

Name _____

Date _____

Before Band-Aids

When little children get hurt, the first thing they usually ask for is a Band-Aid to make their wounds feel better. But have you ever wondered what people used to cover wounds before Band-Aids were invented? Band-Aids have only been around since the 1920's, but people have been getting hurt for much longer than that. How people treated their wounds in the past may surprise you. In addition to cloth bandages, people often covered and cured their wounds with cobwebs.

Cobwebs are made by members of the spider family called *Theridiidae*. These spiders do not spin typical webs that look like concentric polygons. Unlike the mathematically magical webs of their cousins, these spiders spin a haphazard, sticky, crisscrossed net in which they trap their prey.



Most people associate cobwebs with an unkempt house, primarily because of the dust that accumulates on the adhesive strands of cobwebs. But though it might appear untidy, the presence of cobwebs does not suggest an unhealthy space. In fact, quite the opposite is true. Many types of cobwebs are laced with penicillin, fungi that contain antibiotic properties. Alexander Fleming, the discoverer of penicillin, came across the fungi when working with a colleague's cobweb collection.

When the cobwebs containing penicillin came into contact with some bacteria samples, the growth of the bacteria was halted, and the bacteria samples died. The discovery of penicillin for use as an antibiotic changed the face of modern medicine, as it helped treat many serious diseases. All along, that incredible cure was lurking in the rafters! It is no wonder that cobweb bandages were known for generations as a medical cure. Not only did the webbing help to coagulate the liquid oozing from the wound, but it also contained penicillin, a powerful fungal antibiotic that aided in the healing process. By using cobwebs to cover wounds, people with injuries were using antibiotics without even realizing it.

Cobwebs appear in the folktales of many cultures: cobwebs made of gold, cobwebs spun into gorgeous gowns, cobweb swings, Christmas trees draped in silver cobweb dresses. These days, cobwebs are used as eerie decorations in creepy Halloween scenes, or else they induce cranky frustration during spring-cleaning. Instead of being frustrated the next time you reach up to clean a dusty crevice, try to remember the medical treasure trove tangled in your broom.

1) Based on information in the passage, which of the following best describes the form of a web spun by a Theridiidae spider?

- A. a concentric polygon
- B. an oblong sphere
- C. an imprecise mesh
- D. an equilateral triangle

2) In paragraph 2 the author writes, "Unlike the mathematically magical webs of their cousins, these Spiders spin a haphazard, sticky, crisscrossed net in which they trap their prey." Which of the following literary devices is used in this quotation?

A. Anthropomorphism in which a human quality, emotion or ambition is attributed to a non-human object or being. This is often used in order to relate the object to the reader on a familiar level and also to increase the level of relativity between the humans and objects while lending character to the subject.

B. Anastrophe, in which the order of the noun and the adjective in the sentence is exchanged. In standard parlance and writing the adjective comes before the noun but when one is employing an anastrophe the noun is followed by the adjective. This reversed order creates a dramatic impact and lends weight to the description offered by the adjective.

C. Alliteration, characterized by the use of adjacent words that begin with the same sound or letter, creating a repetition of similar sounds in the sentence. This is used to add character to the writing and often adds an element of playfulness.

D. Asyndeton, characterized by the intentional omission of conjunctions in the sentence while maintaining the grammatical accuracy of the phrase. This helps in shortening the implied meaning of the entire phrase and presenting it in a succinct form. This compact version works to create an immediate impact whereby the reader is instantly attuned to what the writer is trying to convey.

3) As used in paragraph 3, which is the best synonym for **unkempt**?

- A. messy
- B. old
- C. creepy
- D. filthy

4) Which of the following phrases, if placed at the beginning of the final paragraph, would provide the best transition from paragraph 3 to the final paragraph?

- A. Finally, as many people know,
- B. Despite being associated with Halloween,
- C. In addition to serving a medicinal function,
- D. No matter how you feel about them,

5) According to the passage, Alexander Fleming

- A. collected cobwebs for a living
- B. was a famous doctor
- C. created Band-Aids
- D. discovered penicillin

6) According to the author, cobwebs appear in folktales as all of the following EXCEPT

- A. bandages
- B. gorgeous gowns
- C. Christmas tree decorations
- D. swing

7) The main purpose of this passage is to

- A. recount famous folktales about cobwebs and their many uses
- B. persuade the reader to use cobwebs instead of Band-Aids
- C. inform the reader about cobwebs and their former medicinal use
- D. relate an entertaining anecdote involving the history of cobwebs

8) Explain in your own words how cobwebs are actually a “medical treasure trove.”

Answers and Explanations

1) C

Core Standard: **Integration of Knowledge**

In paragraph 2, the author claims that *Theridiidae* “spiders do not spin typical webs that look like concentric polygons. Unlike the mathematically magical webs of their cousins, these spiders spin a haphazard, sticky, crisscrossed net in which they trap their prey.” From this information we can infer that the *Theridiidae* spiders do not create a web made with mathematical precision, but instead an imprecise net made out of random crisscrosses. This tells us that a *Theridiidae* spider’s web looks something like an imprecise mesh. Therefore **(C)** is correct.

The passage tells us that the webs of a *Theridiidae* spider are not “typical” and do not “look like concentric polygons,” so **(A)** is incorrect. Moreover, the author says that they are “unlike” the mathematically magical webs of their cousins. Since choices **(B)** and **(D)** describe mathematical forms, we know that they are also incorrect.

2) C

Core Standard: **Integration of Knowledge**

In this quotation, the author employs the repetition of similar sounds in the words “mathematically magical,” “spiders spin,” and “crisscrossed.” Therefore the alliteration is the literary device used in this quotation. Choice **(C)** is correct.

The passage does not provide information to support choices **(A)**, **(B)**, and **(D)**. Therefore they are incorrect.

3) A

Core Standard: **Craft and Structure**

Unkempt (*adjective*): having an untidy or disorderly appearance.

In paragraph 3, the author writes, “Most people associate cobwebs with an unkempt house, primarily because of the dust that accumulates on the adhesive strands of cobwebs.” From this we can infer that people associate cobwebs with an unkempt house, meaning one that shows the presence of dust. Then the author writes, “But though it might appear untidy, the presence of cobwebs does not suggest an unhealthy space.” This context tells us that a house that is *unkempt* appears untidy.

Another word for untidy is *messy*, so **(A)** is correct.

Although an *old* house might have cobwebs, dust and cobwebs can accumulate in a new house as well if it is not swept. This means that unkempt refers to untidiness, not to age. Therefore **(B)** is incorrect.

In the last paragraph, the author claims that “cobwebs are used as eerie decorations in creepy Halloween scenes,” but this statement is unrelated to the context of paragraph 3. Since the context surrounding the word “unkempt” makes it clear that the word refers to untidiness, *creepy* is not a good synonym. This means **(C)** is incorrect.

While unkempt does refer to untidiness, *filthy* is too strong a word to be a good synonym. Something that is untidy or messy is not necessarily extremely dirty. This makes **(D)** incorrect.

4) C

Core Standard: **Integration of Knowledge**

The first sentence of the last paragraph is: “Cobwebs appear in the folktales of many cultures: cobwebs made of gold, cobwebs spun into gorgeous gowns, cobweb swings, Christmas trees draped in silver cobweb dresses.” Paragraph 3, which comes just before this sentence, describes the medicinal function of cobwebs as a way to cover and cure wounds. Since the last paragraph discusses a new topic (cobwebs in folktales), we need a phrase to provide a transition from the previous topic to the new topic. The phrase “In addition to serving a medicinal function” recalls the ideas in paragraph 3 but at the same time lets us know a new topic is forthcoming. Therefore **(C)** is correct.

Although it is customary to begin the last paragraph of an essay with the word “finally,” the phrase “Finally, as most people know” does not help us transition from the topic of cobwebs’ medicinal function to the topic of folktales. Moreover, finally is often used as the last adverb in a list that might include words like “firstly,” “secondly,” and so on. Since this passage is not structured in this format, it makes less sense to close the passage with “finally.” This means **(A)** is not the best choice.

The last paragraph does discuss the association between cobwebs and Halloween, but this idea is not in contrast with the idea that cobwebs often appear in folktales, so “despite” does not make sense here. Also, the phrase “Despite being associated with Halloween” does not provide a transition from the topic of cobwebs’ medicinal function to the topic of folktales. This makes **(B)** incorrect.

The phrase “No matter how you feel about them” does not work as a transition to the last paragraph, because the topic of the previous paragraph is not how people feel about cobwebs, but how they were used for medicinal purposes. Therefore **(D)** is incorrect.

5) D

Core Standard: **Key Ideas and Details**

In paragraph 3, the author states, “Alexander Fleming, the discoverer of penicillin, came across the fungi when working with a colleague’s cobweb collection.” From this we can understand that Alexander Fleming discovered penicillin. Therefore **(D)** is correct.

The passage does not provide information to support choices **(A)**, **(B)**, and **(C)**. Therefore they are incorrect.

6) A

Core Standard: **Key Ideas and Details**

In the final paragraph, the author claims, "Cobwebs appear in the folktales of many cultures: cobwebs made of gold, cobwebs spun into gorgeous gowns, cobweb swings, Christmas trees draped in silver cobweb dresses." The author does not mention any folktales that describe cobwebs as bandages, so **(A)** is correct.

In the final paragraph the author writes, "Cobwebs appear in the folktales of many cultures: cobwebs made of gold, cobwebs spun into gorgeous gowns, cobweb swings, Christmas trees draped in silver cobweb dresses." The passage does mention folktales that describe cobwebs as a gown, a Christmas decoration, and a swing. Therefore **(B)**, **(C)**, and **(D)** are incorrect.

7) C

Core Standard: **Integration of Knowledge**

To identify the purpose of a passage, it is helpful to examine the content of each paragraph. In paragraph 1, the author introduces a surprising fact: before there were Band-Aids, people used cobwebs to cover their wounds. In paragraph 2 the author explains how cobwebs are created. In paragraph 3 the author describes how it was discovered that cobwebs contain penicillin, an antibiotic, and the various benefits of using cobwebs to cover wounds. In paragraph 4 the author concludes by asking us to remember that cobwebs are more than just a housekeeping nuisance. From this overview, we can understand that the main purpose of this passage is to inform the reader about cobwebs and their former medicinal use. Therefore **(C)** is correct.

The author briefly mentions folktales involving cobwebs in one sentence of the last paragraph, but he or she does not recount, or retell, the stories. This makes **(A)** incorrect.

Although in paragraph 1 the author states that historically people used cobwebs as wound coverings before Band-Aids were invented, he or she does not attempt to persuade the modern-day reader to give up Band-Aids for cobwebs. This means **(B)** is incorrect.

While the author does discuss some history of cobwebs, the passage does not contain an entertaining anecdote. The main purpose of the passage is to inform, not to entertain. This means **(D)** is incorrect.