**Infer**

- A Good Guess
- Read Between the Lines

One verb that is used frequently on tests is “infer.” Inference questions ask students to move beyond the presented information, read between the lines and find clues, consider and examine them and make inferences that are supported/justified.

**Standard**

**Strand 3, Concept 1, PO 2**
Distinguish supported inferences from unsupported inferences in expository selections such as editorials, newspaper articles, essays, reviews, and critiques.

**Covered by Study Island Topic:**
Inferences

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**AZ Grade 10, Reading Standard**

**Strand 3, Concept 1, PO 7**
Make relevant inferences by synthesizing concepts and ideas from a single reading selection.

**Covered by Study Island Topic:**
Inferences

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**Inferences**

Inferences are evidence-based guesses. They are the conclusions a reader draws about the unsaid based on what is actually said. Inferences drawn while reading are much like inferences drawn in everyday life. Below are some tips and examples for drawing inferences.

**Tips for Drawing Inferences**

1. Make sure your inferences rely mainly on the author's words rather than your own feelings or experience. Your goal is to read the author's mind, not invent your own message.

2. Check to see if your inference is contradicted (proven wrong) by any statements in the paragraph. If it is, it is not an appropriate or useful inference.

3. If the passage is a difficult one, check to see if you can actually identify the statements that led you to your conclusion. This kind of close reading is a good comprehension check. It will also help you remember the material.
Examples:

1. If your mom tells you to put your rain coat on before leaving the house, you can infer (or make an educated guess) that it is raining outside.

2. He is known as the president with the beard and the black top hat who led us through the Civil War.

   You can infer that the president being spoken of in the sentence is Abraham Lincoln.

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Inferences

**Editorial:**

**Brain-Dead From Sports Drinks**

*The New York Times: April 14, 2005*

For years now, we've been hearing about the importance of hydration to avoid heat stroke during prolonged exercise in hot weather. Now, it turns out, too much hydration can kill you.

A study published today in The New England Journal of Medicine should give weekend warriors reason to rethink the wisdom of downing vast amounts of water or sports drinks while exercising vigorously—at least if they are engaging in such endurance tests as a marathon. The study found that a marathon runner could dangerously dilute the blood with an overdose of liquids, risking a coma and even death. The problem has also been detected during long military maneuvers, extended bike rides, and blistering hikes through the desert.

An article by Gina Kolata in The Times today describes the slow and belated recognition of the problem. A South African expert who has been warning of the dangers for more than two decades told Ms. Kolata that he had not found a single case when an athlete had died from dehydration in a competitive race, but that some people had sickened and died from drinking too much. Typically, an overdose of water dilutes their blood and reduces the concentration of sodium. Water enters the cells, causing them to swell, and engorged brain cells press into the skull; such pressure can lead to confusion, seizures, and a loss of vital functions.

All too often, friends, coaches or emergency personnel assume that the problem is dehydration and administer yet more liquid, making the problem worse. The best treatment is a small volume of a concentrated salt solution, given intravenously, to increase blood sodium concentrations. Sports drinks containing electrolytes may not help much as they are mostly liquid themselves.

In the 2002 Boston Marathon, for example, a 28-year-old woman found herself exhausted after running for five hours and gulping sports drinks along the way. Wrongly assuming that she was dehydrated, she chugged down 16 more ounces of a sports drink. She promptly collapsed and was later declared brain-dead. The concentration of salt in her blood was found to be lethally low.

In the study published today, researchers at various Harvard-affiliated institutions tested 488 of the nearly 15,000 runners who completed the 2002 Boston Marathon. They found that 13 percent had blood with abnormally low sodium levels, and that three runners were in danger of dying. It was not the elite runners who were at risk—it was those who had taken four hours or more to finish the race, allowing plenty of time to imbibe excess fluid.

Sports authorities have already issued warnings and tips to avoid excessive drinking, and rescue workers in the Grand Canyon now carry devices to test collapsed hikers for low blood sodium. But the solution is for overly eager endurance runners and hikers to forget the old mantra that they should drink-drink-drink. Too much liquid can be lethal.
1. Based on the text, what logical inference can be made?

- **A.** One should avoid hiking in the Grand Canyon, because it is so easy to get over-hydrated there.
- **B.** Over-hydration is a bigger problem among South African athletes than among American athletes.
- **C.** For endurance athletes, there are serious health risks involved with drinking too much water.
- **D.** If you are running a marathon, you should never drink water even if you are very thirsty, because you could die.

2. Based on this editorial, which of the following statements is an unsupported inference?

- **A.** If you’re engaging in endurance sports, you may be more at risk for over-hydration.
- **B.** If you are an athlete who only runs short races, you are less at risk for over-hydration.
- **C.** You cannot die from being dehydrated, only from being overly hydrated.
- **D.** Drinking too much liquid while running the Boston Marathon can cause over-hydration.

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**Theater Review: Bonnie Parker**

By ANITA GATES  
*The New York Times: April 13, 2005*

In the middle of "Bonnie Parker," at the John Houseman Studio Theater, Dixie Lee Sedgwick suddenly does a cartwheel. She also shrieks a great deal, usually at some horrible little discovery (cobwebs or a spider in her shoe). At one point, she inexplicably gets down on the floor and poses like the young woman in Andrew Wyeth's painting, "Christina's World."

There is probably a lot of rich material in the psyche of Parker, who made her name as the bank-robbing partner of Clyde Barrow and died with him in a hail of police bullets at age 23. But Ms. Sedgwick gives her audience only a one-dimensional character, a young Texas woman who is bored before she meets Barrow and dissatisfied afterward. The only revelation in this deadly one-woman production is that at 17, Parker already has a husband.

Ms. Sedgwick's Bonnie speaks to her diary and mostly to invisible visitors until a peculiar moment near the end when she turns to the audience and says, "I have done wrong," soon adding, "You're no different from me." The exposition is awkward, and anyone unfamiliar with the Bonnie-and-Clyde story might not be absolutely sure who they were.

"What a life! I can't make any sense of it," Bonnie says in the first scene, prophetically. She looks great, though, in period fashions by Shannon N. Short and Diane Simons.

Ms. Sedgwick shows promise, but perhaps the dual roles of actor and playwright are too ambitious an undertaking at this point in her career.

*Bonnie Parker* continues at the John Houseman Studio Theater, 450 West 42nd Street, through May 15.

3. Based on this theater review, which of the following statements is an unsupported inference?

- **A.** The reviewer feels that Ms. Sedgwick's play is too hard to understand and follow.
- **B.** The reviewer thinks Ms. Sedgwick should either write plays or star in them.
- **C.** The reviewer thinks the character of Bonnie Parker lacks depth and complexity.
- **D.** The reviewer thinks that more characters would have made the play stronger.
Asteroids Rock

1) Could a giant space rock slam into Earth in 30 years? Space rocks, or asteroids, have pounded the planets for as long as there has been a solar system. All one has to do is look at Mercury or Mars to see the scars left by these crashes. Even our moon is scarred. What about our planet? Surely Earth is safe.

2) Not really. Take Australia, for instance. There you'll find a group of 13 craters. Huge space rocks gouged them out about 5,000 years ago. Craters are also found in Argentina in South America. There you'll find large teardrop holes in the ground. These formed when a 200-meter (600-foot) space rock broke up as it skipped across the landscape.

3) Signs of this cosmic beating are also found closer to home. In Arizona, you can find a 1.6-kilometer-wide (1-mile-wide) crater. This is Meteor Crater. A speeding space rock blasted it out about 5,000 years ago.

4) These aren't the only impact craters. More than 200 have been found. That may not seem like many, but wind and water can erode, or wear away, old craters. They don't last long. Craters show that space rocks have slammed into our planet. That raises a big question. Could it happen again? To answer that, we have to know where space rocks come from.

5) Most space rocks start off in the asteroid belt, an area between Mars and Jupiter. Millions of asteroids orbit our sun there. Most scientists think asteroids are leftover material from the formation of our solar system. The asteroids found there range in size. Most are pebbles. Some are large stones. Other asteroids are 1,000 kilometers (600 miles) across. If all the asteroids were gathered together, though, they would form an object less than the size of our moon.

6) The NEAR spacecraft crashed into one of these asteroids on February 12, 2001. It's called Eros and is one of the largest asteroids. As NEAR zoomed in on the asteroid, it took lots of photos. They showed that the asteroid has long grooves. It is also pocked with craters. One of the largest is nearly six kilometers (four miles) across. Unfortunately, NEAR went dead as it crashed into Eros. Still, it showed for the first time what an asteroid looks like close-up.

7) The asteroids in the asteroid belt do not pose much of a threat to Earth. They stay there for the most part. Some, however, drift out of the asteroid belt. They may come closer to Earth. These asteroids are more threatening. The ones that come closer to Earth are called Near-Earth Objects. Take an asteroid named Apophis, for example. This 320-meter-wide (1,050-feet-wide) asteroid was discovered just a couple of years ago. Yet some scientists are already worried about it. Apophis passes near Earth about every 16 years. Its next visit should be in 2013. That shouldn't cause a problem. It will pass by us harmlessly. This space rock will pass Earth again on April 13, 2029. This time it will be much closer-only 35,000 kilometers (22,000 miles) away. It will be so close that Earth's gravity may change its orbit. Now that could cause a big problem.

8) Instead of passing by Earth, this asteroid could slam into our planet in April 2036. The most likely spot is off the coast of Mexico. To learn more, NASA plans on sending a spacecraft to the asteroid. The spacecraft would put a homing beacon on it. That would help scientists accurately track the asteroid.

"Asteroids Rock" NG 09/2006

4. From the description in paragraph 5, the reader can infer that

- A. there are only a few thousand asteroids in existence.
- B. the majority of asteroids are quite tiny in size.
- C. all asteroids are about the same size and shape.
- D. Mars has been hit with more asteroids than Earth has.

5. In paragraph 2, what do the craters in Argentina suggest about the behavior of asteroids?

- A. Space rocks, or Asteroids, hit Earth about once in every 5,000 years.
- B. The asteroid that hit Argentina was made of many tiny pebbles.
- C. When asteroids hit a planet, they stay in one place and carve a big hole.
- D. One asteroid can cause more than one crater when it hits a planet.

6. The information in paragraph 7 supports the conclusion that

- A. if an asteroid were to hit Earth, it would throw the planet out of orbit.
- B. it is unlikely an asteroid will hit Earth within the next 50 years.
- C. only asteroids within the asteroid belt pose a threat to the Earth.
- D. the asteroid Apophis could possibly hit Earth in 2029.
7. Based on the information in paragraph 4, the reader can **infer** that the number of existing craters

- A. indicates the exact number of asteroid that have ever hit Earth.
- B. tells scientists that millions of years ago the earth was one big crater.
- C. is fewer than the actual number of asteroids that have hit Earth.
- D. proves that Earth would survive a direct hit from a gigantic asteroid.

8. The reader can **infer** from paragraph 1 that

- A. only recently have asteroids hit planets.
- B. asteroids have struck the moon in the past.
- C. Mars has escaped being hit by any asteroids.
- D. space rocks are not the same thing as asteroids.

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**Music Industry Sues Hundreds Of File Sharers At Colleges**

By Frank Ahrens

*Washington Post, Staff Writer*

Wednesday, April 13, 2005

The entertainment industry's effort to sue music and movie pirates into submission is reaching into the Internet's next generation with the filing of several hundred lawsuits yesterday against college students using a faster version of the Web called Internet2. In the year and a half since the Recording Industry Association of America (RIAA), the trade group of major music companies such as Sony BMG Music Entertainment and Universal Music Group, began suing Internet song-swappers, more and more college students have moved off the Web to trade music on Internet2, a separate network used by universities and colleges for sharing research and other academic works.

"This is an emerging epidemic," RIAA President Cary Sherman said yesterday. "We cannot allow a zone of lawlessness where the normal rules do not apply."

Adding yesterday's 405 suits against students at 18 schools, the RIAA has sued more than 10,000 people since its campaign began. The Motion Picture Association of America (MPAA), which represents big studios such as Warner Bros. Pictures and Walt Disney Studio Entertainment, also said yesterday that it would go after Internet2 users who illegally trade digital movies.

The MPAA would not reveal the number of suits it plans to file, saying only that it is targeting "several dozen" individuals whose names it intends to release today.

During the past year, the RIAA has been monitoring the swapping of copyrighted material, such as songs and movies, via a relatively new file-sharing program known as I2hub, which lets users trade song files for free over Internet2 networks, Sherman said.

I2hub was founded by Wayne Chang, a former executive at Napster Inc., which launched the music-swapping revolution before the entertainment industry forced it to shut down.

Yesterday, Chang said I2hub is similar to AOL Instant Messenger or Internet Relay Chat communications programs in that it permits an exchange of data between users: "We do not host any offending files on our servers," Chang said, "nor do we have an index of files." The RIAA would not say how it infiltrated the Internet2 network but said it was alerted to its existence as a song-sharing hub by articles in college newspapers.

9. Based on information in the article, which of the following is an **unsupported inference**?

- A. The RIAA feels that the music business is being threatened or harmed by the illegal downloading and sharing of music by college students.
- B. The MPAA’s threat to go after students who download movies illegally will drastically reduce the
number of students who do so.

C. RIAA President Cary Sherman does not feel that students should be exempt from the legal consequences of sharing music over the Internet.

D. One reason the RIAA is waiting to release the number and names of students it is suing is it wants to make those students nervous who are downloading illegally.

10. Based on this article, which of the following inferences can be supported?

A. Some top executives in the music business have been known to illegally download music off the Internet.

B. The RIAA no doubt has spies on college campuses who track down students suspected of illegally downloading files.

C. When the music industry realizes they can't stop the illegal downloading, they will quit filing these lawsuits against students.

D. In the future, there will be more lawsuits filed against college students who download music illegally using I2hub and Internet2.

Answers

1. C
2. C
3. D
4. B
5. D
6. D
7. C
8. B
9. B
10. D

Explanations

1. It is important not to generalize too much when making inferences. This article issues warnings about over-hydration, and it gives some good supporting evidence. But you cannot infer, for example, that you should never drink water when running marathons. The article simply suggests that it is dangerous to drink too much during endurance sports.

2. Even though the South African study had not found one runner who had died from dehydration, that is not enough information to infer that one cannot die from being dehydrated. Just because studies are quoted, the information cannot necessarily be generalized to all other similar situations. There may be dozens of studies that prove just the opposite—that plenty of runners have gotten sick or died from not drinking enough water.

3. Although the reviewer says the character of Bonnie is "one-dimensional" (meaning shallow or lacking depth) and calls it a "deadly one-woman production," she does not say anything directly or indirectly to imply that more characters would have improved this play. That inference cannot be supported by anything in the text. The reviewer does, however, say things like "inexplicably" (meaning "can't be explained") that suggest the play is hard to follow.
4. Paragraph 5 provides detail about space rocks, or asteroids. It tells about how old they are, and indicates that they come in a range of sizes. It says that "most" asteroids are "pebbles." Pebbles are very small rocks, so the reader can infer from this that the majority of asteroids are tiny.

5. According to paragraph 2, the group of craters in Argentina show that the asteroid "skipped" across the landscape, causing "teardrop" craters along the way as it broke into pieces. This tells the reader that asteroids do not always create one giant crater.

6. The paragraph says that Apophis will pass within 22,000 miles of Earth in the year 2029. It also says that this is close enough for Earth's gravity to potentially change the asteroid's orbit. The author says, "Now that could cause a big problem." The reader can infer that Earth's gravity could pull the asteroid in such a way that it would hit the earth.

7. Paragraph 4 says that around 200 craters have been found on Earth. It also says that craters do not last very long—wind and water erode them away. From this information, the reader can infer that many more asteroids have hit the earth than the number of current craters would indicate.

8. Paragraph 1 talks about planets that have been hit by asteroids. It says that the asteroids leave "scars" on these planets. By saying that our moon is also "scarred," the author is telling the reader that asteroids have hit the moon as well.

9. In this article, the motion picture industry says it plans to go after people who trade digital movies, but no statistics are quoted to indicate what effect this will likely have on users. Any inferences one might make about how a crackdown would affect those who trade illegally would be unsupported, based on this article.

10. This article doesn't say how the RIAA is getting its information, except to say that articles in campus newspapers brought this topic to their attention. The article says nothing about the habits of top executives in the music business. But it does talk about the current lawsuits being brought against college students who download illegally. Also, the RIAA president calls this "an emerging epidemic," meaning it is happening now. That is enough information to infer that there will be more of such lawsuits in the future.