

True Forensic Crime Stories

Introduction

Gripping true-crime stories are a perfect way to investigate how the tools and techniques of forensic science help detectives solve crimes. The engaging text and photos in the *True Forensic Crime Stories* series grab readers' attention and keep them involved. Each book contains details about real crimes and the science behind the forensics that cracked the case. As students read, they use critical-thinking skills, such as comparing and contrasting, identifying sequence, determining cause-and-effect relationships, and making inferences.

National Standards

This series supports Science, Social Studies, and Language Arts. Go to www.enslowclassroom.com and/or www.enslow.com and click on the "View State Correlations" tab. Click on your state, grade level, and curriculum standard to display how any book in this series backs up your state's specific curriculum standard.

Classroom Activities

Included in this teacher's guide are activities linking to Reading/Language Arts, Math, Science, and Social Studies. The activities, and a reproducible handout, require readers to use comprehension and vocabulary skills relating to the book's subject. Some activities can be reworked to use with any book in the series. The last page of this guide offers a reproducible assessment tool covering comprehension, vocabulary, and inference.

Guided Reading Level: W

Reproducible for Educational Use Only

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Where to Find More Information about Titles in this Series:

Visit www.enslowclassroom.com and/or www.enslow.com to search for other titles and series, as well as download the teacher's guides for other titles in this series:

<u>Titles in this series</u>	<u>Library Edition ISBN</u>	<u>Paperback Edition ISBN</u>
Bones <i>Dead People DO Tell Tales</i>	978-0-7660-3669-7	978-1-59845-363-8
Cybercrime <i>Data Trails DO Tell Tales</i>	978-0-7660-3668-0	978-1-59845-361-4
DNA and Blood <i>Dead People DO Tell Tales</i>	978-0-7660-3667-3	978-1-59845-362-1
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Gun Crimes <i>Dead People DO Tell Tales</i>	978-0-7660-3763-2	978-1-59845-365-2
Trace Evidence <i>Dead People DO Tell Tales</i>	978-0-7660-3664-2	978-1-59845-347-8

Titles in this series can be purchased through all major vendors or directly from:

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Teacher's Guide for Trace Evidence: Dead People DO Tell Tales

Footprints . . . fingerprints . . . fibers . . . hair. Wherever we go, we leave evidence, or pick up some, to show we were there. So for more than a hundred years, detectives and forensic scientists have been using trace evidence to catch criminals. In this book, readers learn about the techniques scientists use to collect and analyze evidence while enjoying some fascinating tales of how trace evidence solved crimes!

Before Reading

Remind students that good readers preview a book to find out what they might learn and what they already know about the subject. Allow time to read to the title, study the cover photo, and browse pages to note the chapter headings, photos, diagram, captions, sidebars, fact boxes, Chapter Notes, Glossary, and Index. Then have students complete a *Quick Write* to this prompt: *Imagine you witness a crime on your way to school. The "bad guys" don't see you, but you can see them and their getaway car. Write about what you would do.* After reading, students will share their writing efforts.

During Reading

Remind students that sometimes an author uses a cause-and-effect text structure. Review that a cause is **why** something happens; an effect is **what** happens. Explain that an author may use words like *because*, *the reason*, and *so* to signal a cause-and-effect relationship, but that sometimes readers must infer the relationship from details in the text. Add that a two-column Cause-and-Effect Chart helps readers see relationships between events and better understand a selection. Suggest that as students read each chapter, they put sticky notes where they find examples of cause-and-effect relationships. After completing that chapter, they can use the stickies to locate entries to add to their Cause-and-Effect charts.

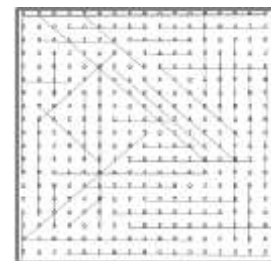
As they read, ask students to look for the following as well:

- A quotation from master detective Sherlock Holmes
- Why tree bark might hold clues to a crime
- Why impressions are important to forensic scientists
- A diagram of a hair follicle
- Why trace evidence have limitations

After Reading

Invite students to share their *Quick Writes*. Encourage good writers to flesh out their short stories into longer fictional mysteries, using information from the book about how crimes are solved. To prompt personal responses to the book, ask: *Which part of the book did you find most interesting? Why? What, if anything, surprised you? Do you think you would ever want to work in law enforcement or forensic science? Why or why not?*

Use the Reading/Language Arts, Math, Science, and Social Studies activities on the next page. Make copies of the Handout and Assessment pages that follow for students to do in class or as homework. Have them explain why each "False" question is incorrect by correcting it. **Answers: Handout** (right) **Assessment**—1. C, 2. A, 3. D, 4. B, 5. A, 6. B, 7. B, 8. C, 9. D, 10. A.



Curriculum Links

SAFETY WARNING:

Make sure students do not have allergies to any materials. Supervise activities using sharp or hot/cold objects. Always review directions and safety rules before students begin any project.

Reading/Language Arts Activity:

Have pairs of students skim pages 39-49 (the Wayne Williams trial), then write a script for the closing arguments in the trial, one student as the prosecutor and the other as the defense attorney. Stress that actors can include backstory details to convince a jury of the innocence or guilt of the defendant. Once the script is ready, let the students present their summation to the class, who will render the verdict. Explain that the class is not bound by the real, original verdict; class members should vote according to how well they think the state or defense presented its case. If possible, videotape the proceedings.

Math Activity:

Discuss the popularity of first-run and rerun TV shows that focus on forensics, such as *CSI*, *NCIS*, and *Body of Proof*. Survey students to find out (1) how many watch these shows, and (2) if they do, which is their favorite. Tally the votes to see which show is most popular with students. Then ask each student to survey 10 family members or friends to gather the same data. As a class, tally the data of all forensic-show viewers and favorite shows, then have students create bar, line, or area graphs to display the results.

Science Activities:

1. Help students understand why eyewitness testimony is not always accurate. Ask them, one at a time, to study the room and the position of all the objects in it for 30 seconds. Then have one student leave the room and, while he or she is gone, ask volunteers to move some objects in the room. Also, have a few students change seats. Have the student return and identify what, if anything, has changed. Repeat the activity until every student has a turn.
2. Gather plastic bags filled with clean trash (no discarded food, milk containers washed, etc.). Ask adult friends to help you get a variety like baby food jars, soap wrappers, men's deodorant, lipstick, plastic spoons, frozen food packaging, newspaper, movie/theater ticket stub, dated receipt, broken toy, hair dye box, and power bar wrappers. Have students work in small groups. Give each a bag, plastic gloves, and newspaper. Tell them to take objects from the bag one at a time, put them on the newspaper, and make a descriptive list, such as: broken plastic spoon, parking receipt, movie ticket stub, baby powder can, etc. Finally, ask groups these questions: *How many people do you think live where the trash was collected? How does trash give clues to ages or gender? Did they have a pet? What gives a clue about the exact time something was used? How could that be used for an alibi?*

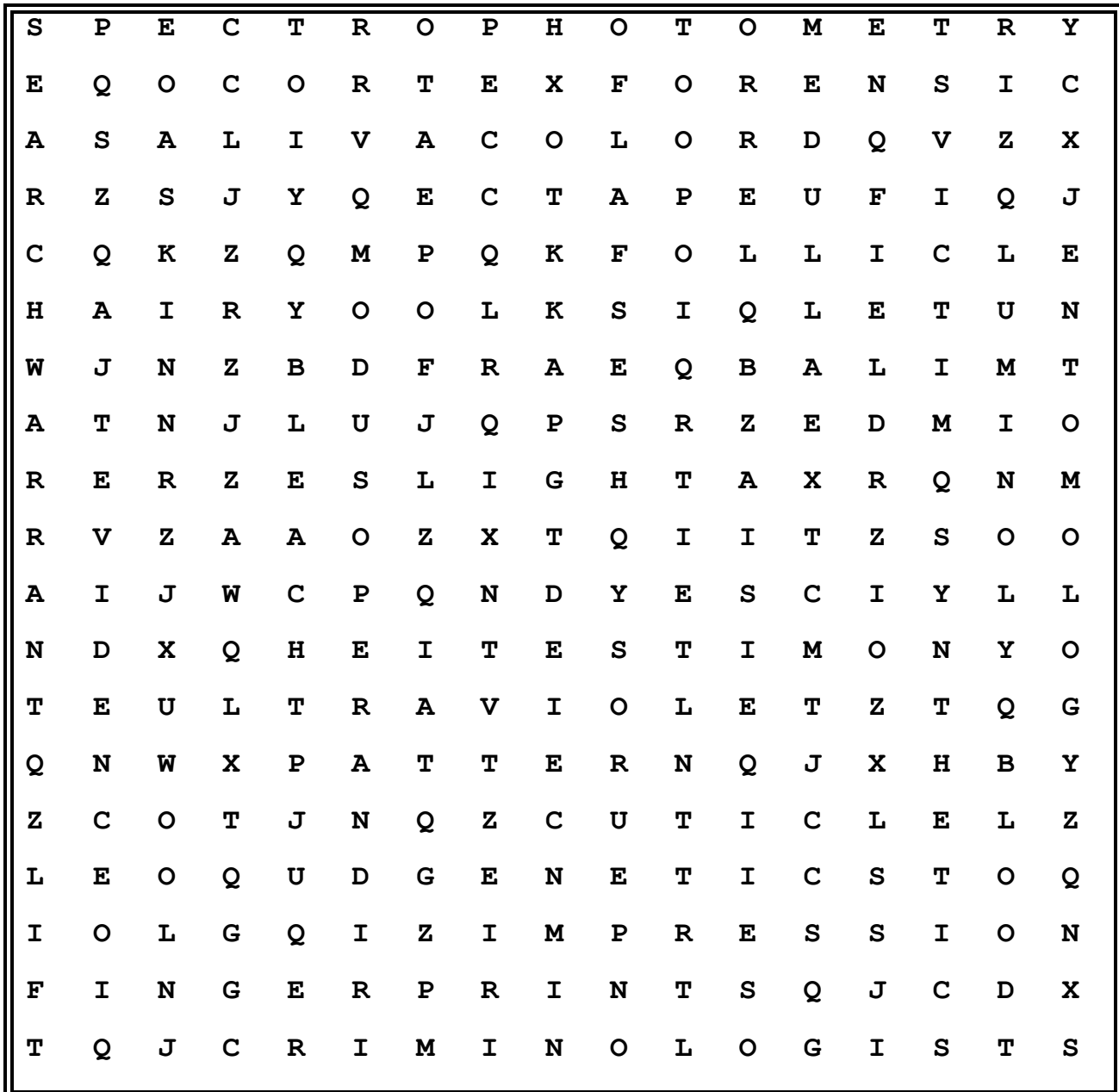
Social Studies Activity:

Remind students that the U.S. Constitution guarantees citizens' rights. Add that with rights come responsibilities. The Constitution did not spell out the responsibilities, but they are inferred. For example, the Sixth and Seventh Amendments guarantee a citizen's right to a speedy trial by jury. This infers that citizens have a responsibility to serve on a jury if called. Have students work in pairs or small groups to research at www.uscourts.gov/FederalCourts/JuryService.aspx how Federal juries are chosen and what they do, and at your state Website, the same for local juries, if qualifications/duties are different. Invite pairs/groups to share their results as a poster, written report, or PowerPoint™ presentation.

Handout

Find-a-Word

Find these terms from the book across, down, or diagonally in the puzzle below: BLEACH, BLOOD, COLOR, CORTEX, CRIMINOLOGISTS, CUTICLE, DYES, ENTOMOLOGY, ENZYME, EVIDENCE, FIBER, FIELD, FINGERPRINTS, FOLLICLE, FOOTPRINT, FORENSIC, GENETICS, GUN, HAIR, IMPRESSION, KERATIN, LIFT, LIGHT, LUMINOL, MEDULLA, MODUS OPERANDI, PATTERN, PLASTIC, POLYMORPHISM, SALIVA, SEARCH WARRANT, SKIN, SPECTROPHOTOMETRY, SYNTHETIC, TAPE, TESTIMONY, TRACE, TRACKS, ULTRAVIOLET, VICTIM, WOOL. On the back of this paper, explain how each word relates to trace evidence.



Assessment

Circle the letter that best completes the statement or answers the question.

1. Edmond Locard's theory was _____.
 - A. "every man for himself"
 - B. "everybody has a heart"
 - C. "every contact leaves a trace"
 - D. "everybody makes mistakes"
2. The average human being has about 5 million hairs.
 - A. True
 - B. False
3. Which was the **MOST** important clue that led Detective Vidocq to catch the men who stabbed Fontaine?
 - A. buttons
 - B. footprints
 - C. blood-soaked fibers
 - D. bits of paper with writing
4. Rope, string, and other things made of long fibers twisted together are _____.
 - A. strides
 - B. cordage
 - C. treads
 - D. leads
5. Which is the method of identifying substances by testing how they react to light?
 - A. spectrophotometry
 - B. entomology
 - C. anthropology
 - D. polymorphotry
6. Keratin is _____.
 - A. a soft jelly
 - B. a tough kind of protein
 - C. a sweet syrup
 - D. a part of the medulla
7. Evidence that is circumstantial directly proves a fact.
 - A. True
 - B. False
8. The book implies that which of the following is true about trace evidence?
 - A. It's just as strong as direct evidence.
 - B. It's stronger than direct evidence.
 - C. It's weaker than direct evidence.
 - D. None of the above.
9. At a criminal trial, _____.
 - A. the defense attorney must prove his or client is innocent
 - B. the prosecutor must testify
 - C. the defense attorney must make his or client testify
 - D. the prosecutor must prove a person guilty beyond reasonable doubt
10. Fiber evidence is not an exact science.
 - A. True
 - B. False