ----- | 4. The cat belonged to the daughter.       |
| ----- | ----- | ----- | 5. The story tells about two people.       |
| ----- | ----- | ----- | 6. The mother heard a loud crash.          |

A business man had just turned off the lights in the store when a man appeared and demanded money. The owner opened the cash register. The contents of the cash register were scooped up, and the man sped away. A member of the police force was notified promptly.

TRUE	FALSE	?????
-----	-----	_____ 1. A man appeared after the owner had turned off the lights.
-----	-----	_____ 2. The robber was a man.
-----	-----	_____ 3. A man did not demand money.
-----	-----	_____ 4. The man who opened the cash register was the owner.
-----	-----	_____ 5. The store owner scooped up the contents of the cash register.
-----	-----	_____ 6. Someone opened a cash register.
-----	-----	_____ 7. After the man who demanded money scooped up the contents of the cash register, he ran away.
-----	-----	_____ 8. While the cash register contained money, the story did not state how much.
-----	-----	_____ 9. The robber demanded money of the worker.
-----	-----	_____ 10. The story concerns a series of events in which only three persons are referred to : the owner of the store, a man who demanded money, and a member of the police force.
-----	-----	_____ 11. The following events were included in the story: someone demanded money, a cash register was opened, its contents were scooped up, and a man dashed out of the store.

The first scientist appeared at the door and said, "I've come for them." Carefully the test tubes were set down. The reply came: "They're not ready." A few minutes later, a loud noise could be heard. The first scientist rushed away, glancing to see if anyone was watching and muttering, "I've got to give them the slip!"

TRUE    FALSE    ?????

- |       |       |       |   |
|-------|-------|-------|---|
| _____ | _____ | _____ | 1. The first scientist is a man.                |
| _____ | _____ | _____ | 2. There are two scientists in the story.       |
| _____ | _____ | _____ | 3. The first scientist came for the test tubes. |
| _____ | _____ | _____ | 4. The test tubes weren't ready.                |
| _____ | _____ | _____ | 5. The scientist was doing an experiment.       |
| _____ | _____ | _____ | 6. A loud noise came from the room.             |
| _____ | _____ | _____ | 7. The first scientist ran away.                |
| _____ | _____ | _____ | 8. A murder was committed.                      |
| _____ | _____ | _____ | 9. The first scientist did it.                  |

The bell had just rung. A woman stood in the classroom. The lights were turned off. Just then, a child appeared to receive a treat. The teacher told the child all the treats were gone.

TRUE    FALSE    ????

- |       |       |       |   |
|-------|-------|-------|---|
| _____ | _____ | _____ | 1. The child was a boy.                 |
| _____ | _____ | _____ | 2. The teacher turned off the lights.   |
| _____ | _____ | _____ | 3. It was Friday.                       |
| _____ | _____ | _____ | 4. The woman said the treats were gone. |

**POINTS FOR MURDER THEY WROTE**

TEAM NAME \_\_\_\_\_

<b>Daily Journal Content 10</b>	<b>Interviews Content 10</b>	<b>Labs Correct 10 points</b>
3/31	1	1
4/1	2	2
4/6	3	3
4/7	4	4
4/8	5	5
4/9	6	6
4/12	7	7
4/13	8	
4/14	9	
4/15	10	
4/16	11	
4/19	12	
4/20	13	
4/21	14	
4/22	15	
4/23		
4/26		
4/27		
4/28		
4/29		
<b>TITLES:</b>		
Lawyer		
Recorder		
Lab Technician		
Lab Technician		
Interviewer		
<b>Preliminary Work 10 ea.</b>		
Badges		
Journal cover		
Group name		
Making teams		
Just the facts		
Find the difference	<b>Notes</b>	<b>Total points</b>
		Journal
<b>Crime Scene (50)</b>		Preliminary Work
Drawing (25)		Crime Scene
Verbal Description (25)		Written Report
		Interviews
<b>Written Report</b>		Labs
Organized (20)		
Deductions (20)		
Clearly explained (20)		
Diligence on written (20)		
Badges (20)		
Journal Cover (20)		

**THE "HOW TO'S"**

**OF THE**

**CRIME**

# MURDER THEY WROTE

## TEACHER LETTER

Dear fellow teachers:

It's time! Murder is in the air again. I have some new co-workers who are willing to take the plunge into Murder They Wrote. We are aiming for the end of April for our next crime and would like to enlist your aid once again.

Ideas are flying and we would love to hear your ideas. Please write them down on the back of this announcement and put them in my mailbox.

One idea I'm working on is limiting times any one group can ask one person questions. My thoughts include a ticket system or coupons that students will use and visits will be limited to 3 times per teacher maximum. Your ideas are welcome.

If you are willing to be a witness, suspect, victim or murderer please sign below with the proper box checked. Witnesses just see or hear something. Suspects will do fingerprints and possibly by a murderer. Victim and murderer are self-explanatory. Thank you so very much for helping with this unit—the students really do enjoy this whole process.

Thanks, Linda Gaither

---

Suspect

Witness

Victim

Murderer

\_\_\_\_\_ Name

\_\_\_\_\_ Discipline and Room Number

## MURDER THEY WROTE SUSPECT SURVEY

Please take just a few minutes to complete this survey.

Name \_\_\_\_\_

1. What is your shoe size? \_\_\_\_\_
2. What is your height? \_\_\_\_\_
3. What brand of gum do you chew? \_\_\_\_\_
4. What snack do you most eat around school? \_\_\_\_\_
5. What soda do you drink? \_\_\_\_\_
6. On average, what time do you arrive at school? \_\_\_\_\_
7. What time do you usually leave in the afternoon? \_\_\_\_\_
8. Do you have a favorite pen or pencil brand? If so, what is it? \_\_\_\_\_
9. Do you have any unusual hobbies? \_\_\_\_\_
10. Would you be willing to give us a hand or fingerprint? \_\_\_\_\_
11. What hour is your plan? \_\_\_\_\_
12. Did you ever have Mr. Marion in class when he was a student? \_\_\_\_\_
13. Women only: What color lipstick do you wear? \_\_\_\_\_
14. What plants, if any do you have in your room? \_\_\_\_\_

Thank you for your time. We will have a list of information for you to give the students when they interview you. We appreciate all of your help. We couldn't do this without you!

Linda & Angie

# MURDER THEY WROTE SUSPECT LIST

## WITNESSES/PRIME SUSPECTS

R. Pulse  
Goode  
Allen  
Jones  
Jost  
Gibbs  
Zahn  
Stille  
Sutton  
Simms  
Bockhorst  
Backer  
Balsavias

Crisler  
Kester  
Brown  
Toll  
Shrum  
Prakop  
Signorio  
Cope  
Ballentyne  
Brennon  
Tharp  
Cook  
Crogan

Mullins  
Walton  
Brueggeman  
Brothers  
Cornish  
Hallemeier  
Sharkey  
Baldwin  
Meyer  
Doering  
Thro  
St. Pierre  
Cocciola

## CLUES

L. Thro:

Met C. Cook for breakfast on the morning of Friday, May 2<sup>nd</sup>. If you are asked, you were to meet at 6:45, but Ms. Cook was a little late. This is perfectly normal for her.

\*If you are asked about the new wing on the building, tell them you believe the English Department deserves it. You may add anything else to your story.

S. Toll:

You don't know anything about the murder, but you have heard the Social Studies Department is going to get the new wing. This makes you very angry because English teachers deserve windows!!!

\*You may embellish your story any way you wish.

J. Balsavias:

During your sixth hour class, you noticed that your favorite purple pen is missing. You are sure that St. Pierre took it because he is always stealing your pens. You asked Henry for the pen back, but he swears he doesn't have it. You know better and are sure he has that pen somewhere!

\*If you are asked about the new wing on the building, tell them you believe the English Department deserves it. You may add anything else to your story.

H. St. Pierre:

You are always at school by 6:45, so you know who is usually here early and you noticed that Miss Cook was at school when you got there. You were shocked. Of all the teachers, she is never early. You swear you haven't seen Balsavias' purple pen—you hate purple!

\*If they ask you about your conversation with J. Allen about being glad Mrs. Gaither is dead because maybe Science won't get your classroom now—stall. Tell them you didn't really mean it. You were having a bad day, etc., improvise as best you can. However, you do think English at least deserves the new wing; you're afraid you might have to travel next year!

W. Prakop:

You found a strange purple pen in your desk on Monday morning and you promptly turned it over to the police. You would never own a purple pen!

J. Jost:

You overheard H. St. Pierre talking to J. Allen in the hallway before school. He told Mr. Allen that Mrs. Gaither was supposed to get his classroom, so he is glad that Mrs. G. is gone. Maybe this way he will get to keep his room.

\*Feel free to ad lib anything you wish. If they ask you about the new wing, tell them you feel your department deserves it.

J. Allen:

If they ask you about your conversation with H. St. Pierre, tell them that H. did not really mean he was glad Mrs. Gaither was dead. He was having a terrible day. He had his first argument with his wife over room space, and it just carried over to work. Besides, H. St. Pierre is claustrophobic and is afraid he will get a room without windows. The Social Studies Department deserves those new classrooms anyway because the English Department *always* gets its' way.

\*Feel free to ad lib as much as you wish.

T. Brennan:

You were running a new route for cross-country and saw an unusual color green at the pond. You ran over and found Mrs. Gaither face down in the pond. Of course you were concerned, so you turned her over and checked for a pulse. Unfortunately, there was not one. You called the police right away. You noticed a note still crumpled in her hand and assumed it had something to do with her missing birds. You did find it and put it back in her old room (after all, those birds are yours). It sure is a shame. Mrs. Gaither was looking forward to moving to Room 417 next year, so she could have her own classroom for Applied Biology and Chemistry.

\*Feel free to add anything else you wish.

B. Bockhorst:

There was a light on in Mrs. Gaither's room at 6:30 a.m. on Friday, May 2, but her car was not in the parking lot. The birds seemed unusually quiet.

\*Feel free to add anything else you wish.

S. Ballantyne:

You heard noisy birds during 0 hour. You assumed they were just outside, but it did make you think of Mrs. Gaither's finches.

\*Feel free to add anything else you wish.

T. Jones:

Since you are a traveling teacher, you have noticed some tension between the Social Studies and English Departments. You are very glad to be leaving the confusion about the new wing behind because you are staying at South High next year. All these teachers seem to overreact.

\*Feel free to embellish the story as you wish.

J. Baldwin:

You don't know anything about Mrs. Gaither, but you are sure it was an accident. North High had the nicest faculty, no one would ever purposely kill someone else.

K. Signorio:

You went by Mrs. Gaither's room on Thursday after school to have her sign some papers. She was stressed because she couldn't find her hypertension medication, and she was certain that she had brought it to school that day. She had over ½ of the bottle left and didn't want to pay for another prescription.

C. Bacher, J. Mullins and L. Walton:

Although you all think this is the greatest tragedy ever at Fort Zumwalt North High School, you have neither seen nor heard anything unusual.

T. Crogan:

You heard the side doors shut at about 6:40, but when you looked in the hall, you did not find anyone in the building.

\*Feel free to add anything else you wish.

D. Sharkey:

You decided to sneak out of the faculty meeting early. You saw Mrs. Gaither headed down to the outdoor classroom. She had a paper bag in her hand and looked preoccupied.

\*Feel free to add anything else you wish.

M. Chrisler, T. Kester, B. Brueggeman, K. Cornish & C. Hallemeier:

You were all late to the faculty meeting on Friday. While you were headed down the hall, you almost ran into Mrs. Gaither. She had a paper bag and a note in her hand.

She seemed to be headed out the doors in the 100 hall, but she looked aggravated. She did not even stop to talk (which is unlike her); in fact she just looked right through you.

\*Feel free to add anything else you wish.

C. Cook:

You went by your mailbox before you went to your sixth hour (you were a few minutes late) and noticed Mr. St. Pierre by the “G” section of the mailboxes. You asked him what he needed, and he looked a little startled. He said he was leaving a note for Mrs. Guida, so you thought nothing of it.

**IF** they ask you about being late for breakfast with Mrs. Thro, tell them you overslept, so you were about 15 minutes late.

**IF** they ask you about Mr. St. Pierre claiming you were at school at 6:45 a.m. on Friday, tell them you were not at school then. You never get to school early—he must have seen someone else.

\*You may embellish your story if you wish. Just don’t give them that extra information unless they ask for it.

E. Brown:

Yes you did tell Mrs. Doering you would do anything to get a room, but you certainly didn’t mean murder. You would willingly teach freshmen for the rest of your life to stay in one room with windows, but not kill someone. Although you did notice something strange the other day. Mr. St. Pierre, who is unusually so quiet, was angry that the Science Department is taking his room away. As they say, “Still waters run deep!”

\*Feel free to embellish this story as you wish.

C. Guida:

If you are asked about finding a note from Mr. St. Pierre in your mailbox on Friday, tell them you did not receive a note.

## NOTES

### 1<sup>ST</sup> NOTE

Want the birds? Buy ½ pint of Werther's Originals by 2:38 TODAY. I'm ready to deal.

### ANNOUNCEMENT

To Bird thief: Mrs. G. has the candy. Tell her where and when. No consequences and no deals.

## CORONER'S REPORT

Date: Friday, May 2, 1997

Location of crime: FZN, Outdoor Classroom

Estimated Time of Death: Between 2:48 p.m. and 5:32 p.m.

Officers: Detective Clancy and Detective Wells

A body identified as Linda Gaither, Science teacher at FZN High School, was found at 5:32 p.m. on Friday, May 2, 1997 in a prone position dorsal side up at the Fort Zumwalt North High School Outdoor Classroom. The body was discovered by a Terrance Brennan, also a teacher at FZN, who stated he was running out a new cross country trail and noticed the green color by the pond. He approached and saw it was a body whose face was under water. He stated that he turned the body over, checked for a pulse, and discovered it was Mrs. Gaither. He called the police.

The victim was wearing black stretch pants, a green pullover tee shirt with the FZN logo on the left front, black socks and white tennis shoes.

The preliminary exam suggests drowning as a possible cause of death. There was no external trauma found on the body and no bruising was apparent—suggesting a quick death. The evidence suggests the victim was unconscious before her face entered the water.

The cause of death is pending an autopsy and further investigation by the police due to the unusual findings at the scene.

Post Script: The kidnapped birds were found at the scene.

## **MURDER THEY WROTE THE TRUTH**

It all started when the architects decided in favor of a new wing instead of adding on the end of the science hallway. Immediately plots began to secure the wing for specific departments. English wanted the wing because English needs windows. But social studies also wanted the wing because they always come up short.

The problem began when the work got out that Applied Biology and Chemistry (Mrs. Gaither) gets rooms 415-417 for new labs, thus setting the stage to rid the FZN world of one science teacher and get away with it.

Step one. Obtain some of Mrs. Gaither's blood pressure medicine. One sly teacher discovered that Covera causes the blood pressure to drop, and possible fainting. AHA—the plot thickens. Under the guise of visiting the birds our suspect lifted the prescription bottle from Mrs. Gaither's desk Thursday May 1<sup>st</sup> after school.

Step two. To build a frame, steal Ms. Balsavius's purple pen and use it for all correspondence with Mrs. G. Our suspect already knows about the problem Ms. Balsavius had with Mr. St. Pierre stealing her purple pens. They share Room 416.

### **The first wall of the frame has now been formed!**

Step three. Get Mrs. Gaither in some secluded place and "Knock her out" while framing someone else. Knowing Mrs. Gaither's love for the birds, our suspect decided on a kidnapping scheme. Swipe the birds before school on Friday, May 2<sup>nd</sup> and leave a note using the purple pen. "Want the birds—buy a ½ ping of Werther's Originals by 2:38 today. I'm ready to deal."

### **The second wall of the frame has now been formed!**

Step four. Set the scene at the outdoor classroom. Walk around the area wearing size 12 men's shoes. Have a Dr. Pepper laced with Covera sitting by the Little House on the Prairie (birdhouse at outdoor classroom) as a peace offering. When she passes out place her by the water. The stage is set to place St. Pierre at the scene.

### **The third wall of the frame has now been formed!**

Now, the last wall of the frame. Sneaking the bag of Werther's into St. Pierre's closet in Room 416.

Our suspect thinks everything is covered. All that is necessary now is to get the rumors going about St. Pierre hating losing his room to science—especially Mrs. Gaither.

### **THE CONFESSION**

She wasn't supposed to die. I just wanted it to look like St. Pierre tried to kill her so social studies could get the new wing. I took the birds and hid them at the outdoor classroom, down by the pond. When Mrs. Gaither showed up there was a Dr. Pepper sitting on the birdcage and I was hiding down the other path watching. She drank the soda and looked around. When she passed out, I hear someone coming and ran away. She must have fallen face down in the pond and drowned before Brennan got there. It was an accident, I just wanted to frame St. Pierre and get the new wing for us.

C. Cook

## ANNOUNCEMENT

On May 13, 1997 at 2:20 p.m., Ms. Cook was arrested for the murder of Mrs. Gaither. After extensive investigation the detectives exposed the entire plot. Ms. Cook stole the birds and framed Mr. St. Pierre so that the Social Studies Department could get the new wing of the building.  
Respectfully submitted by Judge Helms.

# MURDER THEY WROTE

## TEACHER LETTER

Dear fellow teachers:

It's time! Murder is in the air again. I have some new co-workers who are willing to take the plunge into Murder They Wrote. We are aiming for the end of April for our next crime and would like to enlist your aid once again.

Ideas are flying and we would love to hear your ideas. Please write them down on the back of this announcement and put them in my mailbox.

One idea I'm working on is limiting times any one group can ask one person questions. My thoughts include a ticket system or coupons that students will use and visits will be limited to 3 times per teacher maximum. Your ideas are welcome.

If you are willing to be a witness, suspect, victim or murderer please sign below with the proper box checked. Witnesses just see or hear something. Suspects will do fingerprints and possibly by a murderer. Victim and murderer are self-explanatory. Thank you so very much for helping with this unit—the students really do enjoy this whole process.

Thanks, Linda Gaither

---

Suspect

Witness

Victim

Murderer

\_\_\_\_\_ Name

\_\_\_\_\_ Discipline and Room Number

## MURDER THEY WROTE SUSPECT SURVEY

Please take just a few minutes to complete this survey.

Name \_\_\_\_\_

1. What is your shoe size? \_\_\_\_\_
2. What is your height? \_\_\_\_\_
3. What brand of gum do you chew? \_\_\_\_\_
4. What snack do you most eat around school? \_\_\_\_\_
5. What soda do you drink? \_\_\_\_\_
6. On average, what time do you arrive at school? \_\_\_\_\_
7. What time do you usually leave in the afternoon? \_\_\_\_\_
8. Do you have a favorite pen or pencil brand? If so, what is it? \_\_\_\_\_
9. Do you have any unusual hobbies? \_\_\_\_\_
10. Would you be willing to give us a hand or fingerprint? \_\_\_\_\_
11. What hour is your plan? \_\_\_\_\_
12. Did you ever have Mr. Marion in class when he was a student? \_\_\_\_\_
13. Women only: What color lipstick do you wear? \_\_\_\_\_
14. What plants, if any do you have in your room? \_\_\_\_\_

Thank you for your time. We will have a list of information for you to give the students when they interview you. We appreciate all of your help. We couldn't do this without you!

Linda & Angie

# MURDER THEY WROTE SUSPECT LIST

## WITNESSES/PRIME SUSPECTS

R. Pulse  
Goode  
Allen  
Jones  
Jost  
Gibbs  
Zahn  
Stille  
Sutton  
Simms  
Bockhorst  
Backer  
Balsavias

Crisler  
Kester  
Brown  
Toll  
Shrum  
Prakop  
Signorio  
Cope  
Ballentyne  
Brennon  
Tharp  
Cook  
Crogan

Mullins  
Walton  
Brueggeman  
Brothers  
Cornish  
Hallemeier  
Sharkey  
Baldwin  
Meyer  
Doering  
Thro  
St. Pierre  
Cocciola

## CLUES

L. Thro:

Met C. Cook for breakfast on the morning of Friday, May 2<sup>nd</sup>. If you are asked, you were to meet at 6:45, but Ms. Cook was a little late. This is perfectly normal for her.

\*If you are asked about the new wing on the building, tell them you believe the English Department deserves it. You may add anything else to your story.

S. Toll:

You don't know anything about the murder, but you have heard the Social Studies Department is going to get the new wing. This makes you very angry because English teachers deserve windows!!!

\*You may embellish your story any way you wish.

J. Balsavias:

During your sixth hour class, you noticed that your favorite purple pen is missing. You are sure that St. Pierre took it because he is always stealing your pens. You asked Henry for the pen back, but he swears he doesn't have it. You know better and are sure he has that pen somewhere!

\*If you are asked about the new wing on the building, tell them you believe the English Department deserves it. You may add anything else to your story.

H. St. Pierre:

You are always at school by 6:45, so you know who is usually here early and you noticed that Miss Cook was at school when you got there. You were shocked. Of all the teachers, she is never early. You swear you haven't seen Balsavias' purple pen—you hate purple!

\*If they ask you about your conversation with J. Allen about being glad Mrs. Gaither is dead because maybe Science won't get your classroom now—stall. Tell them you didn't really mean it. You were having a bad day, etc., improvise as best you can. However, you do think English at least deserves the new wing; you're afraid you might have to travel next year!

W. Prakop:

You found a strange purple pen in your desk on Monday morning and you promptly turned it over to the police. You would never own a purple pen!

J. Jost:

You overheard H. St. Pierre talking to J. Allen in the hallway before school. He told Mr. Allen that Mrs. Gaither was supposed to get his classroom, so he is glad that Mrs. G. is gone. Maybe this way he will get to keep his room.

\*Feel free to ad lib anything you wish. If they ask you about the new wing, tell them you feel your department deserves it.

J. Allen:

If they ask you about your conversation with H. St. Pierre, tell them that H. did not really mean he was glad Mrs. Gaither was dead. He was having a terrible day. He had his first argument with his wife over room space, and it just carried over to work. Besides, H. St. Pierre is claustrophobic and is afraid he will get a room without windows. The Social Studies Department deserves those new classrooms anyway because the English Department *always* gets its' way.

\*Feel free to ad lib as much as you wish.

T. Brennan:

You were running a new route for cross-country and saw an unusual color green at the pond. You ran over and found Mrs. Gaither face down in the pond. Of course you were concerned, so you turned her over and checked for a pulse. Unfortunately, there was not one. You called the police right away. You noticed a note still crumpled in her hand and assumed it had something to do with her missing birds. You did find it and put it back in her old room (after all, those birds are yours). It sure is a shame. Mrs. Gaither was looking forward to moving to Room 417 next year, so she could have her own classroom for Applied Biology and Chemistry.

\*Feel free to add anything else you wish.

B. Bockhorst:

There was a light on in Mrs. Gaither's room at 6:30 a.m. on Friday, May 2, but her car was not in the parking lot. The birds seemed unusually quiet.

\*Feel free to add anything else you wish.

S. Ballantyne:

You heard noisy birds during 0 hour. You assumed they were just outside, but it did make you think of Mrs. Gaither's finches.

\*Feel free to add anything else you wish.

T. Jones:

Since you are a traveling teacher, you have noticed some tension between the Social Studies and English Departments. You are very glad to be leaving the confusion about the new wing behind because you are staying at South High next year. All these teachers seem to overreact.

\*Feel free to embellish the story as you wish.

J. Baldwin:

You don't know anything about Mrs. Gaither, but you are sure it was an accident. North High had the nicest faculty, no one would ever purposely kill someone else.

K. Signorio:

You went by Mrs. Gaither's room on Thursday after school to have her sign some papers. She was stressed because she couldn't find her hypertension medication, and she was certain that she had brought it to school that day. She had over ½ of the bottle left and didn't want to pay for another prescription.

C. Bacher, J. Mullins and L. Walton:

Although you all think this is the greatest tragedy ever at Fort Zumwalt North High School, you have neither seen nor heard anything unusual.

T. Crogan:

You heard the side doors shut at about 6:40, but when you looked in the hall, you did not find anyone in the building.

\*Feel free to add anything else you wish.

D. Sharkey:

You decided to sneak out of the faculty meeting early. You saw Mrs. Gaither headed down to the outdoor classroom. She had a paper bag in her hand and looked preoccupied.

\*Feel free to add anything else you wish.

M. Chrisler, T. Kester, B. Brueggeman, K. Cornish & C. Hallemeier:

You were all late to the faculty meeting on Friday. While you were headed down the hall, you almost ran into Mrs. Gaither. She had a paper bag and a note in her hand.

She seemed to be headed out the doors in the 100 hall, but she looked aggravated. She did not even stop to talk (which is unlike her); in fact she just looked right through you.

\*Feel free to add anything else you wish.

C. Cook:

You went by your mailbox before you went to your sixth hour (you were a few minutes late) and noticed Mr. St. Pierre by the "G" section of the mailboxes. You asked him what he needed, and he looked a little startled. He said he was leaving a note for Mrs. Guida, so you thought nothing of it.

**IF** they ask you about being late for breakfast with Mrs. Thro, tell them you overslept, so you were about 15 minutes late.

**IF** they ask you about Mr. St. Pierre claiming you were at school at 6:45 a.m. on Friday, tell them you were not at school then. You never get to school early—he must have seen someone else.

\*You may embellish your story if you wish. Just don't give them that extra information unless they ask for it.

E. Brown:

Yes you did tell Mrs. Doering you would do anything to get a room, but you certainly didn't mean murder. You would willingly teach freshmen for the rest of your life to stay in one room with windows, but not kill someone. Although you did notice something strange the other day. Mr. St. Pierre, who is unusually so quiet, was angry that the Science Department is taking his room away. As they say, "Still waters run deep!"

\*Feel free to embellish this story as you wish.

C. Guida:

If you are asked about finding a note from Mr. St. Pierre in your mailbox on Friday, tell them you did not receive a note.

## NOTES

### 1<sup>ST</sup> NOTE

Want the birds? Buy ½ pint of Werther's Originals by 2:38 TODAY. I'm ready to deal.

### ANNOUNCEMENT

To Bird thief: Mrs. G. has the candy. Tell her where and when. No consequences and no deals.

## CORONER'S REPORT

Date: Friday, May 2, 1997

Location of crime: FZN, Outdoor Classroom

Estimated Time of Death: Between 2:48 p.m. and 5:32 p.m.

Officers: Detective Clancy and Detective Wells

A body identified as Linda Gaither, Science teacher at FZN High School, was found at 5:32 p.m. on Friday, May 2, 1997 in a prone position dorsal side up at the Fort Zumwalt North High School Outdoor Classroom. The body was discovered by a Terrance Brennan, also a teacher at FZN, who stated he was running out a new cross country trail and noticed the green color by the pond. He approached and saw it was a body whose face was under water. He stated that he turned the body over, checked for a pulse, and discovered it was Mrs. Gaither. He called the police.

The victim was wearing black stretch pants, a green pullover tee shirt with the FZN logo on the left front, black socks and white tennis shoes.

The preliminary exam suggests drowning as a possible cause of death. There was no external trauma found on the body and no bruising was apparent—suggesting a quick death. The evidence suggests the victim was unconscious before her face entered the water.

The cause of death is pending an autopsy and further investigation by the police due to the unusual findings at the scene.

Post Script: The kidnapped birds were found at the scene.

## MURDER THEY WROTE THE TRUTH

It all started when the architects decided in favor of a new wing instead of adding on the end of the science hallway. Immediately plots began to secure the wing for specific departments. English wanted the wing because English needs windows. But social studies also wanted the wing because they always come up short.

The problem began when the work got out that Applied Biology and Chemistry (Mrs. Gaither) gets rooms 415-417 for new labs, thus setting the stage to rid the FZN world of one science teacher and get away with it.

Step one. Obtain some of Mrs. Gaither's blood pressure medicine. One sly teacher discovered that Covera causes the blood pressure to drop, and possible fainting. AHA—the plot thickens. Under the guise of visiting the birds our suspect lifted the prescription bottle from Mrs. Gaither's desk Thursday May 1<sup>st</sup> after school.

Step two. To build a frame, steal Ms. Balsavius's purple pen and use it for all correspondence with Mrs. G. Our suspect already knows about the problem Ms. Balsavius had with Mr. St. Pierre stealing her purple pens. They share Room 416.

### **The first wall of the frame has now been formed!**

Step three. Get Mrs. Gaither in some secluded place and “Knock her out” while framing someone else. Knowing Mrs. Gaither's love for the birds, our suspect decided on a kidnapping scheme. Swipe the birds before school on Friday, May 2<sup>nd</sup> and leave a note using the purple pen. “Want the birds—buy a ½ ping of Werther's Originals by 2:38 today. I'm ready to deal.”

### **The second wall of the frame has now been formed!**

Step four. Set the scene at the outdoor classroom. Walk around the area wearing size 12 men's shoes. Have a Dr. Pepper laced with Covera sitting by the Little House on the Prairie (birdhouse at outdoor classroom) as a peace offering. When she passes out place her by the water. The stage is set to place St. Pierre at the scene.

**The third wall of the frame has now been formed!**

Now, the last wall of the frame. Sneaking the bag of Werther's into St. Pierre's closet in Room 416.

Our suspect things everything is covered. All that is necessary now is to get the rumors going about St. Pierre hating losing his room to science—especially Mrs. Gaither.

### **THE CONFESSION**

She wasn't supposed to die. I just wanted it to look like St. Pierre tried to kill her so social studies could get the new wing. I took the birds and hid them at the outdoor classroom, down by the pond. When Mrs. Gaither showed up there was a Dr. Pepper sitting on the birdcage and I was hiding down the other path watching. She drank the soda and looked around. When she passed out, I hear someone coming and ran away. She must have fallen face down in the pond and drowned before Brennan got there. It was an accident, I just wanted to frame St. Pierre and get the new wing for us.

C. Cook

## ANNOUNCEMENT

On May 13, 1997 at 2:20 p.m., Ms. Cook was arrested for the murder of Mrs. Gaither. After extensive investigation the detectives exposed the entire plot. Ms. Cook stole the birds and framed Mr. St. Pierre so that the Social Studies Department could get the new wing of the building.  
Respectfully submitted by Judge Helms.

**ORIGINAL**

**LABS**

**BEST COPY AVAILABLE**

69

## PAPER CHROMATOGRAPHY

Process used to separate pigments. This can be used on ink as well as plant stain quite effectively.

### METHOD:

1. Label paper chromatography strips to identify origin of the sample.
2. Draw a light pencil line across the paper about 1.5 – 3 cm up from the bottom. This will mark your point of origin.
3. If you are testing an ink pen: Make a dark dot with the selected pen on the pencil line but near the middle. Be sure to mark in the same spot several times to make the dot real dark.

If you are testing plant pigment: Lay the leaf or petal in question on top of the chromatography paper and rub a dime slowly and firmly across the tissue, causing bruising and some pigment to be left on the paper.

4. Since you do not know if the sample is water or alcohol soluble, make two samples and test in both. (Hint: Plant pigment is only soluble in alcohol.)

**TO PREPARE TEST LIQUIDS:** Pour 2 cm of water or alcohol into the glass cylinder provided.

5. Slowly and carefully lower the test strip into the cylinder until it rests on the bottom. **DO NOT ALLOW THE DOT OR LINE TO BE SUBMERGED IN THE LIQUID.**
6. Allow the liquid to soak up the paper strip to about 2-cm from the top. Watch to be sure it doesn't reach the top.
7. Remove the strip and allow it to dry.
8. Compare the strips to determine the origin.
9. If you are **TESTING A PIECE OF THE NOTE** from the scene, follow the same procedure, but use a small strip of the actual note and compare the results with your other samples.

Be sure and save the strips and place them on one of your lab data sheets. You have not completed the lab until you decide which pen was used for the note.

## UNKNOWN LIQUID (ALSO KNOWN AS THE URINE LAB)

### PROCEDURE:

1. Place 2 drops of standard solution Canine excretion into one of the depressions on the plate. Add 2 drops of the potassium chromate solution to it. Record your observations on the lab data page.
2. Repeat the procedure with the solution known as "Mt. Dew". Be sure to record your results.
3. Pour or dropper 2 drops of the unknown liquid found at the crime scene into a depression on the plate and add the 2 drops of potassium chromate. Record your results and determine what the unknown liquid really is.
4. **IMPORTANT!!** Rinse the solutions and solids that formed down the drain with lots of water **AND** double rinse the depression plate. Tap in on the side of the sink to remove as much water as possible.

## WHITE POWDER IDENTIFICATION

**MATERIALS:**  
Unknown powder from scene  
Standard drugs labeled A, B, C, and D  
Distilled water  
Universal Indicator  
Universal Indicator chart  
0.5 M HCl  
Ferric nitrate solution  
Depression plate  
Toothpicks  
Marker or pencil

### PROCEDURE:

1. In a horizontal row, place a few granules of drug A into each of three depressions on the plate. Use a pencil or marker to label this row with letter A.
2. Repeat step 1 for each of the other powders and the unknown, making sure that they appear on the data chart. Use every other row of the depression plate to help you not confuse the different powders and avoid contamination.
3. Observe the appearance of each powder, noting its color and consistency. Record observations on the chart.
4. Add 5 drops of distilled water to one well for each powder. Do any reactions begin to occur? Why? Record results.
5. Add one drop of Universal Indicator to each of the depressions already containing powder and water from #4. Use a different toothpick to stir each one. Which are reddish in color? Which are yellow-green? Which are blue? Record the color of each and tell if each is acidic, neutral or basic. Use the indicator strip provided in the kit. Can you explain the results?
6. Add one or two drops of the hydrochloric acid solution to each of the powders in the next vertical column of depressions. Is there any fizzing? Which powders are producing carbon dioxide gas? Record the results.
7. Add one or two drops of the ferric nitrate solution to each of the powders in the last column of depressions. Use different toothpicks to stir each solution around. Have any produced a purple color? What is reacting with the ferric iron to produce this specific color?
8. Carefully discard all of the solutions on the depression plate into the sink and rinse the plate twice with distilled water. If any material remains, ask your teacher for a small test tube brush. Use carefully and don't poke any holes into the depression plate.

## ANALYSIS OF UNKNOWN POWDER

Drug	Appearance	Reaction with Water	Color of Universal Indicator and pH	Reaction with HCl	Reaction with Fe <sup>+</sup>
------	------------	---------------------	-------------------------------------	-------------------	-------------------------------

A \_\_\_\_\_

B \_\_\_\_\_

C \_\_\_\_\_

D \_\_\_\_\_

Unknown (scene) \_\_\_\_\_

## ANALYSIS OF UNKNOWN POWDER

Drug	Appearance	Reaction with Water	Color of Universal Indicator and pH	Reaction with HCl	Reaction with Fe <sup>+</sup>
------	------------	---------------------	-------------------------------------	-------------------	-------------------------------

A \_\_\_\_\_

B \_\_\_\_\_

C \_\_\_\_\_

D \_\_\_\_\_

Unknown (scene) \_\_\_\_\_

## FOOTPRINT LAB

Impressions made by footwear, tires, and tools can easily be destroyed during a preliminary crime scene search. To prevent inadvertent loss of such evidence, one of the earliest concerns of any crime scene investigation should be the security of the scene and the collection and preservation of impressions.

### FOOTWEAR IMPRESSIONS:

1. Photograph each impression located.
2. Place a ruler or other means of scale identification next to the impression.
3. Take the photograph by holding the camera directly over the impression (use of a tripod is highly recommended). Photographs should be taken while a detached flash is held low and to each of the four sides of the impression.
4. Measure the dimensions of the footprint as well as the depth. This information along with condition of the soil at the time of the crime can assist you in determining the weight of your suspect.

### METHOD FOR ESTABLISHING A STANDARD FOOTPRINT DEPTH VERSUS MASS:

1. Have people of various masses step in the soil and measure the depth of their footprint versus their mass. Use people with the same size shoe as the suspect as well as shorter and longer sizes.
2. On centimeter graph paper graph mass versus depth of print. Use this for a standard.
3. Locate the depth of your print on the graph to get an idea on the mass of the suspect.

# FINGERPRINT LAB

## ON HARD SURFACES

Dust plastic cards, metal plates, glass bottles, or other hard surfaced objects for latent fingerprints. Remove developed prints with lifting tape and place the tape on a 3" by 5" card, which contrasts in color with the dusting powder, used. Mark the card with your initials, the date, and an exhibit number, place in an envelope, and seal.

## ON SOFT SURFACES

Carefully remove putty, caulking compound or other soft material bearing visible fingerprint impressions. Leave as much excess material to a stiff section of cardboard that is marked with your initials, the date, and an exhibit number. Tape a protective cover over the specimen. A paper cup or baby food jar is useful for this purpose. Do not touch or otherwise distort the fingerprint. Collect a comparison standard.

## COMPARISON STANDARD: FINGERPRINTS

Collect and identify fingerprints of suspects and other persons who may have touched an object under investigation. Place fingerprint records in a stiff envelope to protect them from being bent. Seal the envelope and label it with your initials, the date, and an exhibit number.

## DIRECTIONS TO LIFT PRINT

### DIRECTIONS TO LIFT PRINT:

1. Use a pencil or pen to place the object with the print in the container (large fish tank works well).
2. Place one drop of super glue into the bottom of the container near the object.
3. Strike a match to provide particles in the air.
4. Shine a light on the glue to cause it to vaporize. This should cause particles of glue to stick to the fingerprint.
5. Remove the object from the container and use a piece of scotch tape to lift the print off the object.
6. Tape the print onto the paper or a glass slide.

### ALTERNATIVE METHOD:

1. Sprinkle fine powder onto the print.
2. Very gently brush the excess off with a very soft bristled paintbrush.
3. Brush in circular motion to cause the dust to cover all the grooves.
4. Lift print with tape and place on paper or a slide.

Powders to try:            Graphite  
                                 Carbon  
                                 Lead pencil remains from pencil sharpener  
                                 Fingerprint powder from your local police department

**ADDITIONAL**

**RESOURCES**

**BEST COPY AVAILABLE**

76

POLICE DEPARTMENT

MAY BERRY

LAW ENFORCEMENT OFFENSE / INCIDENT REPORT

1 COPIES TO		2 OFFICER INJURED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		3 PROCESSED BY		4 CODE 9999		5 REPORT FOR		6 PAGE 1 OF 2		7 COMPLAINT NUMBER 97-9999															
8 TYPE OF INCIDENT LARCENY				9 SAC		10 UCR CODE		11 HOW COMPLAINT WAS RECEIVED (CHECK) <input checked="" type="checkbox"/> RADIO <input type="checkbox"/> PHONE <input type="checkbox"/> OTHER			12 ARRIVAL TIME																
13 ORIGINALLY RECEIVED AS LARCENY				14 OTHER AGENCY NOTIFIED (DIN AND UNIT NAME)				15 DAY, DATE, TIME OF OCCURRENCE WEDNESDAY SEPTEMBER 24, 1997 0800 - NDAY OCTOBER 6, 1997 1200		16 DAY, DATE, AND TIME REPORTED OCT. 7, 1997 0700		17 STATUS: <input checked="" type="checkbox"/> ACTIVE <input type="checkbox"/> CLEARED BY ARREST <input type="checkbox"/> <input type="checkbox"/> INACTIVE <input type="checkbox"/> EXCEPTIONALLY CLEARED															
18 LOCATION OF OCCURRENCE SPECIFY STREET ADDRESS AND/OR APARTMENT COMPLEX, SUBDIVISION, HOTEL 15322 STAPLE HERE STREET STAPLE REMOVER HEIGHTS								19 CAR/BEAT 1575		20 DISTRICT A2		21 GEOGRAPHIC 999															
22 TYPE OF PREMISE (Drugstore, Garage, etc.) RESIDENCE				23 POINT OF ENTRY UNKNOWN				24 POINT OF EXIT UNKNOWN		25 WEAPONS/OBJECTS USED OR DISPLAYED UNKNOWN																	
26 METHOD OF ENTRY UNKNOWN				27 TOOLS USED UNKNOWN				28 POINT OF EXIT UNKNOWN				29 WEAPONS/OBJECTS USED OR DISPLAYED UNKNOWN															
29 VICTIM (If Firm, Name & Type of Business CHECK MULTIPLE VICTIMS <input type="checkbox"/> GORE, ALBERT				30 RESIDENCE ADDRESS 15322 STAPLE HERE				31 RESIDENCE PHONE 555-5555 (3)				32 BUSINESS ADDRESS #2 MARV ALBERT DRIVE				33 BUSINESS PHONE 555-7255 (3)											
34 RACE W		35 SEX M		36 AGE 50		37 DATE OF BIRTH 1-12-47		38 PLACE OF BIRTH WASHINGTON		39 OCCUPATION SALESMAN		40 MARITAL STATUS MARRIED															
41 VICTIM CONVEYED TO N/A				42 VICTIM CONVEYED BY N/A				43 HOSPITAL DISPOSITION <input type="checkbox"/> ADMITTED <input checked="" type="checkbox"/> TREATED AND RELEASED <input type="checkbox"/> DOA				44 TYPE OF INJURIES <input type="checkbox"/> FATAL <input type="checkbox"/> EVIDENT <input type="checkbox"/> NOT DISABLING <input type="checkbox"/> NOT AP <input type="checkbox"/> DISABLING <input type="checkbox"/> PROBABLE <input type="checkbox"/> NOT APPARENT <input type="checkbox"/> UNK															
CODES:												1 - Reporting Party		3 - Witness		5 - Title Holder		7 - Last Person in Possession		9 - Parent		10 - Property Insurance					
CODES:												2 - Person Securing Premise		4 - Owner		6 - Person Discovering Crime		8 - Guardian									
45 CODE 4,6		46 NAME (Last Name First) GORE, TIPPER				47 ADDRESS SEE BOXES 30-31 ABOVE				48 PHONE NO. 555-5252 (9)																	
45A		47A RESIDENCE				47B BUSINESS				48A																	
45B		47B RESIDENCE 1234 FIVE STREET TOLEDO OHIO				47C BUSINESS				48B																	
45C		47C BUSINESS				47D BUSINESS				48C																	
10		INSURANCE AGENT O.W. WILSON				INSURANCE COMPANY OOOPS MUTUAL				555-0001 (3)																	
VEHICLE CODES:												1 - Stolen		2 - Used		3 - Wanted		4 - Held as Evidence		5 - Victim's Vehicle		6 - Recovered		7 - Bicycle		8 - Towed #	
49 CODE BOXES 49-65		50 YEAR 65		51 MAKE N/A		52 MODEL		53 STYLE		54 TYPE		55 COLOR		56 LD. NUMBER													
57 LICENSE NUMBER				58 STATE		59 YEAR		60 PLATE		61 KEYS ON VEHICLE		62 IGNITION LOCKED		63 DOORS LOCKED		64 INSURED		65 VALUE		66 REFERENCE NO.							
PROPERTY CODES:				A - Currency Notes		C - Clothing, Furs		E - Office Equipment		G - Fire Arms		I - Consumable Goods		K - Misc.		B - Jewelry/Precious Metals		D - Damaged Property		F - TV, Radio, Cameras, etc.		H - Household Goods		J - Live Stock		L - Tools	
68 CODE		69 QUANTITY		70 PROPERTY DESCRIPTION: Brand Name, Serial Number, Model / Style, Oper. LD. / Other Identification								71 VALUE		72 RECOVERED		73 REFERENCE NO.											
A		-		FIVE HUNDRED DOLLARS IN CASH								\$500.00															
B		1		"PULSAR" QUARTZ MENS GOLD WATCH, SERIAL # 640637								\$150.00															
K		2		CREDIT CARDS (DISCOVER, MASTERCARD)								-															
F		2		CDs (SPICE GIRLS & SUZANNE VEGA)								\$30.00															
K		20		CHECKS (PERSONAL IN NAME OF TIPPER & AL GORE), CAPITAL BANK, #S 12300-12320, ACCT NUMBER 573-573-00573								-															
74 NARRATIVE										75 TOTAL \$680.00		76 TOTAL		77 OPERATION IDENT. <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO													
"SEE ATTACHED CONTINUATION SHEET"												BEST COPY AVAILABLE															
78 SUBMITTED BY OFFICER, DIN P.O. Brett Hull, #16				79 DATE OF REPORT 10/7/97		80 MESSAGE NO.		81 SUPERVISOR'S INITIAL JEH		82 REVIEWING OFFICER'S SIGNATURE AND DIN																	



I spoke with the victim, Albert Gore, who said that several items are missing from his house over the past week and a half and he has no idea who may have taken the items. There are no signs of forced entry into the house, however the victim states that they often leave their home unlocked even when they are gone for extended periods.

The missing cash had been located in a blue sock that had been located in the top right drawer of Tipper Gore's dresser in the master bedroom. The blue sock was still in the drawer minus the cash. The men's watch had been located in the same dresser, however it had been kept in the left top drawer. The credit cards and personal checks had been located in a drawer of the desk in the office type room, located between Albert & Tipper's bedroom and their daughter Very's bedroom. The CD's had been located somewhere in Very's bedroom.

It should be noted that Very has since moved to Toledo, Ohio. The Progressives Moving & Storage Company was hired to move her furniture to Ohio. The movers arrived at the Gore's house on the morning of Tuesday, September 30, 1997. The moving company's phone number is 555-9735. The supervisor's name was August Vollmer.

It should also be noted that some workers from UCR Carpets (555-9966) had been at the Gore residence on Thursday, October 2, 1997 installing new carpeting throughout the house. The Gores also employ a maid service, Cinderella Inc., and they believe that they were last at the residence on Monday, September 29, 1997.

Mr. Gore has contacted both Master Card & Discover and cancelled his credit card accounts. Capitol Bank has been notified that the Gore's checks were stolen and have cancelled their account under the aforementioned account number.

I.D. Officer Dirty Harry responded and processed the scene for latent fingerprints. He was able to lift several latent prints from the desk and dresser, see Harry's supplemental report for more information.

I conducted a neighborhood canvass which met with negative results.

This officers investigation is complete.

DEPARTMENT REPORTING				COMPLAINT NUMBER:	97-9999 #3
Mayberry, R.F.D.				CODE NO.	999
DIVISION	PRECINCT	SECTOR	COGIS	SUPPLEMENTARY INVESTIGATIVE AND/OR DISPOSITION REPORT	ORIGINAL REPORT UCR CLASSIFICATION
Patrol	Adam	2	999.9		CERTIFIED AS:
DATE OF ORIGINAL REPORT		DAY OF WEEK			Active
October 7, 1997		Tuesday			RECLASSIFICATION (If Applicable)
DATE AND TIME, THIS REPORT		DAY OF WEEK			N/A
October 22, 1300		Wednesday			
NAME OF VICTIM OR COMPLAINANT				RESIDENCE ADDRESS	RES. PHONE
Gore, Albert				15322 Staple Here Street, Mayberry	555-5555 (314)

**ADDITIONAL DETAILS, INVESTIGATIVE AND/OR DISPOSITION:**

Bart Simpson (white, male, DOB: 10/10/77, 1111 Homer Drive, 555-1111), Progressive Moving & Storage Company, came to the police station at 1445 hours on Tuesday, October 14, 1997. I asked Simpson about the day in question and he indicated that he remembered the job, as it was his last with Progressive Moving. He said that he quit because he hated working with Haskell because he was lazy and never did any work. He claimed that Haskell always got out of work because he claimed his back was hurt. Simpson denied being "high". He said that Haskell was always accusing him of that because Simpson listened to rap music. He claimed that Haskell called it drug music. Simpson said that all the bosses and customers thought Haskell was great because he was always super nice around them. He said that when the bosses or customers weren't around Haskell often made fun of them.

Simpson denied any involvement in the theft. He said that his criminal record was in his past and that since he had found Jesus, he now volunteered his time working down at the mission for the Reverend Scott Decker. I asked Simpson if would be willing to submit to a Computer Voice Stress Analysis test in order to prove his innocence. Simpson agreed to do so. Detective Um Cell of this department administered the test using the MZOC format. The relevant questions being did you steal any item from the Gore residence and do you know who stole the items from the Gore residence? Simpson answered "no" to both questions and the results of the test indicated "no deception".

A check of State Criminal History files showed that Very Gore had been arrested for Larceny under \$150.00 on three occasions, DWI, and for possession of a controlled substance twice in the past 5 years. A check of State Criminal History files for Al Bundy revealed no record.

I spoke with Very Gore (white, female, DOB: 9/14/72, 1234 Five Street, Toledo, OH, (999) 555-5252) on the phone regarding the theft. Very said that she was certain that the two CDs were in her room on the morning of the move (Tuesday, Sept.30<sup>th</sup>) as she listened to them on her boom box just before the movers arrived. I asked Very if perhaps the CDs could have been lost in the move and that they might turn up among her other things. Very was very certain that this could not have happened as she has gone through her things several times since the report was made.

I asked Very about why she had moved and she indicated that she had been having much difficulty getting along with her parents. She said that they didn't like her friends and they said that they were tired of bailing her out of jail for drugs and stealing. I asked Very if Al Bundy was there and she indicted that he was at work at the Payless store in the Holy Toledo Mall. I asked Very about how she met Al and she indicted that she had met him over the Internet in a chat room. She had flown to Toledo a couple of times and Al had come to Mayberry to visit her on a couple of occasions but they mostly fell in love over the computer. I asked Very when I could speak with Al and she indicted that they would be in Mayberry for the wedding of a friend this weekend. I arranged to meet with them at the police station on Saturday at 1200 hours.

I sent a message to the Toledo Police Department and requested an Ohio State Criminal History check on Al Bundy, (white, male, DOB: 8/10/62, 1234 Five Street, Toledo, OH, (999) 555-5252).

ATM - Springfield - cash advance  
- right code

BEST COPY AVAILABLE



<b>DEPARTMENT REPORTING</b>				<b>COMPLAINT NUMBER:</b>	97-9999 #2	
Mayberry, R.F.D.				<b>CODE NO.</b>	999	
<b>DIVISION</b>	<b>PRECINCT</b>	<b>SECTOR</b>	<b>COGIS</b>	<b>SUPPLEMENTARY INVESTIGATIVE AND/OR DISPOSITION REPORT</b>	<b>ORIGINAL REPORT UCR CLASSIFICATION</b>	
I.D.	N/A	2	999.9		Burglary - Residential	
<b>DATE OF ORIGINAL REPORT</b>			<b>DAY OF WEEK</b>		<b>CERTIFIED AS:</b>	Active
October 7, 1997			Tuesday			
<b>DATE AND TIME, THIS REPORT</b>			<b>DAY OF WEEK</b>		<b>RECLASSIFICATION (If Applicable)</b>	
October 21, 1300			Tuesday		N/A	
<b>NAME OF VICTIM OR COMPLAINANT</b>				<b>RESIDENCE ADDRESS</b>		
Gore, Albert				15322 Staple Here Street, Mayberry		
				<b>RES. PHONE</b>		
				555-5555 (314)		

**ADDITIONAL DETAILS, INVESTIGATIVE AND/OR DISPOSITION:**

I received information from the County Single Print Unit that the fingerprints lifted at this crime scene were not of evidentiary value. They were therefore destroyed.

On October 7, 1997 I photographed the scene. The film was seized and tagged to be held as evidence in the department's evidence facility. The film was turned over to department evidence custodian Joe Friday.

Respectfully,

P.O. Dirty Harry

<b>DEPARTMENT REPORTING</b>				<b>COMPLAINT NUMBER:</b>	97-9999 #1	
Mayberry, R.F.D.				<b>CODE NO.</b>	999	
<b>DIVISION</b>	<b>PRECINCT</b>	<b>SECTOR</b>	<b>COGIS</b>	<b>SUPPLEMENTARY INVESTIGATIVE AND/OR DISPOSITION REPORT</b>	<b>ORIGINAL REPORT UCR CLASSIFICATION</b>	
Patrol	Adam	2	999.9		Burglary - Residential	
<b>DATE OF ORIGINAL REPORT</b>			<b>DAY OF WEEK</b>		<b>CERTIFIED AS:</b>	Active
October 7, 1997			Tuesday			
<b>DATE AND TIME, THIS REPORT</b>			<b>DAY OF WEEK</b>		<b>RECLASSIFICATION (If Applicable)</b>	N/A
October 13, 1300			Monday			
<b>NAME OF VICTIM OR COMPLAINANT</b>				<b>RESIDENCE ADDRESS</b>	<b>RES. PHONE</b>	
Gore, Albert				15322 Staple Here Street, Mayberry	555-5555 (314)	

**ADDITIONAL DETAILS, INVESTIGATIVE AND/OR DISPOSITION**

I contacted victim Al Gore by phone & made arrangements to meet with him & his wife, Tipper, at their home on Wednesday, October 8, 1997. When I arrived I inspected the residence for any evidence of forced entry, however none was located.

I asked the Gore's if they suspected anyone in particular. They said that they had no idea who might have taken their property. The Gore's said that to their knowledge neither their stolen credit cards nor their stolen checks had been used.

The Gore's said that their daughter Very is 25 years old and moved to Toledo, Ohio to live with a boyfriend, Al Bundy. Bundy is a shoe salesman whom they don't particularly care for. They said that there were 2 employees that worked for the moving company to move Very's furniture. I asked them if Very had ever been in any trouble and they said only for minor things as a juvenile like truancy, curfew violations, and minor in possession of alcohol. Al Gore said that Very had phoned them from Toledo and told them that the two CDs were missing and she believed that they were stolen from her room before she moved her things to Ohio.

I contacted August Vollmer of the Progressives Moving & Storage Company. He stated that the two employees who worked the job at the Gore's residence were Bart Simpson and Eddie Haskell. I advised him of the theft and asked him about the two employees. He said that Haskell was a long-time employee that was very polite & reliable. He said that Simpson had only worked for him for a week and had since quit. He said that he'd have Haskell come by the station to talk with me today. He gave me the following phone number for Simpson 555-1111.

A check of the state criminal history files showed no arrests for Haskell. Simpson had been arrested several times for larceny, burglary, and common assault.

On Thursday, October 9, 1997 at 1100 hours, Eddie Haskell (white, male, DOB: 1/15/47, 9858 Metrix Drive, 555-6983) came to the station to be interviewed. Haskell said that his back had been hurting him so he did very little work on that date. He said that some of the time he was waiting in the truck hoping that his pain medication would kick in. He said that he didn't recall seeing any of the stolen items in the house. Haskell said that he worked with Simpson that day only. He said that Simpson was a "loud mouth" who bragged about how many women liked him. Haskell said that he thought that Simpson was "high" when he came to work that day.

I was able to contact Bart Simpson and he agreed to come to the station on Tuesday, October 14, 1997 in the afternoon to be interviewed.

I spoke with Allen Wagner, the Installation Service Manager for UCR Carpets regarding this case. He said that two employees worked on the Gore installation. The employees were Jerry MacGuire and Billy Bob Thornton. Wagner said that MacGuire & Thornton had been with the company for 20 & 27 years respectively.

He indicated that Thornton is somewhat mentally challenged. He said that he has never had any problems with either employee. Wagner arranged for both workers to come to the police station to be interviewed.

A check of the state criminal history files showed no arrests for MacGuire or Thornton.

On Friday, October 10, 1997 MacGuire & Thornton came into the station. I spoke first with MacGuire (black, male, DOB: 8/5/50, 55748 Showmethemoney Drive, 555-1212) who said he remembered working at the Gore's on October 2<sup>nd</sup> because their house was so big. He said that he and Thornton arrived at about 0700 hours and worked that day until 1700 hours. He said that Thornton was with him all the time, except for a few bathroom visits. MacGuire said that he would be willing to submit to a CVSA test if asked.

I spoke with Thornton (white, male, DOB: 12/10/52, 8558 Fried Tatters Ln., 555-0666) who said that he reckoned that he would rather be cut with a sling blade than steal something. He said that he would take any kind of a test to show that he always tells the truth, even if he does something bad.

I contacted Betty Rubble, the manager of Cinderlla Inc. maid service. She stated that Laverne Defazio & Shirley Feeny in fact cleaned the Gore's house on Monday, September 29, 1997. She said that they are both regularly assigned to the Gore's house and have been for the past six months. They clean their house once a week. Rubble arranged for both maids to meet me at her office on Friday, October 10<sup>th</sup> at 1400 hours.

A check of the state criminal history files showed no arrests Defazio. Feeny had been arrested for prostitution about 10 years ago.

I spoke first with Defazio (white, female, DOB: 7/12/57, 123 Fascination Street, 555-7983) who said that she and Feeny arrived at the Gore's on Monday morning at about 0900 hours. Mrs. Gore told them that a light cleaning would only be necessary because they were having new carpeting put in soon. Defazio said that she and Feeny were separated several times during the two hours that they were at the Gore residence. She said that she did not recall seeing any of the stolen items lying out. She said that she has never stolen anything and didn't believe that Feeny would steal any items. Defazio agreed to take a CVSA test if asked.

I spoke with Feeny (white, female, DOB: 2/19/59, 8000500 Easy Street, 555-3819) who said that she and Defazio arrived at the Gore's on Monday morning at about 0900 hours. Feeny said that she and Defazio worked separately during the two hours that they were at the Gore residence. She said that she did not recall seeing any of the stolen items lying out. I asked Feeny about her past criminal history and she stated that it was in her past, just a misunderstanding. She requested that I not tell her employer or husband about the arrest, as they were unaware of her criminal history. She insisted that she took nothing and requested that she be given a lie detector test.

I called Detective Sergeant Andy Sipawitz of the Toledo, Ohio Police department and requested that he contact Very Gore and obtain elimination prints from her. He agreed to forward them to me when completed.

BEST COPY AVAILABLE

# FINGERPRINTS



**TENTED ARCH**



**PLAIN OR CENTRAL  
POCKET WHORL**



**PLAIN ARCH**



**PLAIN WHORL WITH  
ELONGATED CORE**



**LOOP**



**ACCIDENTAL  
WHORL**



**DOUBLE LOOP  
WHORL**

**COPIED FROM FORENSIC SCIENCE, AN INTRODUCTION TO  
CRIMINALISTICS, DEFOREST, GAENSSLEN, LEE**

**BEST COPY AVAILABLE**

**BRYAN HAMPTON  
FORENSIC SCIENTIST  
ST. CHARLES COUNTY SHERIFF'S DEPARTMENT  
CRIME LABORATORY  
949-7488**

There are three fundamental facts that have made fingerprints a superlative method for personal individualization and accepted by the courts as such:

1 An individual's fingerprint ridges are formed during fetal life, between 100 and 120 days of development, and remain unchanged for the remainder of a person's lifetime.

2 It has been shown empirically, with theoretical support, that fingerprints are unique. No two persons, even identical twins, possess identical ridge characteristics.

3 Fingerprint classification systems permit the development of files of systematically classified fingerprints and the ability to retrieve a particular file rapidly.

### Fingerprint Classification Systems

**Types of Patterns** The fingerprint ridges, which can be observed on the inner surfaces of the hands, are known as *papillary ridges* (or *friction ridges*). These ridges occur in certain definite formations, and they can be classified into specific types of patterns. There are three basic fingerprint patterns from which are derived the fingerprint classification system. These are: *arches*, *loops*, and *whorls*. These basic patterns can be further subdivided into eight types:

- |               |                       |
|---------------|-----------------------|
| 1 Plain arch  | 2 Tented arch         |
| 3 Ulnar loop  | 4 Radial loop         |
| 5 Plain whorl | 6 Central pocket loop |
| 7 Double loop | 8 Accidental          |

All the pattern types are formed by a series of lines, corresponding to ridges (hills) and grooves (valleys) on the skin of the fingertip. The skin is composed of two major types of cell layers. The outer layer (the surface) is known as the *epidermis*. The inner layer is known as the *dermis* (Figure 12-1).

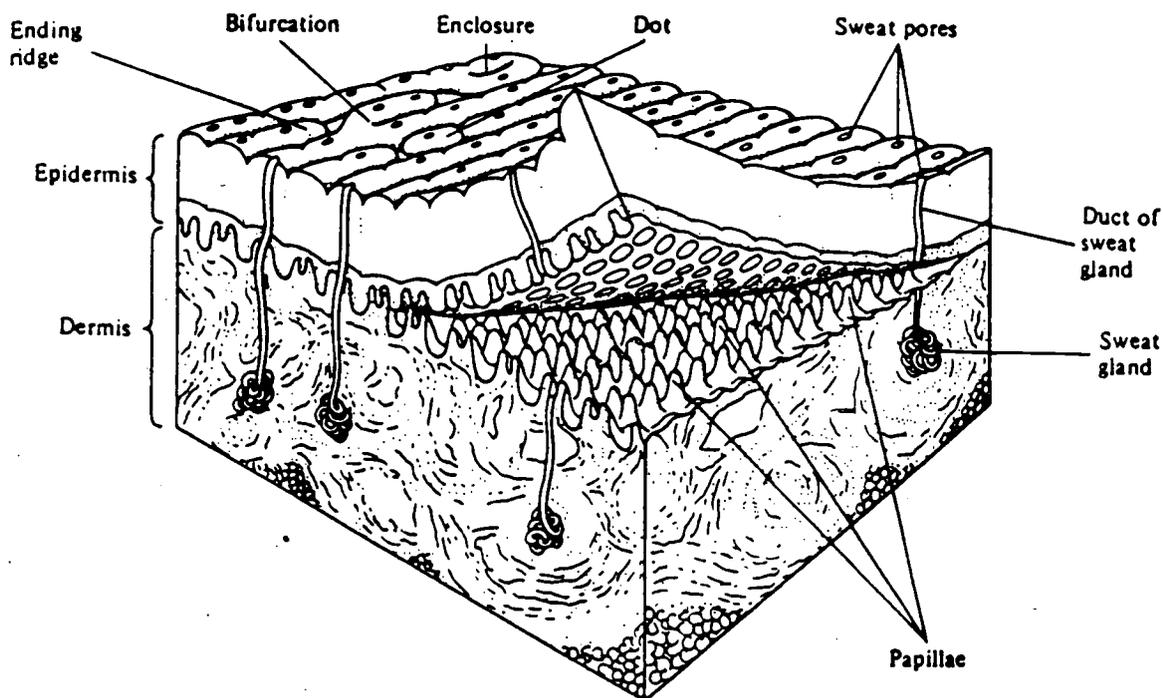
By their relationship to one another the ridges form definite designs, and these are called fingerprint patterns. The area which displays the patterns of the fingerprint, and is surrounded by the type lines, is called the *pattern area*. *Type lines* are the two innermost ridges which run parallel and then diverge and surround the pattern area. The approximate center of the pattern is called the *core*. The outer, terminal, point of the pattern, nearest the type line divergence, is known as the *delta*. The pattern area contains all the ridge detail necessary to classify the print, although features outside this area may be useful in comparing latents with knowns. The eight basic types of fingerprint patterns are shown in Figure 12-2.

The *plain arch* is the simplest pattern. The ridges enter on one side, rise to form a wave in the center, and exit smoothly on the opposite side.

The *tented arch* is a variation of the plain arch. Ridges at the center are thrust upward in a more abrupt manner similar to the appearance of a tent pole.

The *radial loop* is a pattern in which one or more ridges enter on the side toward the thumb (the side on which the radius bone of the forearm lies), recurve, and then exit on the same side.

The *ulnar loop* is a pattern in which one or more ridges enter on the side toward



**FIGURE 12-1**  
 Cross-sectional view of the structure of friction skin. (*The Federal Bureau of Investigation.*)

the little finger (the side on which the ulna bone of the forearm lies), recurve, and then exit toward the same side.

The *plain whorl* is a pattern in which one or more ridges form a complete revolution around the center. Whorls generally have two or more deltas.

The *central pocket loop* is a variation of the plain whorl pattern. Some ridges tend to form a loop pattern, which recurves and surrounds a whorl at the center.

The *double loop (twinned loop)* is another type of whorl. In it two separate loop formations are present and may surround each other.

The *accidental* is a relatively rare type of pattern. This category is used to accommodate those patterns that do not conform to the patterns previously described, such as the lateral pocket loop of Figure 12-2.

BEST COPY AVAILABLE

Comparison of latent prints with known ones begins with the overall pattern. The ridge detail of fingerprints, including the ends of ridges, their separations, and their relationships to one another, constitute the bases for the comparison of fingerprints. These ridge details and their relationships are collectively known as *minutiae*. The use of minutiae in fingerprint comparison is illustrated in Figure 12-7.

The following individual ridge characteristics are valuable for comparison purposes:



1 *Bifurcation (fork)* 

This is a single ridge, splitting or forking into two branches. —

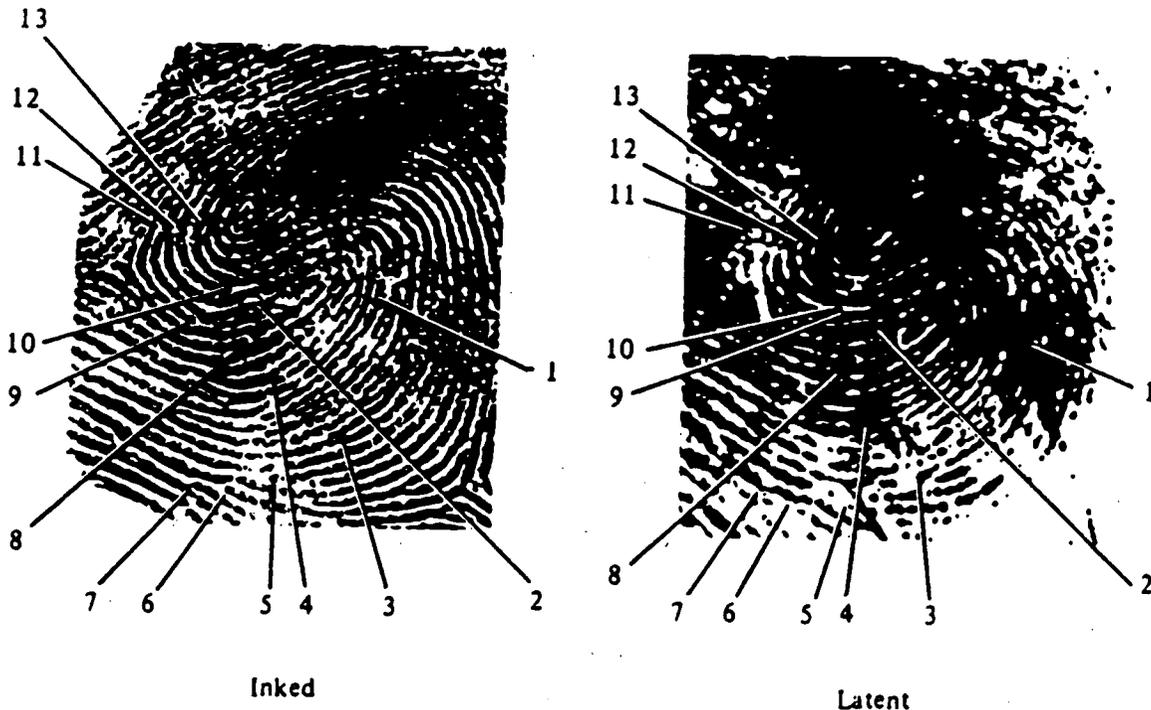


2 *Island (enclosure)* 

An island is formed by a single ridge which, after bifurcating for a short distance, reconverges and continues as a single ridge. An enclosure usually refers to a larger island.

FIGURE 12-7

Comparison of latent and known inked prints. (Courtesy of Detective Nicolas Petraco, Crime Laboratory, New York City Police Department.)





3 *Dot* 

A dot is a very short ridge and means exactly what the word *dot* implies.



4 *Short ridge* 

A short ridge is a relative term, and is used to denote a ridge that is not as long as the average ridge in that specific print.



5 *Ridge ending* 

A ridge ending is the point of the ridge's termination. It is considered an ending ridge only if it terminates within the pattern area.



6 *Trifurcation* 

This is one single ridge splitting into a three-pronged, fork-shaped pattern.



7 *Bridge* 

A bridge is a short ridge which interconnects two other parallel ridges.



8 *Angle* 

An angle results from two or more ridges converging with one another at a point.



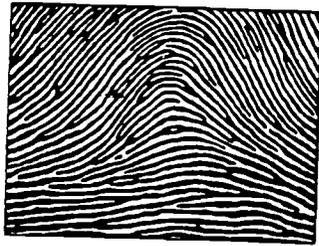
9 *Converging ridges* 

Two or more ridges which meet at a point are converging, and the point at which they meet is called the point of convergence.

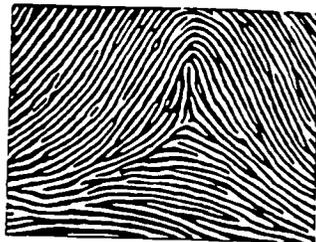


10 *Diverging ridges* 

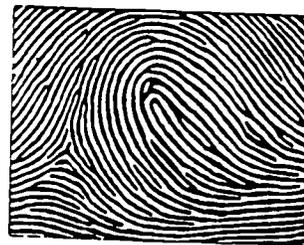
Diverging ridges are ridges which are parallel for some distance but then swing out away from each other.



Plain arch



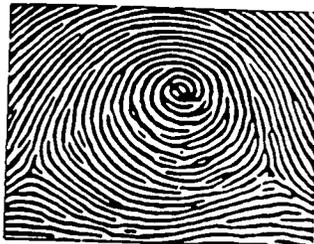
Tented arch



Plain loop



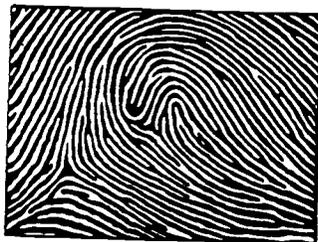
Plain loop



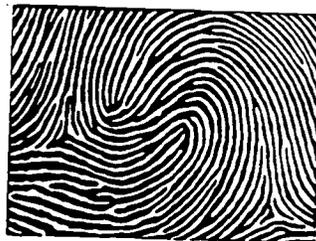
Whorl



Central pocket loop



Lateral pocket loop



Twinned loop



Accidental

**FIGURE 12-2**  
Basic fingerprint patterns. (Faurot Inc., Elmsford, New York.)

BEST COPY AVAILABLE



BEST COPY AVAILABLE

89

4.11A  
Enlargement of a developed crime scene latent  
print.  
(Courtesy, St. Paul Police Department, Minnesota.)



90

**4.11B**  
Enlargement of an inked impression of a suspect's finger.  
(Courtesy, St. Paul Police Department, Minnesota.)



Ex. 4.11 Latent Fingerprint

*Comment*

It is perhaps important to direct the attention of the student to the poor quality of the details which are present but not obvious in the latent impression. Nevertheless, an identity is easily established.

BEST COPY AVAILABLE

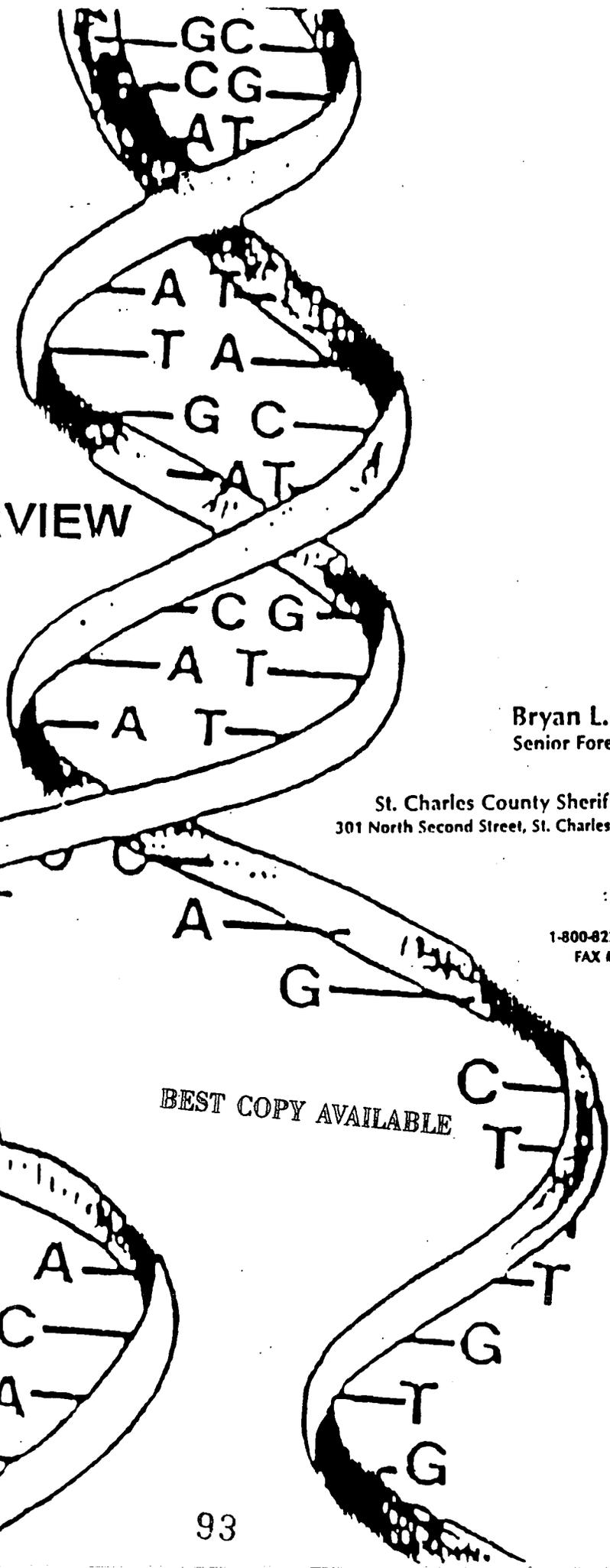
4.11A  
Enlargement of a developed crime scene latent print.



BEST COPY AVAILABLE

4.11B  
Enlargement of an inked impression of a suspect's finger.  
(Courtesy, St. Paul Police Department, Minnesota.)

# FORENSICS, SEROLOGY & DNA: AN OVERVIEW



Bryan L. Hampton  
Senior Forensic Scientist

St. Charles County Sheriff's Office  
301 North Second Street, St. Charles, Missouri 63301

(314) 949-7488  
1-800-822-8017 ext. 4455  
FAX # (314) 949-3009

BEST COPY AVAILABLE



# **Forensic Science is the Application of Science to Matters of the Law**

## **AREAS OF FORENSIC SCIENCE**

- **Medicine**
- **Odontology**
- **Entomology**
- **Anthropology**
- **Engineering**
- **Psychiatry**
- **Questioned Documents**
- **Firearms & Toolmarks**
- **Fingerprints**
- **Criminalistics**

# **CRIMINALISTICS**

- **Drugs/Toxicology**
- **Arson & Explosives**
- **Trace Evidence**
- **Physical Patterns**
- **Serology**

BEST COPY AVAILABLE

## **DRUGS/TOXICOLOGY**

- **Controlled Substances**
- **Poisons - Toxic Substances**
- **Alcohol**

## **ARSON & EXPLOSIVES**

- **Flammables**
- **Incendiary Components**
- **Explosive Mixtures**
- **Residues**

## **TRACE/TRANSFER EVIDENCE**

- **Hair/Fiber**
- **Paint/Plastic**
- **Metal**
- **Wood/Paper**
- **Cosmetics**
- **Glass & Soil**

## **PHYSICAL PATTERNS**

- **Physical Matching**
- **Imprints**
- **Indentations**
- **Bloodstain Patterns**

# SEROLOGY

- Blood
- Tissue
- Saliva
- Semen
- Perspiration

# Forensic Polymorphic Proteins

System (usual abbreviation)	Type	Approximate occurrence, % in U.S. populations	
		White	Black
Phosphoglucuronase* † (PGM)	1	59	66
	2-1	35	29
	2	6	6
Adenylate kinase* (AK)	1	93	99
	2-1	7	1
Acid phosphatase* (ACP; EAP)	2	<1	<1
	A	12	7
	BA	42	32
	B	40	58
	CA	2	1
	CB	4	2
Glyoxalase I* (GLO)	C	<1	<1
	1	16	14
	2-1	52	41
	2	30	45
Esterase D* (ESD)	1	79	84
	2-1	20	15
Adenosine deaminase* (ADA)	2	1	1
	1	90	97
	2-1	10	3
Glutamate-pyruvate transaminase (GPT)	2	<1	<1
	1	29	87
	2-1	49	29
Uridine monophosphate kinase (UMPk)	2	22	4
	1	91	98
	2-1	9	2
6-Phosphogluconate dehydrogenase* (PGD)	2	1	<1
	A	96	93
	AC	4	7
Carbonic anhydrase II* † (CA)	C	<1	<1
	1	100	81
	2-1	—	18
Glutathione reductase † (GSR)	2	—	1
	Usual	100	75
	Usual-variant	—	23
Glutathione peroxidase † (GPX)	Variant	—	2
	Usual	100	94
	Thomas variant	—	6
Peptidase A <sub>1</sub> (PEPA)	1	100	99
	2-1	—	8
	2	—	2

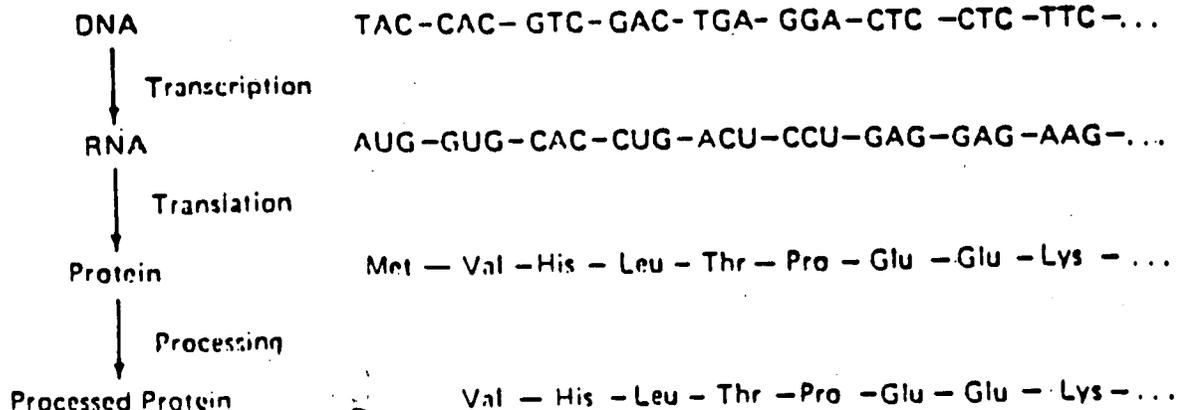
\* Can be typed in dried bloodstains.  
 † Shows 10 types if isoelectric focusing or electrophoresis under special conditions is employed.  
 ‡ Significantly polymorphic only in black populations.

System (usual abbreviation)	Type	Approximate occurrence, % in U.S. populations	
		White	Black
Haptoglobin* † (Hp)	1	17	2
	2-1	48	3
	2	35	1
	2-1M	<1	1
Group-specific component* † (Gc)	0	<1	1
	1	50	7
	2-1	42	2
Transferrin* † (Tf)	2	8	—
	C	99	9
	CB	1	—
	CD	<1	—
Protease inhibitor or $\alpha_1$ -antitrypsin <sup>1</sup> (Pi)	Many	—	—
Immunoglobulin markers (Gm and Km)	Many	—	—

\* Can be typed in dried bloodstains.  
 † Hp 2-1M and Hp 0 cannot be diagnosed reliably in bloodstains. Hp 1 can be subtyped but not routinely in stains.  
 ‡ Gc 1 can be subtyped, but this is not done in stains.  
 § Tf C, the common electrophoretic type, can be subtyped by isoelectric focusing, but this is not done in stains.  
 ¶ Pi has many electrophoretic variants; the common electrophoretic type Pi M can be subtyped by isoelectric focusing.

Copied from Forensic Science

## From Genes to Proteins



# DNA IN FORENSICS

RFLP

PROFILE

PARENTAGE

PCR

PROFILE

PARENTAGE

SEX

DETERMINATION

ABO GENOTYPE

---

## *RECENT DEVELOPMENTS*

← mtDNA MITOCHONDRIAL  
DNA

← MVR-PCR MINI SATELLITE  
VARIANT REPEAT

← PCR-RFLP

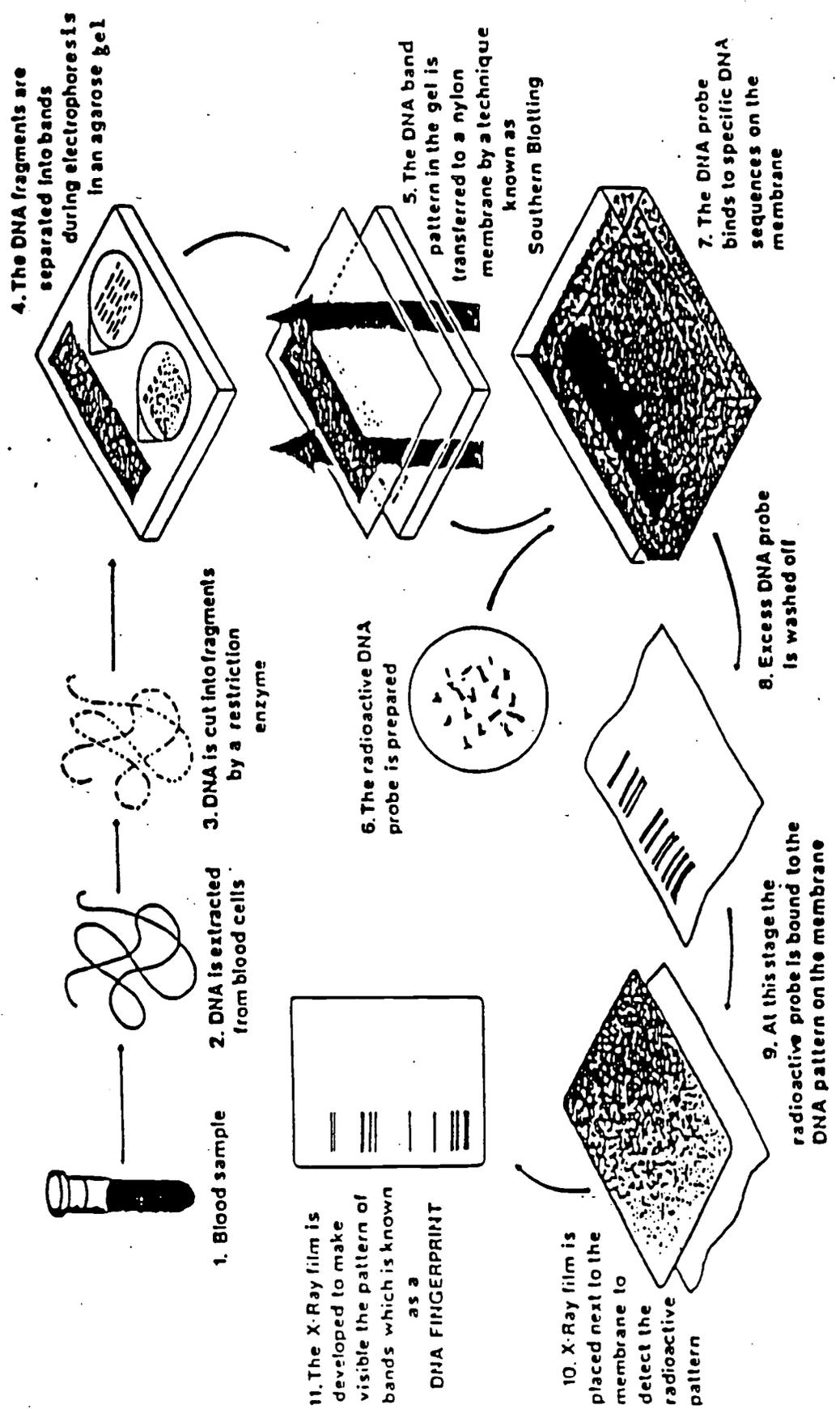
# **FORENSIC DNA ANALYSIS**

## **RFLP**

### **Restriction Fragment Length Polymorphism**

- 1. Isolation of genomic DNA**
- 2. Assessment of quantity/quality  
of DNA**
- 3. Digestion of DNA with RE**
- 4. Agarose gel electrophoresis of  
DNA fragments**
- 5. Transfer of DNA fragments from  
gel to nylon membrane**
- 6. Hybridize DNA fragments to  
labeled probes**
- 7. Autoradiographs or  
Lumigraphs**

# THE DNA FINGERPRINTING PROCESS



BEST COPY AVAILABLE

# **FORENSIC DNA ANALYSIS**

## **PCR**

### **Polymerase Chain Reaction**

- 1. Isolation of DNA**
- 2. Amplification of target DNA**
- 3. Assessment of quantity/quality  
of DNA**
- 4. Polyacrylamide gel  
electrophoresis**
- 5. Silver staining or Fluorescence**

## Glossary:

- ALLELE:** One of two or more alternative forms of a gene occupying the same locus on homologous chromosomes.
- AMPLIFICATION:** Increasing the number of copies of a desired DNA molecule.
- ANNEAL:** Pairing of complementary single strands of DNA to form a double-stranded helical structure.
- AUTORADIOGRAPHY:** The detection of an image on photographic film caused by radioactive molecules.
- DENATURATION:** Conversion of DNA from double-stranded to single-stranded state by use of heat or high pH.
- DNA (deoxyribonucleic acid):** Double-stranded molecule that carries the genetic information in living organisms.
- ELECTROPHORESIS:** Technique for the separation of molecules through their movement on a support medium such as agarose under the influence of an electrical charge.
- ENZYME:** Protein that speeds up the rate of chemical reactions in the body but is unaltered itself in the reaction.
- GENE:** Chromosomal segment, organized in a linear arrangement, that codes for a polypeptide chain or RNA molecule.
- GENOME:** Entire set of heredity factors of an organism, contained in the chromosomes.
- GENOTYPE:** Particular combination of genes present in the cells of an individual.
- HYBRIDIZATION:** Process of complementary base pairing between two single strands of DNA, or DNA and RNA.
- LOCUS:** Position a gene occupies on a chromosome.
- PHENOTYPE:** Visible characteristics of an individual as determined by the genes.
- POLYMERASE CHAIN REACTION (PCR):** Process by which a small amount of DNA can be amplified to yield a larger quantity of DNA.
- POLYMORPHISM:** Occurrence in a population of two or more genetically determined alternative phenotypes with frequencies greater than could be accounted for by mutation.
- RESTRICTION ENZYME:** Derived from bacteria, catalyzes the cleavage of DNA at specific points, also called restriction endonuclease.
- RESTRICTION FRAGMENT LENGTH POLYMORPHISM (RFLP):** Variation in the size of DNA fragments produced by restriction enzyme digestion of a genomic DNA. Pattern is recognized using a probe after electrophoresis, Southern blotting, and hybridization.

BEST COPY AVAILABLE

# Forensic Bibliography

## *Forensic Science*

### *An Introduction to Criminalistics*

Peter R. De Frost  
R. E. Gaensslen  
Henry C. Lee  
McGraw - Hill, 1983  
New York, New York

## *Science Against Crime*

Yvonne Deutch, editor  
Exeter Books, 1982  
New York, New York

## *Chemistry and Crime*

### *From Sherlock Holmes to Today's Courtroom*

Samuel M. Gerber, editor  
American Chemical Society, 1983  
Washington, D.C.

## *Criminalistics*

### *An Introduction to Forensic Science*

Richard Saferstein  
Prentice-Hall, Inc., 1977  
Englewood Cliffs, New Jersey

## *Forensic Science Handbook*

### *Volumes I, II, III*

Richard Saferstein, editor  
Prentice-Hall, Inc., 1982, 1988, 1993  
Englewood Cliffs, New Jersey

## FORENSIC ORGANIZATIONS WITH STUDENT MEMBERSHIPS

### AMERICAN ACADEMY OF FORENSIC SCIENCES

Street Address: 410 North 21st Street, Suite #203  
Colorado Springs, CO 80904-2798  
Phone: (719) 636-1100  
(800) 701-2237  
Fax: (719) 636-1993  
E-mail Address: [membership@aafs.org](mailto:membership@aafs.org)  
E-mail Source: Internet

Mailing Address: P.O. Box 669  
Colorado Springs, CO 80901-0669

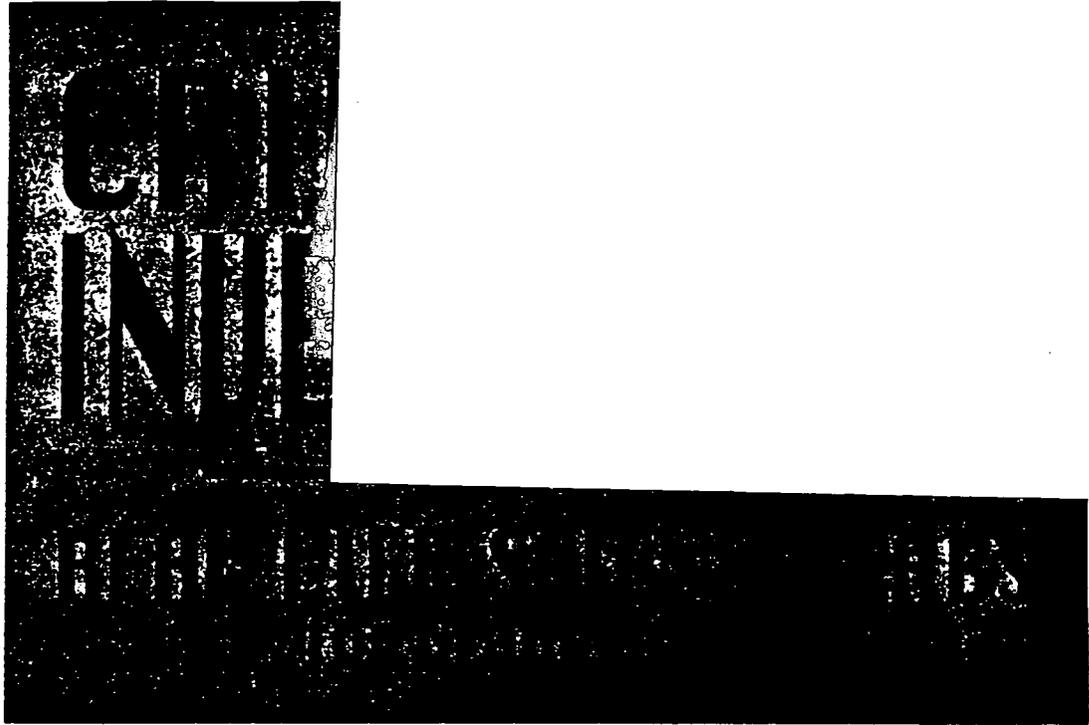
Executive Director: Anne Warren

### Midwestern Association of Forensic Scientists, Inc.

Membership Chairperson:

Patricia Wojtowicz  
Minnesota BCA Forensic Lab  
1246 University Ave.  
St. Paul, MN 55104

E-mail: [MAFSnews@aol.com](mailto:MAFSnews@aol.com)



**PAM WALKER ♦ ELAINE WOOD**

**Illustrations by Christopher Stone**

Cost 28.95  
Plus ships 5.59

Cust. Service 1-800-947-7700



Center for Applied Research  
in Education  
Simon & Schuster  
PO Box 11022  
Des Moines, IA  
50336-1022

**BEST COPY AVAILABLE**

107

Library of Congress Cataloging-in-Publication Data

Walker, Pam.

Crime scene investigations : real-life science labs for grades 6-12 /  
Pam Walker and Elaine Wood : illustrations by Christopher Stone.

p. cm.

ISBN 0-87628-135-8

1. Science—Study and teaching (Elementary)—Activity programs.
2. Science—Study and teaching (Secondary)—Activity programs.
3. Critical thinking—Study and teaching. I. Wood, Elaine.

II. Title.

LB1585.W245 1998

507.1—dc21

98-14891

CIP

© 1998 by The Center for Applied Research in Education

Illustrations by *Christopher Stone*

Acquisitions Editor: *Connie Kallback*

Production Editor: *Mariann Hutlak*

Interior Design/Formatting: *Dee Coroneos*

All rights reserved.

Permission is given for individual teachers to reproduce the worksheets  
for classroom use. Reproduction of these materials for an entire school  
system is strictly forbidden.

Printed in the United States of America

10 9 8 7 6 5 4 3 2 1

ISBN 0-87628-135-8

**ATTENTION: CORPORATIONS AND SCHOOLS**

The Center for Applied Research in Education books are available at quantity discounts  
with bulk purchase for educational, business, or sales promotional use. For information,  
please write to: Prentice Hall Career & Personal Development Special Sales, 240 Frisch  
Court, Paramus, NJ 07652. Please supply: title of book, ISBN, quantity, how the book will  
be used, date needed.



**THE CENTER FOR APPLIED RESEARCH  
IN EDUCATION**  
West Nyack, NY 10994  
A Simon & Schuster Company

On the World Wide Web at <http://www.phdirect.com>

Prentice Hall International (UK) Limited, *London*

Prentice Hall of Australia Pty. Limited, *Sydney*

Prentice Hall Canada, Inc., *Toronto*

Prentice Hall Hispanoamericana, S.A., *Mexico*

Prentice Hall of India Private Limited, *New Delhi*

Prentice Hall of Japan, Inc., *Tokyo*

Simon & Schuster Asia Pte. Ltd., *Singapore*

Editora Prentice Hall do Brasil, Ltda., *Rio de Janeiro*

## ACKNOWLEDGMENTS

Carolina Tips  
Carolina Biological Supply  
2700 York Road  
Burlington, NC 27215  
910-584-0381

DNA Fingerprints: Witness for the Prosecution  
Lewis, Ricki  
Discover Volume 9 Issue 6

Animal Life Processes  
CORD Communications Inc.  
324 Kelly Drive  
Waco, TX 76710  
817-776-1822

Forensic Science  
Kemtec Educational Corporation  
9889 Crescent Park Drive  
West Chester, OH 45069  
513-576-3535

Biotechnology Notebook  
MSCE  
13157 Olive Spur Road  
St. Louis, MO 63141  
314-576-3535

Discover June 1988  
650 N. Dearborn, Suite 650  
Chicago, IL 60601  
312-482-8099

St. Charles County Sheriff's Office  
Bryan L. Hampton, Senior Forensic Scientist  
Buford H. Seabolt, Forensic Lab Director  
301 North Second Street  
St. Charles, MO 63301

BEST COPY AVAILABLE

## PRESENTERS

Linda Gaither  
Science Department Chair  
Fort Zumwalt North High School  
1230 Tom Ginnever  
O'Fallon, MO 63366  
Phone: (636) 272-4447

Dr. Larry Higgins  
Assistant Superintendent, Curriculum and Instruction  
Fort Zumwalt School District  
110 Virgil  
O'Fallon, MO 63366  
(636)272-6620

Karen Blessman  
Vocational Resource Educator  
Fort Zumwalt North High School  
1230 Tom Ginnever  
O'Fallon, MO 63366  
(636)272-6636

BEST COPY AVAILABLE



**U.S. Department of Education**  
Office of Educational Research and Improvement (OERI)  
National Library of Education (NLE)  
Educational Resources Information Center (ERIC)

ACTE 99  
LE079785



## REPRODUCTION RELEASE

(Specific Document)

### I. DOCUMENT IDENTIFICATION:

Title: <u>Murder They Wrote</u>	
Author(s): <u>Linda Gaither - My Unit</u>	
Corporate Source: <u>Dr. Larry Higgins + Karen Blessman helped present at ACTE</u>	Publication Date:

### II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, *Resources in Education* (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic media, and sold through the ERIC Document Reproduction Service (EDRS). Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce and disseminate the identified document, please CHECK ONE of the following three options and sign at the bottom of the page.

The sample sticker shown below will be affixed to all Level 1 documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

\_\_\_\_\_ Sample \_\_\_\_\_

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

1

Level 1

↓

Check here for Level 1 release, permitting reproduction and dissemination in microfiche or other ERIC archival media (e.g., electronic) and paper copy.

The sample sticker shown below will be affixed to all Level 2A documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE, AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY

\_\_\_\_\_ Sample \_\_\_\_\_

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2A

Level 2A

↓

Check here for Level 2A release, permitting reproduction and dissemination in microfiche and in electronic media for ERIC archival collection subscribers only

The sample sticker shown below will be affixed to all Level 2B documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

\_\_\_\_\_ Sample \_\_\_\_\_

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2B

Level 2B

↓

Check here for Level 2B release, permitting reproduction and dissemination in microfiche only

Documents will be processed as indicated provided reproduction quality permits.  
If permission to reproduce is granted, but no box is checked, documents will be processed at Level 1.

*I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche or electronic media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries.*

Sign here →

Signature: <u>Linda Gaither</u>	Printed Name/Position/Title: <u>Linda Gaither</u>	
Organization/Address: <u>Ft. Zumwalt North High School</u>	Telephone: <u>636 372 4447</u>	FAX: <u>636-272 6124</u>
	E-Mail Address: <u>gaitherlinda@hotmail.com</u>	Date: <u>3/15/00</u>



### III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):

If permission to reproduce is not granted to ERIC, or, if you wish ERIC to cite the availability of the document from another source, please provide the following information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents that cannot be made available through EDRS.)

Publisher/Distributor:
Address:
Price:

### IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:

If the right to grant this reproduction release is held by someone other than the addressee, please provide the appropriate name and address:

Name:
Address:

### V. WHERE TO SEND THIS FORM:

Send this form to the following ERIC Clearinghouse: <b>Acquisitions Coordinator</b> <b>ERIC Clearinghouse on Adult, Career, and Vocational Education</b> <b>Center on Education and Training for Employment</b> <b>1900 Kenny Road</b> <b>Columbus, OH 43210-1090</b>
--

However, if solicited by the ERIC Facility, or if making an unsolicited contribution to ERIC, return this form (and the document being contributed) to: