Justice and Crime

Statue of Justice, Brussels, Belgium

1. According to the laws in the United States, "Justice is blind." What does this sentence mean?

2. Movies, TV shows, and books about crimes and criminals are very popular. Why do you think people are interested in these types of stories?

3. People often say that the punishment should fit the crime. What is the proper punishment for robbing a bank, for stealing a car, or for murder?

A forensic scientist dusting a window for evidence

Prereading

1. Work in a small group. What types of technology can help solve crimes? Make a list in the chart below. When you are finished, share your list with the class.

Type of Technology	How can this help solve a crime?

2. Who are the different people that solve crimes? How are their jobs different from each other? How do they try to solve crimes?

Reading

🎧 **Read the passage carefully. Then complete the exercises that follow.**

Solving Crimes with Modern Technology

1   Solving crimes is one of the most important jobs of law enforcement. Improvements in
2 crime technology help investigators identify suspects and solve crimes faster and more
3 efficiently. Detectives even use this technology today to solve crimes from a long time ago.
4   A well-known example of new technology is DNA testing. Previously, when police
5 found body fluids such as blood, sweat, and saliva at a crime scene, they collected
6 it as evidence. However, this evidence could not be analyzed at that time. Even so,
7 crime experts stored it in a freezer. Today, modern DNA testing helps experts analyze
8 this type of evidence to solve recent crimes. They are reinvestigating "cold cases," too.
9 Cold cases are unsolved crimes from the past. Now criminologists have the modern
10 technology they require to analyze frozen evidence. In many cases, they identify
11 suspects with the information they get from it.
12   The murder of ten-year-old Anna Palmer is an example of a cold case. In 1998,
13 someone attacked and killed Anna outside her house in Salt Lake City, Utah. There
14 were no witnesses to the murder and very little evidence. Then in 2009, this cold case
15 was reopened. Experts examined dirt from under Anna's fingernails and found DNA
16 evidence. This DNA matched the DNA of Matthew Brock. In 2011, Brock pled guilty
17 to Anna's murder and is now in prison for life.
18   Another example of modern technology involves new kinds of fingerprint testing.
19 In the past, analysts could only examine fingerprint patterns and check them with the
20 ones they had on file. The fingerprints of convicted criminals are kept permanently
21 on file in police records. People whose fingerprints are not on file cannot be identified
22 in this way. Today, however, fingerprint testing provides additional information,
23 such as the age and sex of its owner. The fingerprints also reveal if the person takes
24 medication. Investigators can use this new technology to reanalyze fingerprints from
25 cold cases to help identify a suspect and even solve the crime.
26   In one case, the police in Tacoma, Washington, found the body of a 27-year-old
27 woman who had been murdered in her bedroom. There were no witnesses, and her
28 apartment had few clues. The only real evidence did not seem very helpful. The
29 victim's bed sheet had some of her blood on it and looked as if someone had wiped
30 his or her hands. At the time of the murder, it was impossible to identify a fingerprint,
31 or even a palm print, from fabric. The detectives could not use the evidence, but they
32 saved it. They called Eric Berg, a forensic expert with the Tacoma police, for help.
33 A forensic expert is a person who helps solve crimes.

34   Eric Berg is not only a forensic expert, but a computer expert, too. He developed
35   computer software to enhance, or improve, crime scene photos. He used his software
36   and reexamined the fabric from the murder case. It worked! Eric Berg used his software
37   to make the palm print more apparent, or clear. Then he gave the new evidence to the
38   detectives. The detectives checked the palm print with clear palm prints they had on
39   file. They identified a man whose palm print matched a print on file and arrested him.
40   The court eventually convicted him of the crime, and he is now in jail. Today, many
41   other police departments have reopened old cases and are using Eric Berg's software.
42   Police are developing other kinds of new crime-solving technology that are
43   enabling them to reconsider evidence they could not use in the past. By helping the
44   police identify suspects, new technology may help solve cold cases as well as current
45   cases and put more criminals in prison.

A forensic scientist securing a fingerprint

Fact Finding

Read the passage again. Then read the following statements. Check (√) whether each statement is True or False. If a statement is false, rewrite it so that it is true. Then go back to the passage and find the line that supports your answer.

1. _____ True _____ False   Fingerprint testing always helps to solve crimes.

_____

2. _____ True _____ False   Modern fingerprint technology can identify body fluids.

_____

3. _____ True _____ False   When a woman was murdered in Tacoma, Washington, it was impossible to identify a fingerprint from fabric.

_____

4. _____ True _____ False   Eric Berg developed new software to improve photos.

_____

5. _____ True _____ False   Eric Berg's technology may help solve older crimes, too.

_____

6. _____ True _____ False   In the past, detectives never took samples of evidence at a crime scene.

_____

7. _____ True _____ False   Detectives can always solve cold cases with new technology.

_____

Reading Analysis

Read each question carefully. Circle the letter or the number of the correct answer, or write your answer in the space provided.

1. Read lines 1–3. **Law enforcement** means
   a. making sure people obey the law.
   b. writing laws to solve crimes.
   c. creating new technology.

2. Read lines 4–8.

   a. **Previously** means

      1. unfortunately.

      2. in the past.

      3. surprisingly.

   b. What are **blood**, **sweat**, and **saliva**?

     _____

   c. How do you know?

     _____

   d. A crime **scene** is

      1. the place where the crime occurred.

      2. the evidence of a crime.

      3. a collection of body fluids.

   e. In the past, what did the police sometimes do with evidence they could not identify?

      1. They threw it away.

      2. They didn't collect it.

      3. They saved it.

   f. **Analyze** means

      1. inspect carefully.

      2. collect.

      3. store.

3. Read line 9. **Cold cases** are

   a. crimes that were committed in the winter.

   b. old crimes that have not been solved.

   c. recent cases that are unsolvable.

4. Read lines 15–16. **This DNA matched the DNA of Matthew Brock.**

   a. This sentence means

      1. the DNA was Matthew Brock's.

      2. the DNA was the only evidence of the crime.

      3. the DNA was different from Matthew Brock's DNA.

   b. **Matched** means

      1. was different from.

      2. was the same as.

      3. was similar to.

5. Read lines 20–21. Whose prints are already on file?

   a. People who have never committed a crime in the past

   b. People who have been convicted of a crime in the past

   c. All the people who live in a city, state, or country

6. Read lines 27–30.

    a. Which word is a synonym for **clues**?

    _____

    b. A **victim** is

        1. the person who commits a crime.

        2. the person who is harmed by a crime.

7. Read lines 30–33.

    a. What is a type of **fabric**?

        1. A bed sheet

        2. A fingerprint

        3. Blood

    b. What was the only evidence the Tacoma police had?

    _____

    c. An **expert** is a person who

        1. is very skilled at working with evidence.

        2. is very skilled at working with computers.

        3. is very skilled at working in a special field.

    d. What is a **forensic expert**?

    _____

8. Read lines 34–37.

    a. **Software** refers to

        1. computers.

        2. computer programs.

        3. photos.

    b. **Enhance** means _____ .

    c. How do you know?

    _____

    d. A synonym for **apparent** is

        1. new.

        2. clear.

        3. evidence.

9. Read lines 42–43.

    a. **Enabling** means

        1. allowing.

        2. making.

        3. telling.

b. **Reconsider** means
  1. solve quickly.
  2. think over again.
  3. get rid of.

10. What is the main idea of the passage?
  a. New technology always solves every crime, even old ones.
  b. New technology helps solve many crimes, even old ones.
  c. New technology is only useful in solving murders.

Vocabulary Skills

PART 1

> ### Recognizing Word Forms
> In English, there are several ways that verbs change to nouns. Some verbs become nouns by adding the suffix –*ment*, for example, *arrange (v.)*, *arrangement (n.)*.

Complete each sentence with the correct word form on the left. Use the correct form of the verb. The nouns may be singular or plural.

improve *(v.)*

improvement *(n.)*

1. Criminologists have made many _____ in the ways they now solve crimes. New technology _____ the ability of the police to catch criminals.

enhance *(v.)*

enhancement *(n.)*

2. Eric Berg's software _____ crime scene photos. Criminologists use these _____ to identify evidence.

enforce *(v.)*

enforcement *(n.)*

3. One of a police officer's jobs is law _____. A police officer not only _____ the law, but also tries to help prevent crimes from happening.

develop *(v.)*

development *(n.)*

4. Eric Berg _____ computer software to help solve crimes. The _____ of new software programs is helpful to forensic experts.

require *(v.)*

requirement *(n.)*

5. Forensic experts sometimes _____ modern technology to identify suspects in a crime. However, this _____ is not always necessary when there are several witnesses to the crime.

The Prefix *re-*

In English, the prefix *re-* means *again*. It can be added to many words, especially verbs, for example, *rewrite* means *write again* when the prefix *re-* is added to *write*.

Read the following sentences. Complete each sentence with the correct word from the box. Use each word only once.

reanalyze	reexamine	reopen
reconsider	reinvestigate	

1. Unsolved murder cases are never really closed. The police will ＿＿＿＿＿＿ a case

   and try to find the murderer if new evidence becomes available.

2. The police have started to ＿＿＿＿＿＿ a 20-year-old murder case. They think they

   can solve it now.

3. Improved fingerprint testing enables experts to ＿＿＿＿＿＿ fingerprints for more

   information, such as the age and sex of the owner.

4. Investigators are going to ＿＿＿＿＿＿ opening several old unsolved cases. However,

   they are not sure they have enough evidence.

5. In the past, investigators could get only a little information from blood, such as blood

   type. Now they can ＿＿＿＿＿＿ blood for much more information that will help

   them identify a crime suspect.

Vocabulary in Context

Read the following sentences. Complete each sentence with the correct word or phrase from the box. Use each word or phrase only once.

arrest *(v.)*	criminologists *(n.)*	pattern *(n.)*
clues *(n.)*	enforce *(v.)*	reopen *(v.)*
convict *(v.)*	evidence *(n.)*	scene *(n.)*

1. Police officers, detectives, and many other people _____ the law in a variety of ways.

2. Much _____ is required in order to identify a suspect and solve a crime.

3. Today, investigators frequently _____ cold cases because they can reexamine stored evidence for new information.

4. _____, such as hair and skin, provide very good evidence for identifying crime suspects.

5. Sometimes police can match the _____ of a car tire from a crime scene with a design from the tire manufacturer.

6. Only police investigators are permitted at the _____ of a crime.

7. Courts cannot _____ a person without sufficient evidence to prove the person is guilty.

8. _____ are very skilled at solving crimes.

9. The police can only _____ someone when they have enough evidence to suspect that person of having committed a crime.
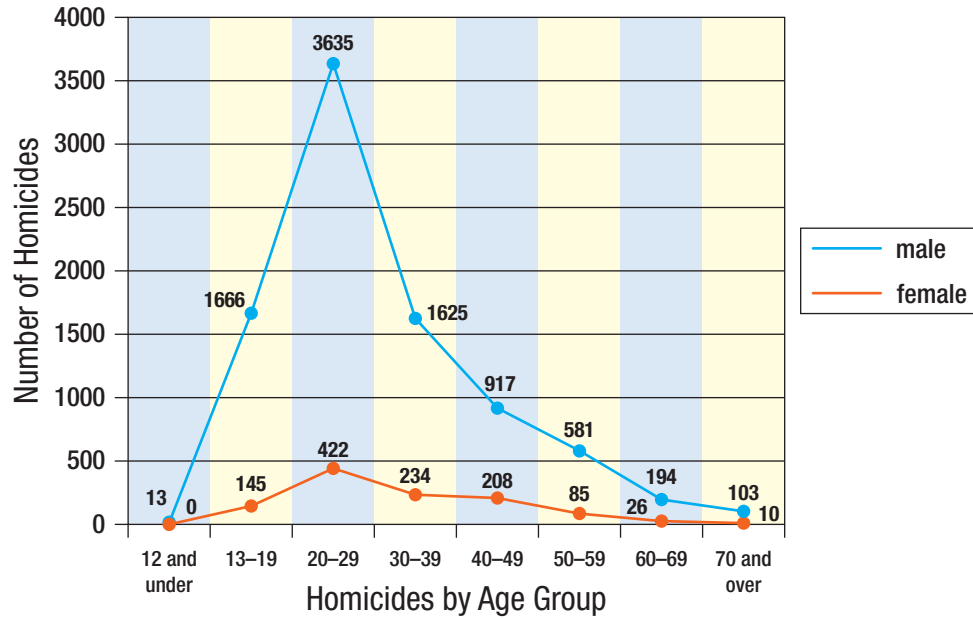
Reading Skill

Understanding Line Graphs
Line graphs often contain important information. It's important to understand them. Line graphs compare numbers or amounts, and give you information about the reading.

Read the line graphs. Then answer the questions.

## Homicide Offenders by Age and Gender in the United States in One Year

Source: http://www.fbi.gov

1. Who is an offender?
   a. The victim
   b. The killer

2. What gender and age group committed the most murders in this one-year period?
   a. Males between 13 and 19
   b. Females between 13 and 19
   c. Males between 20 and 29
   d. Females between 20 and 29

3. What gender and age group committed the fewest murders in this one-year period?
   a. Males under 12
   b. Females under 12
   c. Males over 70
   d. Females over 70

4. What can we conclude from this graph? Check (√) all that apply.
   _____ a. As people get older, they are more likely to commit homicide.
   _____ b. At any age, more males than females commit homicide.
   _____ c. The very young and those over 70 are the least likely to commit homicide.
   _____ d. Females and males are equally likely to commit homicide.
   _____ e. Males between 20 and 29 years of age commit more murders than females of all ages combined.
   _____ f. Even children commit murder.

Homicide Victims by Age and Gender
in the United States in One Year

Source: https://www.census.gov/compendia/statab/2012/tables/12s0311.pdf
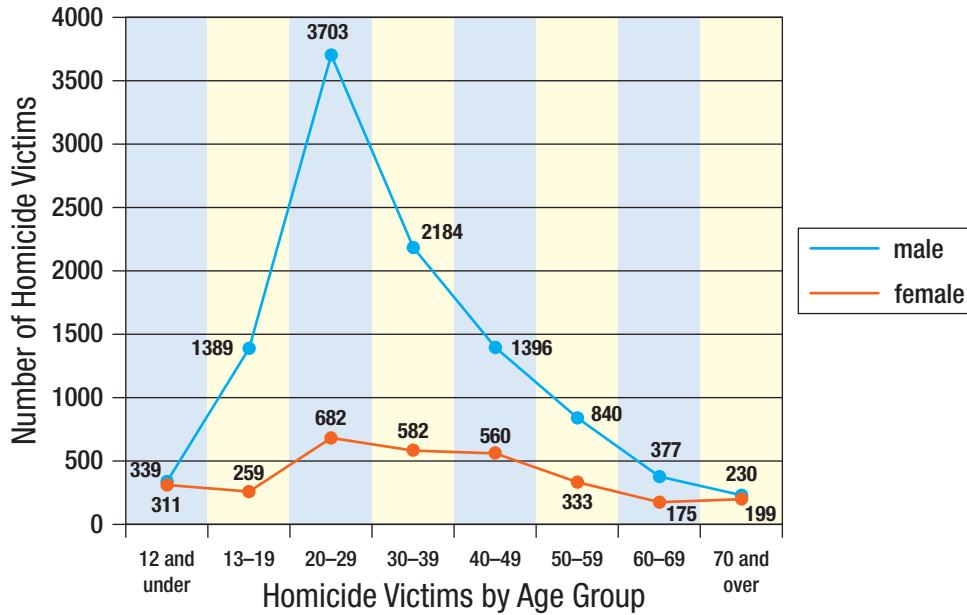
1. Who is a homicide victim?

   a. The person who is killed

   b. The killer

2. Who is least likely to be a victim of a murder?

   a. A male aged 70 or older

   b. A female under 12 years of age

   c. A female between 60 and 69 years old

3. What can we conclude from this graph? Check (√) all that apply.

   _____ a. Children under 12 are the least likely to be murdered.

   _____ b. Older people are the least likely to be murdered.

   _____ c. More males between 20 and 29 years old are murdered than any other group.

   _____ d. The very young and those over 70 are the least likely to be murdered.

   _____ e. At any age, more females than males are murdered.

   _____ f. More males between 20 and 29 years of age are murdered than all females of every age combined.

Information Recall

Read the passage again, and review the information in the line graphs. Then answer the questions.

1. How is fingerprint testing today more helpful than it was in the past?

_____

_____

2. How are investigators able to solve cold cases that were unsolvable in the past?

_____

_____

3. Who is most likely to be both a homicide offender and a homicide victim?

_____

_____

Writing a Summary

A summary is a short paragraph that provides the most important information from a reading. It usually does not include details, just the main ideas. When you write a summary, it is important to use your own words, and not copy directly from the reading.

Write a brief summary of the passage. The summary should not be more than four sentences. Use your own words.

_____

_____

_____

_____

Topics for Discussion and Writing

1. In the United States, the fingerprints of convicted criminals are kept on file permanently. Do you agree with this policy? Or do you think the fingerprints should not be on file after the criminal comes out of jail? Why? Explain your opinion.

2. Criminal investigators try to collect as much evidence as they can in order to identify the person who committed a crime. How much evidence does a jury need in order to convict a person of a crime?

3. Many people's fingerprints are not on file. As a result, fingerprints from a crime scene may not help criminal investigators find the criminal. Should the law require all people to put their fingerprints on file even if they have never committed a crime? Explain your reasons for your answer.

4. Look at the DNA samples below.
   a. Which suspect's DNA is the best match for the DNA sample found at a crime scene?
   b. Does this DNA match prove that this suspect committed the crime? Why or why not?

DNA Samples From:

| Crime Scene | Suspect #1 | Suspect #2 | Suspect #3 |
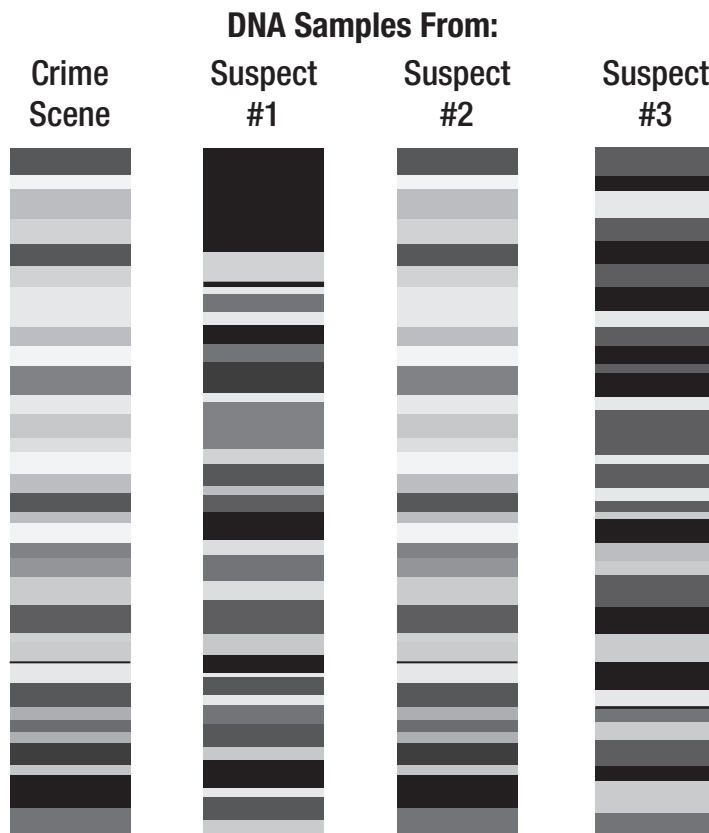
Source: http://evolution.berkeley.edu/evolibrary/news/060301_crime

5. Write in your journal. Chapter 7 discusses some new kinds of technology to help solve crimes. Which new technology do you think is the most important one? Why? What types of crimes do you think it can help solve?

Critical Thinking

1. Each person's fingerprints are unique and do not change over the person's lifetime. Scientists studied fingerprint patterns and developed a system for classifying them by type in order to make identification more accurate. Examine the sample fingerprints below.

Figure 1: Arch

Figure 2: Left loop

Figure 3: Right loop

Figure 4: Tent

Figure 5: Whorl

**Source:** National Institute of Standards and Technology

On a separate sheet of paper, using an ink pad, make your own fingerprint and compare it to the samples. Which pattern does your fingerprint have? How is it similar to that pattern? What are the differences that make it clear they are not the same fingerprint? When you have finished, be sure to destroy the paper with your fingerprint on it.

2. Go online to a search engine such as Google to find a website with sample fingerprints and fingerprint-matching games. Use these key words: "classifying fingerprints" or "fingerprint samples and how to classify them." Examine the sample prints. Then do a fingerprint-matching game. See if you can identify the print taken from a crime scene.

3. Eric Berg used his own time and money to improve crime scene photos. Why do you think he worked so hard at this? What might be some reasons? Compare your answers with those of your classmates.

Crossword Puzzle

Review the words in the box below. Then read the clues on the next page. Write the words in the correct spaces in the puzzle.

analyze	enforcement	forensic	reconsider
apparent	enhance	match	scene
blood	experts	pattern	technology
clues	fabric	previously	unsolved
enable			
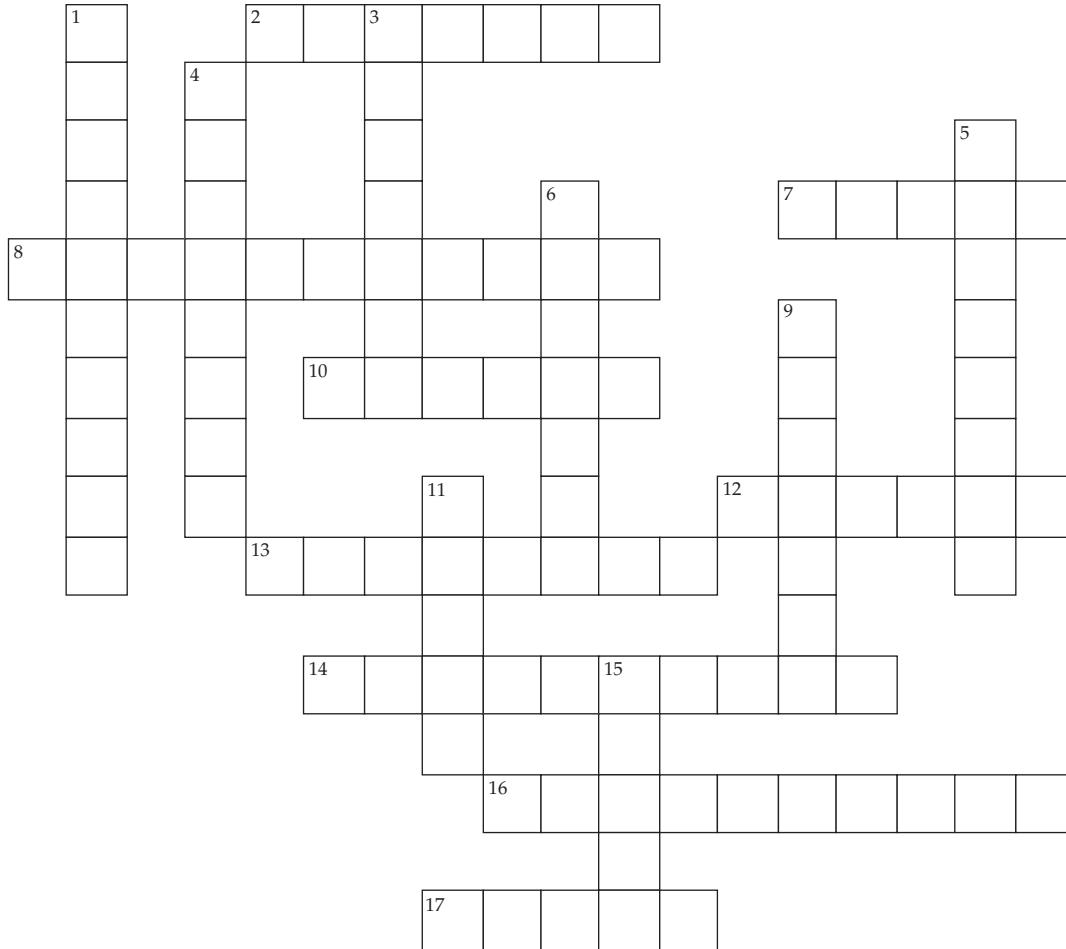
Crossword Puzzle Clues

ACROSS CLUES

2. Many _____ help the police solve crimes. Some work with computers; others work with photography, for example.

7. _____ is a type of body fluid.

8. The job of the police is law _____. They try to make sure that laws are obeyed.

10. New ways of crime solving _____ investigators to solve many crimes.

12. Sometimes a piece of _____, such as material from a coat, becomes important evidence in a crime.

13. The man's guilt was _____, or clear, from the evidence, so the man pled guilty to the murder.

14. Investigators often _____ old murder cases because they can use evidence that was not useful in the past.

16. _____, police could only look at the design of fingerprints. Today, they can get much more information from fingerprints.

17. _____ are evidence that police find and collect at the scene of a crime.

DOWN CLUES

1. Modern _____, such as powerful computers and improved photography, help police identify suspects.

3. The _____ of every person's fingerprints is unique. No one has exactly the same fingerprints.

4. There are many _____ crimes that investigators hope to find answers to one day.

5. Eric Berg often provides useful _____ evidence to police after he studies it.

6. Experts carefully _____ fingerprints, body fluids, material, and other evidence from every crime.

9. Some computer programs can _____ an image so it can be used as evidence in a crime case.

11. Every person's DNA is unique. When police find a _____ between a suspect and DNA from a crime scene, they are confident that the person may be guilty.

15. The _____ of a crime is the place where the crime took place.