

Thinking KAP

approx. 4 min.

Delivery

Have students complete the Thinking KAP activity independently.

Alternatively, you may choose to have students complete this activity in pairs.

Lead a discussion about using clues to make inferences.

Have students share their responses to the activity. The discussion should be guided by student responses, but you may wish to address the following points:

- We make inferences in our daily lives, using clues to draw conclusions.
- On the SAT, there are always clues that help us make inferences. Students should always base their inferences on the clues in the text; they should not need to go far beyond the passage to support their conclusions.

5 LESSON 5 INFERENCE AND VOCABULARY QUESTIONS



Thinking KAP

Read the following short passage.

Jacob's friend, Luke, wasn't at the bus stop in the morning. This was highly unusual. Then, in the cafeteria, when Jacob walked up to his friends, who had been talking animatedly, they stopped talking. After a few moments of awkward silence, they started talking to Jacob as if nothing had happened. Jacob wasn't sure what to think. He wondered if his friends were talking about something that they didn't want him to know. When he got to basketball practice after school and there were signs around the gym wishing him a happy birthday and a birthday cake from his teammates, he knew why his friends had been acting strangely.

What inference did Jacob make? What were the clues that Jacob used to make this inference?

(sample answer) Jacob thought that his friends had a secret that they didn't want him to know. The biggest clue was when they stopped talking when he walked up to them in the cafeteria. He also thought it was unusual when Luke wasn't at the bus stop.

Instruction

 approx. 6 min.

Delivery

Introduce the types of questions students will encounter on the SAT.

Read the introductory text with students.

- Remind students that they learned about detail and global questions in the previous lesson. In this lesson, students will learn about inference and vocabulary-in-context questions.

Explain what is tested by inference questions and vocabulary-in-context questions.

Review the chart with students.

- Emphasize that both question types require students to draw conclusions about what they have read. Vocabulary-in-context questions require students to make an inference about the meaning of an unfamiliar word based on its context.
- Point out that vocabulary questions are very easy to recognize; they will always show a word in quotes, with a line reference.

Guide students through the Try It Out exercise.

Read each question stem, and have students check the appropriate box.

- You may choose to have students discuss with a partner which abilities each of these questions tests. Alternatively, you can have groups of students analyze one question and share their thoughts with a group that analyzed the other question.

Teacher's Note

Point out that the inference question stems use the word *imply* and the phrase *most likely*. Inference questions generally provide clues that students will need to make an inference based on information in the passage—students should look for these words.

Instruction

Types of Questions

In Lesson 4, you learned how to answer detail questions and global questions. In this lesson, you will learn how to answer two other types of questions you'll encounter: inference questions and vocabulary-in-context questions.

Question Type	This question tests your ability to
Inference	<ul style="list-style-type: none">• use the information in the passage to come up with a logical conclusion• locate embedded clues that help you determine what the author is trying to convey
Vocabulary-in-Context	<ul style="list-style-type: none">• infer the meaning of a word from context

TRY IT OUT

Read each question stem below. Mark whether each question is an inference question or a vocabulary-in-context question. Underline the words in the question that helped you make your determination.

1. Which of the following does the passage imply is a hypothesis that Chain and Florey wished to test in their experiment (lines 12–13)?
 Inference Question Vocabulary-In-Context Question
2. In line 87, the word “heroic” means the same as which of the following?
 Inference Question Vocabulary-In-Context Question
3. With which statement below would the author of Passage 1 be most likely to agree?
 Inference Question Vocabulary-In-Context Question

Inside the SAT!

There are more inference questions than vocabulary-in-context questions on the SAT.

Instruction

Delivery

Explain how to approach inference questions.

Read the explanation of inference questions with students and work through the sample question.

- Point out that the question includes the words “to suggest that,” which let students know that they need to make an inference.
- Then read the passage, noting that the underlined portions of the text provide clues to help students determine the author’s intent.
- Explain that the passage does not explicitly say that Gorky’s beliefs were solidified early in life; however, since his opinion on the exhibition (expressed when Gorky was quite young) was aligned with his later political beliefs, one can infer that his political beliefs were solidified early in life.

Explain how to approach vocabulary-in-context questions.

Read the explanation of vocabulary questions with students and work through the sample question.

- Point out that this question includes a word in quotes and a line reference—typical of vocabulary questions on the SAT.
- Then read the passage, noting the underlined words and phrases, which serve as context clues students can use to determine the meaning of the word *charged*.
- Encourage students to predict the meaning of the unknown word. Then they can read their answer back into the sentence to check that it makes sense.
- To help students understand why the right answer is right, emphasize that employees spending a lot of time tending to personal needs online are not productive. This would be discouraging for the people assigned to keep productivity levels high; therefore, *charged with keeping* must mean something similar to *assigned to keep*.

Teacher’s Note

The word *charged* has different meanings in different contexts. Emphasize that SAT words will often have multiple meanings; students must read carefully to determine the definition that is being tested.

Approaching Inference Questions

When authors want to convey a message to you without stating it directly in the text, they are really asking you to make an inference—in other words, figure out their message on your own. However, they don’t leave you empty-handed; they leave plenty of clues to help lead you to a logical conclusion. Use the line references or underlined key words to help the paragraph that contains the information you need. Then carefully read for evidence that supports the most logical answer choice.

Inside! the SAT!

Vocabulary-in-context questions are easy ways to save time and earn points. If you are stuck for time and can’t read an entire passage, you can probably answer these questions just by reading the sentences around the tested word.

Excerpt from a Long Passage

The Nizhni Novgorod art exhibition in 1896 generated a storm of controversy in Russian newspapers. Of the critics raising their voices on the matter, it is Maxim Gorky who is most remembered. Although quite young at the time, Gorky’s opinions on the exhibition remarkably aligned with his political beliefs later in life. He thought the majority of the art on display had been generated by an economy of exploitation that only rewarded artists who created works inaccessible to the general population.

Question

1. The author uses the phrase “Although quite young at the time” to suggest that
- (A) Gorky was not qualified to evaluate the exhibition
 - (B) the artists needed time to develop their talents
 - (C) the youth opposed the status quo
 - (D) Gorky’s beliefs were solidified early in his life
 - (E) Gorky’s attitude toward the elite would change

The key words “although quite young at the time” help you find the information you need.

Since the text tells you that Gorky was quite young but his opinions aligned with his later political beliefs, you can infer that his beliefs were solidified early in life.

Approaching Vocabulary-in-Context Questions

Vocabulary-in-context questions test your ability to infer the meaning of a word from context. Once you find the word in the passage, read the sentence and predict another word that could go in its place. Then find a synonym for your prediction in the answer choices. Read the sentence through with your answer choice to make sure it is correct.

Excerpt from a Short Passage

In addition—and even more discouraging for management executives charged with keeping productivity levels high—some workplace studies suggest that the average employee spends more than 33 minutes online every day tending to personal needs.

Detail Question

2. In line 3, “charged” most nearly means
- (A) accused
 - (B) discouraged
 - (C) studied
 - (D) tasked
 - (E) spent

The line reference “In line 3” helps you find the tested word.

If you predict another word for *charged*, *tasked* should match your prediction.

REMEMBER

- Even if you know the definition of the vocabulary word, do not answer the question until you’ve read the word in context. Many of the answer choices will be definitions of the tested word, but only one will work in context.

Instruction



approx. 6 min.

Delivery

Guide students through the Try It Out exercise.

Give students about 6 minutes to read the passage independently.

- Make sure students are creating passage maps as they read this long passage.
- Let students know that the questions for this passage appear on the facing page. Students should complete the questions once they finish reading the passage.

TRY IT OUT

Practice the strategies you have learned to read the following long passage. Identify each type of question you answered on the lines provided.

Questions 1–4 are based on the following passage.

The following passage is from a journal that features articles in the field of American studies. It examines the contributions of Reverend Sylvester Graham to the dietary reform movement of the 19th century.

Inside! the SAT!

The topics you will read about on the SAT will include the humanities, social sciences, natural sciences, and fiction. However, most of the passages on the test will be nonfiction, not stories.

Line

5

It is surprising that one of the men destined to be most influential in his long-term impact on the American diet is now largely forgotten, even by those who enjoy the crackers that still bear his name. Reverend Sylvester Graham (1794–1851) was lampooned in the press, ridiculed by the public, and scoffed at by medical professionals. Yet his ideas, writings, lectures, and influence were instrumental in shaping ideas that we still hold today about food and nutrition.

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The diet of 19th-century Americans was not much like that of their modern counterparts. Meat—especially pork—was a main staple of every meal, and what little vegetables and grains people ate were usually fried or drenched in grease, gravy, or fatty sauces. For the most part, fruits and vegetables were not considered very nutritious, and less-nourishing white flour was beginning to displace whole-wheat flour as the standard among bread bakers. Long-term, chronic digestive problems were common, and the widespread excessive consumption of alcoholic beverages was enough of a problem to have spawned the temperance movement.

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After suffering a protracted chronic digestive illness of his own, Reverend Graham began to examine the effects of diet on health. He was exposed to, and influenced by, the work of the famous English vegetarian Reverend William Cowherd. Graham posited that eating meat increased a person's craving for whiskey and encouraged other dietary and moral bad habits. He conjectured that eliminating meat from the diet would lead to generally good physical and spiritual health. Graham wrote and published books and traveled up and down the Atlantic coast giving lectures on his principles of dietary reform. He was reportedly a spellbinding speaker, and thousands attended his seminars, which were part militant sermon and part scientific argument.

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Graham's theories focused on the relationship between a proper diet and the health of a person's body and spirit. His philosophical principle was simple: the decline of humanity since the time of the Garden of Eden had resulted in gluttony, slaughter, and industrial processing of foods, with the subsequent modern epidemic of poor health and impoverished morals. Graham's prescription for the restoration of humankind to dietary paradise included limiting meals to two per day, eliminating tobacco, whiskey, and most meat, and leaving foods as much as possible in their raw, unprocessed state. His own particular obsession was processed white flour, which was just then coming into widespread use in commercial bakeries. Graham railed against the removal of bran from flour before baking, and was so vehement in his protestations that some newspapers began to refer to him as "Dr. Bran."

35

The intensity of his stance regarding the ill of meat and white bread was so well-known that a Graham speech in Boston once occasioned a riot among groups of local butchers and bakers. Graham's predilection for dark, coarse cereals eventually came to be connected so closely with him that whole grain products in general took on his name: graham flour, graham bread, and the product still known today as graham crackers.

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KAPLAN ADVANTAGE
SAT CRITICAL READING AND WRITING

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Instruction



approx. 6 min.

Delivery

Guide students through the Try It Out exercise.

Have students complete the questions independently. Then review.

- First, discuss which questions are inference questions and which are vocabulary questions. Ask students to explain how they determined each question type.
- Then ask students to explain how they arrived at their answers. Focus the discussion on how students answered each question, not just on the answers.

Answer Explanations

1 B

The line reference mentions Graham's digestive illness. Students can infer that this was due to eating the normal American diet of the time.

2 A

Students should use the context clues in the noted sentence to determine the meaning of the word. Remind students to make a prediction and then look for a synonym in the answer choices. The context clue "spellbinding speaker" should help students determine that *militant* means *enthusiastic* in the sentence.

3 D

Students can use the phrases "his philosophical principle" and "modern epidemic of poor health and impoverished morals" to guide their choices.

4 A

Students should use the context clues in the noted sentence to determine the meaning of the word. Remind students to make a prediction and then look for a synonym in the answer choices. The prediction may be "liking" which would lead students to choose the synonym "preference for."

Inside! the SAT!

Detail, inference, and vocabulary-in-context questions will reflect the order of the passage. That is, the answers to the earlier questions will be found earlier in the passage.

1. The passage implies that Graham began to study the impact of eating habits (lines 16–17) mostly because he

- (A) deplored the increasingly widespread use of white flour
- (B) had become ill from eating the normal American diet
- (C) was searching for a cure to his craving for whiskey
- (D) felt that he needed more spiritual enrichment
- (E) wanted to participate in founding the American Vegetarian Society

Question 1 is a(n) ***inference*** question.

2. The word "militant" in line 25 most nearly means

- (A) enthusiastic
- (B) unpopular
- (C) regimented
- (D) unorthodox
- (E) religious

Question 2 is a(n) ***vocabulary-in-context*** question.

3. The description of Graham's views (lines 26–30) suggests that he was

- (A) more troubled by the country's widespread social problems than by the dietary habits of his followers
- (B) offended by the use of his name to describe food products
- (C) very persuasive in spreading his message and convincing others to follow his dietary system
- (D) primarily concerned with the relationship between poor diet and declining morals
- (E) enthusiastic about influencing other political and religious leaders

Question 3 is a(n) ***inference*** question.

4. The phrase "predilection for" in line 40 most nearly means

- (A) preference for
- (B) insight about
- (C) prejudice against
- (D) understanding of
- (E) power over

Question 4 is a(n) ***vocabulary-in-context*** question.

UNIT 1 1 2 3 4 5 6

UNIT 1: READING COMPREHENSION
LESSON 5: INFERENCE AND VOCABULARY QUESTIONS

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Independent Practice



approx. 12 min.

Delivery

Have students complete the Independent Practice.

As students work, observe and assist when necessary. Redirect students as needed by asking them questions about their work. Effective questions include the following:

- What active-reading strategies are you using?
- Which clues are you using to make your inference?
- What evidence supports your inference?
- What is your prediction for the meaning of the tested word?

Independent Practice

The passage below is followed by questions based on its content. Answer the questions on the basis of what is stated or implied in the passage and in any introductory material that may be provided.

Questions 1–7 are based on the following passage.

In 1928, bacteriologist Alexander Fleming observed that a spot of mold had contaminated one of the glass plates on which he was growing a colony of bacteria. Instead of discarding the plate immediately, he noticed that bacteria were flourishing everywhere on the plate except in the vicinity of the mold. He decided to culture the mold and found that a broth filtered from it inhibited the growth of several species of bacteria. A decade later, the active antibacterial principle in Fleming's broth—penicillin—was isolated by a team of scientists led by Howard Florey and Ernst Chain. Florey and Chain went on to demonstrate that penicillin could cure bacterial infections in humans, and penicillin became a “miracle drug.”

The story of penicillin reveals a great deal about the often miraculous nature of scientific research. When Fleming picked up his famous contaminated culture plate in order to take a closer look, he was not engaging in any methodical process of scientific discovery. He was not seeking to test any new hypothesis about antibacterial agents. He was not attempting to carry out a rigorously designed, logical experiment that would provide evidence to support or refute a theory. Fleming was merely given to leaving his used plates lying around on his lab bench for two or three weeks at a time (to the dismay of more fastidious colleagues) and then, before discarding them, casually examining them for any unusual developments. He threw the door wide open to the same outside variables that his peers worked so meticulously to eliminate from their experiments. Any microorganism waiting through the air of the lab could take up residence on one of Fleming's plates and thus be granted a moment or two of his attention.

With such a haphazard “method,” only blind luck could yield results of any significance. Indeed, the combination of circumstances that led to Fleming's discovery was improbable beyond belief. The airborne spores on his plate had made their way upstairs from the laboratory directly below. If the mycologist working downstairs had been given the proper equipment to grow his molds—one of

45 which just happened at the time to be a strong penicillin-producing strain—he would have been using a hood to prevent the release of spores. And even complete inundation of the building with spores should not have resulted in contamination. The mold will grow only at moderate temperatures, and the month was August, when spores do not normally have a prayer of multiplying. A string of days in the middle of this particular August was unseasonably cool, however. Naturally, fate also played a role in Fleming's realization that the mold possessed antibacterial properties. He had already decided to discard all the plates on his bench when a visit from a colleague prompted him to take another look at some of them, including the now-famous one.

60 After making a broth from the mold and testing it with success on numerous species of bacteria, Fleming tried externally applying the broth to patients. He quickly became discouraged with the lack of results, published his findings, and gave up. It was left to Florey and Chain, who came across Fleming's paper years later, to perform the definitive experiment, the one that would propel penicillin to the front lines of the war against bacterial infections. They went to heroic lengths to extract the active element from Fleming's broth. To test their hypothesis, Florey took eight white mice and injected each with a lethal amount of streptococcus bacteria. Four mice then received an injection of the extract from Fleming's broth, and four did not. The next day, the mice that got the penicillin were robust, but the ones that didn't were dead.

70 Florey and Chain's work was everything that Fleming's was not: elegant in its simplicity, rational, precise—in short, textbook science. Nothing was left to chance. The experiment and its results could be replicated with ease. Fleming's discovery, by contrast, hinged on overwhelming happenstance. How sobering it is to reflect that without Fleming, Florey and Chain could not have achieved what they did.

Answers

1 B Degree of Difficulty: 3

Students can use their passage maps and clues in the text to make an inference about the author's purpose. The author provides evidence that both types of scientific inquiry are necessary.

! If students chose (D), they focused on the main idea of only a portion of the passage. Remind students that author's purpose questions are really testing their knowledge about the main idea of the whole passage.

2 C Degree of Difficulty: 2

Students can use their notes on the main idea of each paragraph in their passage maps to determine the correct answer. The passage contrasts the messy methods of Fleming with those of Florey and Chain.

! If students chose (A), they focused on the first part of the passage which describes how luck played into Fleming's discovery. Bad luck in science, however, is not mentioned at all in the passage. Remind students that all aspects of an answer choice need to be true for it to be the correct answer.

3 A Degree of Difficulty: 2

Students should use key words in the question stem and those that they underlined in their passage maps to find the relevant part of the passage, and then reread it carefully. The answers to detail questions can be found in the text. Fleming was working with bacteria when he noticed the mold. The bacteria was not happenstance.

! If students chose (C), they may not have known the word *ambient*. Remind students they need to be able to rule out all other answer choices when they have chosen the correct one.

4 B Degree of Difficulty: 3

Students can use the line reference to go directly to the relevant sentence in the passage and reread it carefully. They should make a prediction as to the meaning of the word and find a synonym in the answer choices. Students may have used "in the habit of" as their prediction. The synonym would be *inclined*.

! If students chose (A), they may have answered the question using their knowledge of the tested word without looking back at the context in the passage. Remind students that many words have multiple meanings.

1. The author's primary purpose in writing the passage was most likely to
- (A) recount a brief history of the development of common "miracle drugs"
 - (B) illustrate contrasting, yet complementary, methods of scientific inquiry**
 - (C) argue for the superiority of methodical science that is immune to chance
 - (D) explore the unlikely chain of events that led to Fleming's discovery
 - (E) prove that animal testing leads to substantial benefits for humankind

hint → Make sure that your answer choice applies to the entire passage, not just one paragraph.

2. The main contrast in the passage is between

- (A) good luck and bad luck in scientific investigations
- (B) Fleming's personal hygiene and that of Florey and Chain
- (C) Fleming's methods and those of Florey and Chain**
- (D) scientific method in 1928 and a decade later
- (E) the discovery of bacteria and the discovery of penicillin

hint → Use your passage map to determine the main ideas of the passage.

3. Which of the following was NOT a chance circumstance that contributed to Fleming's discovery?
- (A) the presence of bacteria on the culture plate**
 - (B) the species of mold that the mycologist was growing
 - (C) the ambient temperature in the lab
 - (D) the freedom of the mold to spread
 - (E) the position of his lab in the building

hint → You can find the details needed to answer this question in the third paragraph of the passage.

4. As used in line 26, the word "given" most nearly means

- (A) granted
- (B) inclined**
- (C) specified
- (D) hoping
- (E) attempting

hint → Try replacing the word "given" with each of the answer choices to see which makes the most sense.



Answers

5 E Degree of Difficulty: 4

Students can use the clues in the paragraph—the mold spores wafting to his lab, the cool days of August, Fleming taking another look at the plate—to determine that the most logical reason for mentioning the mycologist is to emphasize the happenstance nature of Fleming’s discovery.

⚠️ If students chose (D), they may have thought that the mycologist was negligent in letting the spores loose. Remind students to find as many clues as they can to substantiate their choice for the correct answer. The other details in the paragraph do not substantiate (D).

6 C Degree of Difficulty: 3

Students can use the line reference to go directly to the relevant sentence in the passage and reread it carefully. They should make a prediction as to the meaning of the word and find a synonym in the answer choices. Students may have used *serious* as their prediction. The synonym would be *great*.

⚠️ Students who answered (A) or (E) used their knowledge of the tested word without looking back at the context in the passage. Remind students that many words have multiple meanings and that the SAT generally does not test the most common meaning. Also remind students that, as (A) and (E) are synonyms, neither can be correct.

7 D Degree of Difficulty: 5

Students should use the line reference and the key words in the question stem to go to the relevant part of the passage. They can then use the clues in the passage to determine the most logical answer. The clue about how Florey and Chain set up their experiment using live mice leads to the inference that they wanted to test the culture inside a living organism.

⚠️ Students who answered (E) based their answer choice on the information at the beginning of the paragraph. While the answer choice is true, Florey and Chain were not trying to test the accuracy of Fleming’s conclusion.

5. The author mentions the mycologist in lines 42–47 primarily to emphasize which of the following?

- (A) Unconventionality in laboratory practices was not limited to Fleming.
- (B) Researchers often have to work in difficult circumstances.
- (C) The properties of the penicillin mold would have eventually been discovered even without Fleming.
- (D) Fleming’s discovery was the result of another scientist’s negligence.
- (E)** The chances of Fleming making his discovery were remote.

hint Use your marked passage to identify the main idea of this paragraph.

6. In line 70, the word “heroic” suggests which of the following?

- (A) courageous
- (B) unrealistic
- (C)** great
- (D) ancient
- (E) brave

hint Which answer choices can you eliminate because they are the common meanings of the word “heroic”?

7. Which of the following does the passage suggest is a hypothesis that Florey and Chain wished to test in their experiment (lines 71–74)?

- (A) The results of Fleming’s investigations can be duplicated if an identical method is used.
- (B) The efficacy of Fleming’s antibacterial broth is not dependent on the species of bacteria targeted.
- (C) Mice are more susceptible than humans to a wide variety of bacterial infections.
- (D)** The active culture in Fleming’s broth will remain effective inside a living organism.
- (E) Fleming’s conclusion about the effect of externally applying the broth was inaccurate.

hint Find the difference in the way Florey and Chain used penicillin when compared with Fleming.

KAP Wrap

approx. 5 min.

Delivery

Summarize what students have learned about inference and vocabulary-in-context questions.

- Inference questions require students to use clues to arrive at the most logical answer. Students can use line references, underlined key words, and their passage maps to find the relevant paragraph and search for evidence.
- Vocabulary-in-context questions also ask students to make inferences. Students should predict the meaning of the tested word in context and then look for a synonym in the answer choices.

Have students work on the KAP Wrap at the end of class or for homework.

- Encourage students to look back at questions in the lesson as a basis for the questions they create. They can use similar phrasing for their questions.
- After students complete the KAP Wrap, you may choose to have them share their questions in pairs or small groups. Students can check their peers' understanding and offer feedback on the questions they created.

KAP Wrap

Read the following passage carefully.

Sunspots are poorly understood. Observations have revealed that the swirly smudges represent areas of intense magnetic activity where the sun's radiative energy has been blocked, and that they are considerably cooler than bright regions of the sun. Scientists have not been able, however, to determine just how sunspots are created or what effect they have on the solar constant (a misnomer that refers to the sun's total radiance at any instant).

The latter question, at least, now seems to have been resolved by data from the Solar Maximum Mission satellite, which has monitored the solar constant since 1980, the peak of the last solar cycle. As the number of sunspots decreased throughout 1986, the satellite recorded a gradual dimming of the sun. Over the past year, as sunspots have proliferated, the sun has brightened. The data suggest that the sun is 0.1 percent more luminous at the peak of the solar cycle, when the number of sunspots is greatest, than at its nadir.

In the space below, write one inference question and one vocabulary-in-context question to accompany this passage.

(sample answers)

Inference question:

1. The passage implies that the solar constant is not an accurate term because Vocabulary-in-Context question:
2. The word "proliferated" in line 11 most nearly means

