

## Lesson 17 Differentiate Between Substantiated and Unsubstantiated Opinions



### UNDERSTAND THE TEKS

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When you read informational text, often you encounter both facts and opinions. Critical readers evaluate information and distinguish facts from opinions.

**Factual information** can be proved. It can be verified through testing, measurement, and observation. We can find evidence that shows it is accurate.

**Fact:** Leonardo da Vinci painted the *Mona Lisa*.

**Opinions** cannot be proved. An opinion is a personal belief, feeling, or judgment. It's not right or wrong. It's what someone thinks or believes. Keys to statements that express opinions are *I believe, I think, I feel*. Many people may share the same opinion, but that doesn't make the opinion true.

**Opinion:** Leonardo da Vinci was one of the greatest artists, inventors, and thinkers of all time.

Although an opinion cannot be proven to be true, it can be **substantiated**. This means that it can be backed up with enough evidence to make the claim seem very likely to be true. In informational text, writers often include support for their opinions.

How do writers substantiate their opinions? They may use:

- facts
- relevant examples
- details
- expert opinions

An **expert opinion** is a judgment by someone with knowledge in the field. For example, a Shakespeare scholar would have the knowledge and experience to give you an expert opinion on whether a newly found sonnet was actually written by Shakespeare. A veterinarian, even one who read Shakespeare for enjoyment, would *not* have the necessary knowledge to give an expert opinion on this issue.

Be careful, though. Not all opinions are substantiated. Sometimes a writer simply states an opinion as though it is true without offering any backup or real support. Opinions that are not supported are called **unsubstantiated opinions**. They are not backed up.

When you read informational text:

- differentiate facts from opinions
- decide whether an opinion is substantiated or not
- evaluate how strong or compelling the evidence is that the author uses to back up the opinion.



## GUIDED PRACTICE

**DIRECTIONS** Read the selection below. Follow the instructions and answer the questions in the side column. They will help you understand how to read to master the TEKS.

### Do Animals Dream?

by Faith Hickman Brynie

- 1** My dog Dave whines and twitches, his eyes darting and jerking beneath fluttering lids as he growls softly in his sleep. Is he chasing a dream-rabbit? Despite Dave's silence on the subject, I'm convinced he dreams. For many years, scientists avoided the question, because they had no way to investigate it. Now, new imaging techniques are making research into animal dreams possible.
- 2** (a) "Some tantalizing pieces of evidence suggest that animals dream," says Ruth Propper, assistant professor of psychology at Merrimack College in North Andover, MA. The biggest clue, she says, is REM (rapid eye movement) sleep. REM is most often associated with dreams in humans. Birds and nearly all mammals twitch and move while in REM sleep, and the electroencephalograph (EEG) records the patterns of heightened activity in the brain. "Since this is similar to humans, we tend to think the animal might be dreaming," Propper says.
- 3** Some of the first evidence came from the work of French scientist Michel Jouvet in 1963. He worked with cats and noticed that during REM sleep, they behave as people do. They move little, despite tossing and turning in other stages of sleep. Jouvet found that the brain sends signals to the muscles during REM sleep. The signals for jerks and growls get through, but a region of the brain stem blocks impulses to the large muscles of the arms and legs, bringing on "sleep paralysis."
- 4** Jouvet performed surgery on some cats. He cut the sleep paralysis pathway in the brain stem. The cats were then free to move about during REM sleep. Jouvet watched the sleeping cats do kittenish things, chasing, leaping, and pouncing — on a ball that wasn't there! The cats stood, arched their backs, and fought — with enemies only they could see! Jouvet drew the obvious conclusion. The cats were acting out their dreams.
- 5** A decade later, J. Allan Hobson and Robert McCarley at Harvard also studied cats, but in a different way. They found that an area near the base of the brain produces strong, rhythmic bursts of nerve signals during REM sleep. The signals travel upward and spread through the cortex, the brain's thin, outer layer where most of its "thinking" functions take place. (b) These bursts from the lower brain region must be the source of dreams, Hobson and McCarley decided. The cortex, they suggested, was doing what it always does — attempting to make sense of incoming signals. The result would be the cat's dream of pouncing or chasing.

### Guided Questions

Read paragraph **1**. Circle the author's opinion.

Read sentence (a) in paragraph **2**. Circle the person providing the evidence. Is this person qualified to provide expert opinion on this topic? Why or why not?

Read paragraphs **3** and **4**. What conclusion did Michel Jouvet draw from his research?

Read sentence (b) in paragraph **5**. Circle the words that indicate that this is not a fact, but an opinion or judgment Hobson and McCarley feel is substantiated by their research.

**6** Another experiment conducted by Kenway Louie and Matthew Wilson at the Massachusetts Institute of Technology showed that rats “replayed” prior training during REM sleep. From this replay, Wilson says, “we know that they [the animals] are in fact dreaming and that their dreams are connected to actual experiences.”

**7** Michael Noonan of Canisius College in Buffalo, NY, agrees. He thinks that animals dream, just as humans do. “Our brains are similar, our neurochemistry the same, and our reflexes and memory are wired in a like manner,” he says. Noting that apes trained to use sign language have been observed signing in their sleep, as if talking in their dreams, Stanford sleep scientist William Dement concurs: “I tend to believe that if all the signs of dreaming are present, dreaming is, too.”

**8** As persuasive as this evidence may be, scientists think that they still have a lot to learn. Why, for example, do animals replay one experience during REM sleep and not another? Wilson hopes to find out by teaching animals different tasks, then recording which ones they replay during REM sleep. Another question is why animals vary so much in their sleep needs. The brown bat spends more than 80 percent of its life asleep, nearly 20 hours a day. By contrast, an elephant sleeps only three hours.

**9** There is, of course, the possibility that we have it totally wrong, psychologist Ruth Propper says. Neuronal activity in the hippocampus doesn’t necessarily mean that animals see pictures inside their heads as human dreamers do. My dog Dave could settle the issue, but he shows no desire to reveal his secret. Until he does, I’ll continue to believe that he dreams. He awoke from his nap just moments ago with a particularly self-satisfied look on his face. Looks like that dream-squirrel didn’t get away.

### **They Sleep, But Do They Dream?**

**10** Only two mammals go without REM sleep — the spiny anteater and the dolphin. The dolphin is unique in another way: Since it must constantly surface for air, its brain sleeps one side at a time.

## **Guided Questions**

Read paragraph **7**. Circle the evidence Noonan gives to support the judgment that cats dream. Is this evidence factual information or unsubstantiated opinion?

What is the purpose of paragraphs **8–9**?



**ADDITIONAL PRACTICE**

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**DIRECTIONS** Reread the selection. Mark it up as you like. Then answer the following questions.

1. What new scientific advances have allowed us to find evidence to help us determine whether animals dream?

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2. Summarize the evidence that led Jouvett to believe that cats dream.

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3. In paragraph 6, what did Wilson conclude from his research with rats? What does this lead you to conclude about learning?

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4. Do you think that this article did a good job of substantiating the opinion that animals dream? Why or why not?

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 ★ PRACTICE

**DIRECTIONS** Read the selection below. Then answer the questions that follow.



## Rome Burns!

by Angela Murock Hussein

Do not consider it proof just because it is written in books, for a liar who will deceive with his tongue will not hesitate to do the same with his pen.

—Maimonides, a noted medieval Jewish scholar and doctor

- 1 It was A.D. 64, and Rome was on fire. It would be almost six days before the blaze was finally contained, and, by then, a huge portion of the city had been destroyed.
- 2 According to ancient accounts, some Romans believed that their emperor, Nero, who was not popular during or after his reign was responsible for the fire or, at least, that he was indifferent to the disaster. As a result, a tale began to circulate that Nero, who thought of himself as a brilliant musician, had used the view of the fire raging outside his window as a backdrop for a stage performance where he sang a song accompanied by an instrument.

- 3 In later versions of the tale, people imagined that Nero was playing a violin, because this was an instrument that was familiar to them. Yet, the violin actually dates to about 1,000 years after Nero died. Still, the tale persisted and led to the coining of the phrase “fiddling while Rome burns,” which means to ignore a disaster or to have a good time while others suffer through a catastrophe. As the tale’s details were repeated over the centuries, they gradually became part of the popular image of Nero. History, however, does record a more balanced account.

### Apartment Hazards

- 4 Before modern times, fires were somewhat commonplace in large cities. Why? As the only source of light and heat, open flames were everywhere. In downtown Rome, there were many apartment buildings, usually with businesses, such as bakeries and restaurants, on the ground floors. Because there was little room between these buildings, known as *insulae*, the danger of an uncontrolled fire spreading from one to another was ever present.
- 5 In Roman times, fire fighters did have some equipment, including fire *retardant* mats and manual water pumps. The city also had a large number of public fountains. While these made Rome better equipped than most ancient cities to handle fires, without modern plumbing, water still had to be carried from place to place. And, this water did not have the high pressure provided by modern hydrants and hoses. Therefore, fighting fires was much more difficult than today.
- 6 In A.D. 64, the Great Fire spread across 10 of Rome’s 14 districts, completely destroying three of them. The fire took many lives and left thousands of people homeless, but the Romans learned from the disaster. When they rebuilt the damaged neighborhoods, they used baked bricks and concrete instead of more flammable materials such as wood. In addition, the new *insulae* were spaced more widely apart to prevent the easy spread of fire.

### What Tacitus Says

- 7 The earliest surviving detailed account of the fire comes from the historian Tacitus, who was very young when it raged through the city. He reported that there was rumor in his day that Nero had ordered the fire to be set and that during the fire, Nero had sung while playing on a lyre, a kind of ancient harp. But Tacitus also contended that this gossip was false and that Nero had been outside of the city at the time. He went on to say that the emperor returned directly to deal with the tragedy, pledging funds and contributing food and temporary shelter for the victims. Tacitus also mentions that the unhappy citizens of Rome were eager to assign responsibility for the fire to someone. Well aware of their feelings, the emperor had blamed the disaster on a new religious group in the empire at the time, the Christians. Tacitus tells us that Nero had many Christians arrested and killed, offering their executions as public entertainment.

### Suetonius Says Otherwise

- 8 Another Roman historian, Suetonius, who wrote about the lives of the first 12 emperors of Rome, reported that not only was Nero singing and playing his lyre during the fire, but also that he actually had sent men to set the fire. Nero did so, Suetonius said, because he was insane. Much of the rest of Suetonius’ account of Nero includes further accusations that characterize the emperor as mentally unstable, violent, and unconcerned with human life. Suetonius’ version of events surrounding the fire complements his understanding of Nero’s personality. A similar tale was recounted by the writer Cassius Dio, who wrote almost 100 years after the event. His account is similar to that of Suetonius, indicating that, in his day, it was commonly believed that Nero had set the fire.

9 According to his critics, Nero's motivation for setting the fire was his dislike of how areas of the city looked. And, it is true that, in rebuilding the fire-ravaged parts of the city, all was more attractive and adhered to better safety standards than before. But the action Nero took that most truly angered the people was his taking control of a large amount of the city center. He did so not to build new houses or to benefit those who had lost their homes and businesses, but to create a new palace complex for himself. Yet, excavations have proved that the area of the new palace that Nero called the Domus Aurea ("Golden House") was not located in the areas of the city that had sustained the greatest fire damage. Thus, this fact counters the idea that the fire was set to make room for the palace. Nevertheless, circumstances, as well as Nero's increasing unpopularity, fueled the rumors connecting him to the fire.

- 1 According to ancient accounts, which of the following is an unsubstantiated opinion held by some Romans?
- A There was a major fire in Rome in A.D. 64.
  - B The emperor Nero set fire to the city and showed no concern as it spread.
  - C It took almost six days to put out the fire.
  - D A large portion of Rome was destroyed by the fire.
- 2 Which detail repudates the idea that Nero played the fiddle while Rome burned?
- A Nero thought of himself as a brilliant musician.
  - B The tale persisted for centuries.
  - C Not everyone believes the tale of Nero fiddling.
  - D The violin dates to about 1,000 years after Nero died.
- 3 The author includes the facts in paragraphs 4–5 mainly to show how —
- A easy it was for fires to start and spread
  - B open flames provided light and heat
  - C many apartment buildings had businesses on the ground floors
  - D Rome had better fire equipment than other ancient cities
- 4 In paragraph 7, all of the following phrases indicate that the opinion about Nero's responsibility is unsubstantiated except —
- A *earliest surviving detailed account*
  - B *rumor in his day*
  - C *contended that this gossip was false*
  - D *unhappy citizens of Rome were eager to assign responsibility*
- 5 According to paragraph 8, Suetonius supports the opinion about Nero's responsibility by —
- A proving that Nero sent men to set the fire
  - B citing evidence provided by Cassius Dio
  - C providing his own eyewitness account of the event
  - D offering the opinion that Nero was insane
- 6 In your own words, tell what Maimonides meant by his statement at the beginning of this article. Tell how it applies to today's world as well as to the ancient and medieval worlds.
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## CUMULATIVE PRACTICE

**DIRECTIONS** Answer the following questions based on the selection you just read.

- 7 A word that means the opposite of indifferent in paragraph 2 is —
- A unresponsive
  - B concerned
  - C similar
  - D insincere
- 8 The author's perspective in this article is that —
- A Nero set the fire so that he could take over the area and make it look more attractive
  - B both Tacitus and Suetonius present an accurate view of Nero
  - C the evidence dealing with whether Nero set the fire is inconclusive
  - D Nero was a madman and a tyrant
- 9 In paragraph 4, the Latin word insulae means —
- A islands
  - B cities
  - C businesses
  - D apartment buildings
- 10 In paragraph 5, the word retardant means —
- A a material that prevents something from happening
  - B something that burns quickly
  - C something that slows down
  - D equipment that pumps water