

Unit 5 Assessment

Solving History's Mysteries

1 You would think that scientists have their eyes on the future, not the past. You would expect them to spend their time thinking about making tomorrow's life better than today's with new gadgets, faster forms of transportation, or better medical treatments. However, a lot of scientists spend their time thinking about yesterday. They use their scientific knowledge to help solve the mysteries of history.

2 Suppose some fabric is found under the floorboards of an attic. Even if the fabric is just a torn piece, an historian might be able to figure out what it comes from and how old it is. A piece of the fabric could be studied under a polarizing light microscope to see the structure of the fibers. This can reveal whether the fiber is a natural one such as cotton, silk, or linen, or a synthetic fiber such as nylon or polyester. Synthetic fibers were not used until the beginning of the twentieth century. So, for example, a Civil War soldier's uniform with polyester in it is not genuine.

3 Of course, just because a piece of fabric is pure cotton or silk doesn't make it old. Natural fibers exist today and are widely used to make clothes. Another way experts can date a piece of fabric is to examine the dye used to color it. The ingredients in dyes have changed throughout history. A process called thin layer chromatography is one way for historians to figure out exactly what a dye is made of. For this process, samples of the fabric are soaked to take out dye. A tiny dab of the dissolved dye is put onto a specially treated sheet of glass, metal, or plastic. The fluid will form a pattern on the sheet. This pattern is matched with sample patterns made by known dyes. Thin layer chromatography can show the ingredients of the dye and whether it is natural or synthetic.

4 Science alone can't solve every mystery from the past. Historical knowledge also plays a part. Suppose a scientific test proves that a blue fabric from Europe has been dyed with plant pigment from the indigo plant. A textile historian will know that before the fifteenth century in Europe, the only source for blue dye was the woad plant. After sea routes to Asia were discovered, indigo became available in Europe. So if a textile fragment found in Europe is dyed with indigo, an expert will know that it is unlikely to date from before the late 1400s.

5 Even the dirt on a piece of fabric can supply clues. A microscope can analyze any grains of soil to see whether they match the soil types of the area where the fabric was found. There may even be tiny fragments of dried plant leaves or seeds clinging to the fabric, and these can be identified.

6 To many people, the past is an irresistible mystery, the tantalizing whisper of people long gone. Until someone invents an actual time machine, scientific knowledge sharpens our eyes to examine the clues that tell us about yesterday.

1. Why did the author include the following statement in paragraph 1?

They use their scientific knowledge to help solve the mysteries of history.

- (a) to summarize how scientists use new gadgets
- (b) to introduce the theme of using scientific technology to study artifacts from the past
- (c) to persuade the reader to do their own research on better medical treatments
- (d) to predict the materials that the scientists will use to study artifacts from the past

2. What is the meaning of the underlined phrase in the following sentence from paragraph 1?

You would think that scientists have their eyes on the future, not the past.

- (a) they are studying how eyeglasses will help people in the future
- (b) they are looking for ways to improve vision
- (c) they cannot study artifacts from the past
- (d) the focus of their studies will be based in the future

3. What is the technical meaning of the word "pigment" as used in paragraph 4?

Suppose a scientific test proves that a blue fabric from Europe has been dyed with plant pigment from the indigo plant.

- (a) the nucleus of a plant or animal cell
- (b) the cytoplasm of a plant or animal cell
- (c) a substance in a plant or animal cell that provides its shape
- (d) a substance in a plant or animal cell that provides its color

4. Which of the following can you infer from the following statement?

Until someone invents a time machine, scientific knowledge sharpens our eyes to examine the clues that tell us about yesterday.

- (a) The author believes a time machine will be invented soon.
- (b) The author believes science allows us to have a clearer view of the past.
- (c) The author has sharp eyes because of his knowledge of science.
- (d) The author wants others to become scientific explorers.

5. What is the relationship of the words "natural" and "synthetic" in the following sentence?

This can reveal whether the fiber is a natural one such as cotton, silk or linen, or a synthetic fiber such as nylon or polyester.

- (a) They are antonyms.
- (b) They are synonyms.
- (c) One is an informal word for the other.
- (d) One is a specific type of the other.

6. Which organizational pattern did the author use to describe how chromatography is used to date a piece of fabric?

- (a) cause and effect
- (b) process
- (c) order of importance
- (d) compare and contrast

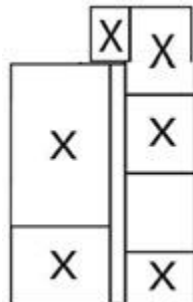
The Birthday Hunt

1 Kara and her friends Otis and Ruthie enjoyed reading adventure books. Now they were about to have a real-life adventure. Otis and Ruthie were twins, and today was their birthday. Their Aunt Cheryl had left a present for them, but they had to follow clues to find it. They had invited Kara to help them hunt.

2 The first clue had come in the mail, folded into the birthday card. It was a sheet of paper showing a bunch of connected rectangles of different sizes. There were no labels on the map, but almost every rectangle had a big X in it. Kara and Otis tried to think of things that had a rectangular shape somewhere on them, like the rugs and the refrigerator. Ruthie always liked to get going immediately. She started looking under the living room rug.

3 “Slow down, Ruthie!” said Otis. “Maybe these rectangles stand for rugs, but how do we know which room the right carpet is in?”

4 “That’s it!” said Kara. “These rectangles are rooms. This is a floor plan of your house. But does X mark the spot? We’ll have to look in every room!”



5 Ruthie said, “Maybe *X* shows things that are crossed out. The room without an *X* on it is probably where we should look.”

6 From its position on the floor plan, the unmarked room seemed to be Otis’s bedroom. Ruthie led the way into the room. They thought they might have to look for quite a while, but they quickly found a slip of paper taped behind the window shade. Ruthie read aloud what was on it.

7 “It’s totally even and stands on the shelf. It can’t be divided except by itself.

8 They looked over at the well-filled bookshelf. Otis said, “What are we looking for? Something that can be divided by itself? Does that mean something sharp? Something that comes in several pieces.

9 The words of the riddle had a familiar sound to Kara. She shushed the others and thought. Then she said, “There *is* something that can be divided only by itself and 1.

10 “A prime number!” shouted Otis. “Look for a book with a number like 3, 5, 11, or 17 on it.” Ruthie ran to the bookshelf and was ready to grab handfuls of books when Kara yelled, “Stop!” When she had everyone’s attention, she said, “The first part of the riddle says that it’s totally even. How can something be an even number and a prime number? Even numbers are divided by 2.”

11 Ruthie jumped up and down. “There *is* an even number that’s a prime number. The number 2 can be divided only by 1 and by 2, *which is itself!*”

12 Otis lunged for the bookshelf and grabbed *The Two Hidden Planets*. Just inside the cover was an envelope with two gift certificates.

13 “What a great present,” said Otis. “I’m getting more books with mine.”

14 “This was like getting a present and a party all in one,” said Ruthie.

15 Yeah,” said Kara. “Thanks for inviting me to your birthday present!”

7. Which sentence from the passage supports the theme of "adventure"?

- (a) Ruthie always liked to get going immediately.
- (b) Otis and Ruthie were twins, and today was their birthday.
- (c) "A prime number!" shouted Otis.
- (d) "That's it!" said Kara.

8. Which sentence from the passage is part of the climax of the story?

- (a) "Slow down, Ruthie!"
- (b) "But does X mark the spot? We'll have to look in every room!"
- (c) "There is an even number that's a prime number."
- (d) "Thanks for inviting me to you birthday present."

9. Which of the senses was best integrated into the following description?

Emma clutched her blanket tightly. It was worn and old, but to Emma it was the most precious object in the world. She clutched the soft fabric and rubbed it on her cheek. She was comforted by the velvety texture and the way it made her skin tingle when she laid her head on it.

- a) Touch
- b) Smell
- c) Sight
- d) Hearing

10. Which of the senses was best integrated into the following description?

The fire alarm's shrill scream stopped the students in their tracks. A moment later, the sounds of shuffling feet and nervous whispering as the students made their way out of the school.

- a) Touch
- b) Smell
- c) Sight
- d) Hearing

11. Evaluate the author's use of sensory language as you read the following passage.

Lana's curly hair fell in tight, chestnut colored ringlets around her face. Her large brown eyes sparkled with excitement. "Is today the day, mommy?" she asked as she rolled out of bed.

I smiled and pulled her close to me. I could smell the sweet strawberry sent of her shampoo as I kissed her hair. The fruity fragrance reminded me of the sweetness of childhood and made me happy. "Today's the day! Are you sure you want to go on the fieldtrip?" I teased.

She exhaled loudly and rolled her eyes. The whoosh of air escaping from her lungs sounded like a car engine trying to start. "Mom!" she groaned. "You know I want to go to Benny's Bakery with my class. We get to make our own donut and everything! I can almost taste the sweet, gooey cream inside the flakey crust – oh and the rich, chocolatey frosting on the top; that's the best part! My mouth is watering just thinking about it!"

Which of the following is not strongly represented within the passage?

- a) Taste
- b) Smell
- c) Sound
- d) Touch

12. Which of the senses was best integrated into the following description?

The moment his feet touched the warm sand, Liam slipped off his sandals and let the warm sand squish between his toes. The ground was warm and the sand was almost too hot for his feet as he made his way toward the ocean. Once there, he stood letting the cool water tickle his feet and legs, before it retreated back to the icy depths of the sea.

- A. Touch
- B. Smell
- C. Sight
- D. Hearing

13. Apply your understanding of nonrestrictive elements as you choose which of the following statements is punctuated correctly.

- A. Prior to becoming President of the United States, Barack Obama graduated from Harvard Law School, one of the leading centers of legal education in the world.
- B. Prior to becoming President of the United States, Barack Obama graduated from Harvard Law School one of the leading centers of legal education in the world.
- C. Prior to becoming President of the United States, Barack Obama, graduated from Harvard Law School, one of the leading centers, of legal education in the world.

14. Apply your understanding of nonrestrictive elements as you choose which of the following statements is punctuated correctly.

- A. There are no lions or giraffes living in Madagascar, an island off the south-eastern coast of Africa.
- B. There are no lions or giraffes living in Madagascar, an island, off the south-eastern coast of Africa.
- C. There are no lions or giraffes living in Madagascar an island off the south-eastern coast of Africa.

15. Apply your understanding of nonrestrictive elements as you choose which of the following statements is punctuated correctly.

- A. Jennifer a talkative young girl from Mr. Smith's class bounded into the principal's office.
- B. Jennifer, a talkative young girl from Mr. Smith's class, bounded into the principal's office.
- C. Jennifer, a talkative young girl from Mr. Smith's class bounded into the principal's office.

16. Apply your understanding of nonrestrictive elements as you choose which of the following statements is punctuated correctly.
- A. After spending a year in Spain Sarah started a blog for people who are interested in Spanish culture.
 - B. After spending a year in Spain, Sarah started a blog for people who are interested in Spanish culture.
 - C. After spending a year in Spain, Sarah started a blog for people, who are interested in Spanish culture.
17. Apply your understanding of nonrestrictive elements as you choose which of the following statements is punctuated correctly.
- A. My sixth grade teacher, whose love of punctuation knew no bounds, would force us to spend hours each day analyzing sentences.
 - B. My sixth grade teacher whose love of punctuation knew no bounds, would force us to spend hours each day analyzing sentences.
 - C. My sixth grade teacher whose love of punctuation knew no bounds would force us to spend hours each day analyzing sentences.
18. Which of the following sentences is punctuated in such a way as to establish the parenthetical element as being of utmost importance?
- A. Jawan Cook usually the top student in the class got the lowest score in the school.
 - B. Jawan Cook, usually the top student in the class, got the lowest score in the school.
 - C. Jawan Cook - usually the top student in the class - got the lowest score in the school.
 - D. Jawan Cook (usually the top student in the class) got the lowest score in the school.

19. What is a parenthetical element?

- A. The portion of a text that must be included inside parenthesis
- B. Extra information added to a sentence that is not essential to the meaning of the sentence.
- C. Punctuation added to a sentence to improve flow.
- D. Phrases that include words or expressions with a meaning that is different from the literal meaning.

20. Determine if the pronoun in bold intensive or reflexive?

I was happy to hear that you fixed **yourself** a healthy breakfast.

- A. Intensive
- B. Reflexive

21. Determine if the pronoun in bold intensive or reflexive?

We were lucky enough to meet the President **himself** after the debate.

- A. Intensive
- B. Reflexive

22. Determine if the pronoun in bold intensive or reflexive?

After lunch, the teacher and I need to excuse **ourselves** briefly to welcome the new fifth graders.

- A. Intensive
- B. Reflexive

23. Determine if the pronoun in bold intensive or reflexive?

After all the work you did this year, you should all give yourselves a pat on the shoulder.

- A. Intensive
- B. Reflexive

24. Which of the following is a true statement?

- a) Intensive pronouns emphasize the noun or pronoun to which they refer.
- b) Intensive pronouns do not emphasize the noun or pronoun to which they refer.
- c) Reflexive pronouns do not refer back to the subject of a sentence.
- d) Reflexive pronouns are the same as intensive pronouns.

25. Which of the following is a true statement?

- a) Denotation refers to the figurative meaning of a word, phrase or statement.
- b) Denotation refers to the literal meaning of a word, phrase, or statement.
- c) Denotation refers to the feeling associated with a particular word.
- d) There is no difference between denotation and connotation.

26. Which word has a negative connotation?

- (a) young
- (b) immature

27. Which word has a negative connotation?

- (a) stingy
- (b) economical

28. Which word has a favorable connotation?

- (a) ignorant
- (b) naive

Assessment 5 Breakdown

	Answer	CCSS	DOK Level	Skill
1	D	RI.6.5	4	Analyze
2	D	RI.6.4, L.6.4	2	Interpret
3	D	RI.6.4, L.6.4a	2	Use Context
4	B	RI.6.6	2	Infer
5	A	L.6.5b	2	Determine Relationship
6	B	RI.6.5	3	Assess
7	A	RL.6.2, RL.6.5	2	Distinguish
8	C	RL.6.5	2	Distinguish
9	A	W.6.3d, L.6.5	3	Draw Conclusions (Sensory Lang.)
10	D	W.6.3d, L.6.5	3	Draw Conclusions (Sensory Lang.)
11	A	W.6.3d, L.6.5	3	Draw Conclusions (Sensory Lang.)
12	A	W.6.3d, L.6.5	3	Draw Conclusions (Sensory Lang.)
13	A	L.6.2a	3	Apply Understanding of Nonrestrictive Element
14	A	L.6.2a	3	Apply Understanding of Nonrestrictive Element
15	B	L.6.2a	3	Apply Understanding of Nonrestrictive Element
16	B	L.6.2a	3	Apply Understanding of Nonrestrictive Element
17	A	L.6.2a	3	Apply Understanding of Nonrestrictive Element
18	C	L.6.2a	4	Analyze Parenthetical Element
19	B	L.6.2a	1	Identify Parenthetical Element
20	B	L.6.1b	2	Classify Intensive Pronoun
21	A	L.6.1b	2	Classify Intensive Pronoun
22	B	L.6.1b	2	Classify Intensive Pronoun
23	B	L.6.1b	2	Classify Intensive Pronoun
24	A	L.6.1b	1	Identify Intensive Pronoun
25	B	L.6.5c	1	Define Denotation / Connotation
26	B	L.6.5c	2	Interpret Connotation
27	A	L.6.5c	2	Interpret Connotation
28	B	L.6.5c	2	Interpret Connotation

