

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: X

Reproducible for Educational Use Only

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Where to Find More Information about Titles in this Series:

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<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
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Teacher's Guide for *Cybercrime: Data Trails DO Tell Tales*

It's the age of computer crime—hackers, credit-card scams, identity theft. But even without a “smoking gun,” forensic detectives can track down criminals who use computers as their weapon of choice. In this book, readers discover some techniques that real detectives use, like capturing “deleted” evidence, to help them solve real-life, computer-based 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 for read to the title, study the cover photo, and browse pages to note the chapter headings, photograph, captions, sidebars, chart, Chapter Notes, Glossary, and Index. Then have students complete a *Quick Write* to this prompt: *Imagine you go to the ATM to withdraw money from your savings account for an important purchase and discover that your money is gone . . . someone hacked into your account and stole your money. Write about how you would react.* After reading, students will share their writing efforts.

During Reading

Review with students that in a sequence text structure, an author describes events in the order in which they happen. Sometimes an author uses dates and words or phrases like *already*, *soon*, *by the time*, *after*, or *then* to signal sequence, but other times readers must infer the sequence from details in the text. Have students use stickies as they read to note the sequence of events, numbering the stickies in time order. After students complete each chapter, they can use the stickies to help them write a brief summary.

Ask students to look for the following as well:

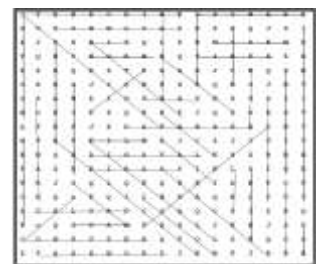
- What Shadowcrew was
- What a sniffer is
- Which famous person once made free phone calls
- Positive and negative aspects of computers
- How a floppy disk foiled a killer
- Tips about online safety
- A chart about careers

After Reading

Invite students to share their *Quick Writes*. Encourage good writers to flesh out their short stories into longer tales of cybercrime. To prompt personal responses to the book, ask: *What was the most interesting fact you learned from this book? Do you know anyone who has been a victim of cybercrime? If so, what happened, and how was the crime solved?*

Review the Glossary terms, then ask students to write a short review of the book, complete with an illustration, using at least five vocabulary terms. Let students share and compare reviews.

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. **Answers: Handout** (right) **Assessment**—1. C, 2. B, 3. D, 4. C, 5. B, 6. A, 7. D, 8. B, 9. D, 10. A.



Curriculum Links

SAFETY WARNING:

Before doing any activity, make sure students do not have allergies to any materials. Supervise activities requiring the use of sharp or hot/cold objects. Always review directions and safety rules with students before they begin any project.

Reading/Language Arts Activity:

Remind students that a *portmanteau* is a blend of two or more words. On the board, write two examples, *smog* (smoke + fog) and *guesstimate* (guess + estimate). Then challenge students to breakdown these common portmanteaux, researching if necessary: *docudrama* (documentary + drama), *edutainment* (education + entertainment), *ginormous* (gigantic + enormous), *brunch* (breakfast + lunch), *camcorder* (camera + recorder), *emoticon* (emotion + icon), *netiquette* (Internet + etiquette), *hazmat* (hazardous + material), and *sitcom* (situation + comedy).

Math Activity:

Revisit the fact on page 35 that each infected computer infects 50 others, which in turn infect 50 more. Explain that this is **exponential growth**: the rate of growth for a mathematical function is relative to its current value. Ask: *Which would be the best way to earn money for 20 days: start with \$1 and get another \$1 each day, or start with 1¢ and **double** it each day?* Have students make charts to show that exponential growth is best. (A few days' amounts are shown below.)

Week	1	2	3	6	12	15	18	19	20
Penny	\$0.01	\$0.02	\$0.04	\$0.32	\$20.48	\$163.84	\$1,310.72	\$2,621.44	\$5,242.88
Dollar	\$1	\$2	\$3	\$6	\$12	\$15	\$18	\$19	\$20

Science Activities:

1. Review that technology is how humans adapt nature to meet their needs, and that the computer is a tool—something that makes work easier. Brainstorm other tools, such as the plow, printing press, broom, X-ray machine, airplane, refrigerator, microwave, and car. Ask: *Which technology do you think has changed human life the most? Do you think other people agree?* Have students survey families and friends, recording each person's choice for most-life-changing technology. Tally the votes and analyze the results.
2. Explain that technology can never be either good or bad; it's just ideas and inventions. Human use, however, sometimes brings unexpected, negative effects, like cybercrime. Remind students that when the Wright Brothers invented the airplane to get places faster, they couldn't foresee that someday terrorists would use planes as weapons to blow up buildings. Have partners research both positive and negative aspects of one kind of technology and present their findings on a poster. Remind pairs to write brief captions to put any photo or drawing in context and, if downloaded, cite its source. Discuss the posters: *Do you think the benefits of this technology outweigh its risks? Why or why not?*

Social Studies Activity:

Explain that the first U.S. copyright law was passed in 1790, but that other countries had such laws before that. Have students research copyright history, from the introduction of the printing press in 15th-century England, at www.arl.org/pp/ppcopyright/copyresources/copytimeline.shtml. Invite them to share their results as a written report, docudrama, or PowerPoint™ presentation.

Handout

Find-a-Word

Find these terms from the book across, down, or diagonally in the puzzle below: **BIT, BOTNET, CHAT ROOM, COMPUTER, COPYRIGHT, CRACKER, CURSOR, CYBERCRIME, DATABASE, DIGITAL, DOWNLOAD, ENCRYPTION, FILE, FIREWALL, DISK, FORENSICS, FORUM, HACK, IDENTITY THEFT, LAWS, LOG ON, MALWARE, MODEM, MOUSE, NETWORK, ONLINE, PASSWORD, PHISHING, PHREAKER, PIRACY, RAIL, REPLICATE, SCAM, SECURITY, SERVER, SNIFFER, SOFTWARE, SPAM, SPYWARE, TEXT, UPLOAD, USB, VIRUS, WAREZ, WORM.** On the back of this paper, explain how each word relates to computers and cybercrime.

C	Y	B	E	R	C	R	I	M	E	S	P	Y	W	A	R	E
H	O	D	O	W	N	L	O	A	D	E	Z	F	Q	J	Z	I
A	J	P	X	B	I	T	Q	L	Z	R	M	O	D	E	M	D
T	Q	H	Y	W	O	R	M	W	Q	V	I	R	U	S	Z	E
R	Z	R	Q	R	Z	T	K	A	A	E	J	U	M	Q	P	N
O	X	E	S	J	I	S	N	R	Z	R	Q	M	O	J	H	T
O	S	A	N	Z	I	G	T	E	X	T	E	Z	U	S	I	I
M	O	K	I	D	Z	Q	H	H	T	J	Q	Z	S	E	S	T
Q	F	E	F	J	X	D	A	T	A	B	A	S	E	C	H	Y
N	T	R	F	F	I	L	E	R	J	C	Z	J	I	U	I	T
E	W	Q	E	D	I	G	A	T	A	L	K	S	Z	R	N	H
T	A	Z	R	P	I	R	A	C	Y	I	N	L	O	I	G	E
W	R	J	S	Q	L	Q	E	Q	R	E	I	A	N	T	C	F
O	E	Q	S	P	Q	I	L	W	R	A	Q	W	L	Y	U	T
R	U	P	L	O	A	D	C	O	A	Q	C	S	I	Z	R	Q
K	O	Q	S	C	A	M	F	A	G	L	J	K	N	J	S	U
C	O	M	P	U	T	E	R	Q	T	O	L	Z	E	Q	O	S
Z	P	A	S	S	W	O	R	D	J	E	N	F	J	R	R	B

Assessment

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

1. Hackers who mess around with other people's computer systems are _____.
 - A. encoders
 - B. zombies
 - C. black hats
 - D. white hats
2. Operation Firewall is a software program used to scam credit card companies.
 - A. True
 - B. False
3. The first computers were _____.
 - A. called mainframes
 - B. very expensive
 - C. owned and operated by the government or large corporations
 - D. all of the above
4. A computer virus called Melissa _____.
 - A. stole money from unsuspecting people's bank accounts
 - B. destroyed the hardware in many computer systems
 - C. spread so fast it swamped computer networks
 - D. threatened our national security
5. Which is **NOT** a kind of malware?
 - A. worms
 - B. froggie
 - C. viruses
 - D. Trojan horses
6. A "cracker" is a hacker who breaks into computers.
 - A. True
 - B. False
7. What is a *phreaker*?
 - A. someone who tries to get personal information through an e-mail
 - B. a discussion group on the Internet
 - C. the conversion of data into a code
 - D. someone who hacks into phone systems
8. Which is **NOT** a qualification for becoming a computer forensic investigator?
 - A. solid problem-solving skills
 - B. compassion for people who hack into computer networks
 - C. a degree in computer science or information technology
 - D. ability to explain findings clearly as an expert witness in court
9. It can be inferred from the book that _____.
 - A. it's legal to download less than 10 songs from a file-sharing network
 - B. investigators don't need a warrant to search your home computer
 - C. hackers never get jail time
 - D. none of the above
10. A single floppy disk helped to catch a serial killer.
 - A. True
 - B. False