DIRECTIONS: Read the two passages and then answer the questions that follow.

Beam Me Up, Smell-ie!
by Faith Hickman Brynie

1 Talk about instant travel in space and time! It seems that nothing can take you back to a memory faster than an odor. The experience is called the “Proust phenomenon.” It’s named for a French novelist who described a flood of childhood memories that came back to him after he smelled pastry dipped in linden tea.

2 It’s hard to argue with Proust’s idea. In our everyday experience, it seems that nothing jogs the memory better than a smell. To see if that’s so, Welsh researchers recruited volunteers who had visited the Jorvik Museum in York, England. Museumgoers there experience not only the sights and sounds, but also the smells, of a Viking village recreated from a thousand years ago. The researchers gave people tests of facts about the museum, asking what they remembered about their visits several years before. Some of the test-takers filled out the questionnaires while smelling the Jorvik Museum’s unique mix of aromas. Others worked while smelling a different odor or none at all. The result? People who smelled “Eau de Jorvik” got the highest scores on the test. This result is not, unfortunately, as much a proof of the Proust phenomenon as it is of a learning process called “context-dependent memory.” The same sights, sounds, and odors that are present when we learn something new help us to recall it later. (Remember that when you are studying for a test!)

3 To qualify as the Proust phenomenon, an odor-prompted memory should be old, vivid, and emotional. There’s evidence for all three. Simon Chu and John Downes at the University of Liverpool asked people in their late 60s and 70s to describe memories that came to mind when they heard a word or smelled an odor. Verbal cues most often produced memories from ages 11 to 25. Odor cues brought back older memories—things that happened when the respondents were ages 6 to 10. The same scientists prodded people’s recall with smells, pictures, and words. Subjects rated their smell-cued memories as more emotional and richer in detail than the word- or picture-stimulated ones.
The big question, however, is whether odor is better than sight or sound at bringing back memories vividly. Rachel Herz, a psychologist at the Monell Chemical Senses Center in Philadelphia, says that it isn’t. She showed people paintings and at the same time had them smell an odor or imagine one. A few days later, she exposed them to the odor or gave them a word describing the odor. Regardless of whether they had smelled the odor or just heard the word, people were no more accurate in remembering the painting. However, the emotional content of their memory—how the painting made them feel—was much stronger when the memory’s trigger was odor.

“I believe that the Proust phenomenon can be subtly redefined,” Herz says. “Odors may trigger a memory of uncommon emotional power, it is true. But the vividness of memory—its sensation of accuracy—is an illusion created by that rush of emotion.” The architecture of the brain explains the Proust phenomenon, Herz thinks. Odors are processed and memories are retrieved (but not stored) in the brain’s right half. The brain’s center of emotion is also there.

Q&A: How Can Our Noses Smell a Trillion Different Odor Mixtures?
by Jane J. Lee, National Geographic

Our noses are better at distinguishing smells than we ever knew. A lot better.

In fact, we may be able to detect as many as a trillion different odors, according to a new study published this week. That’s orders of magnitude more than earlier estimates of nasal intelligence.

The study marks the first time that the human sense of smell has been put through a rigorous scientific test, says Leslie Vosshall, a researcher at Rockefeller University in New York City.

A 1920s study concluded that people could smell roughly 10,000 different odors, but that estimate wasn’t backed by data, says Vosshall, co-author of the study published March 20 in the journal Science.
Still, that decades-old figure remained unchanged until now, likely giving rise to a scientific under-appreciation of our nose’s capabilities.

National Geographic spoke via email to study co-author Andreas Keller, a researcher in Vosshall’s laboratory at Rockefeller University, about the new research, whether there’s a universal “good” smell, and if scientists might find evidence for “supersmellers.”

When did this idea that humans have a poor sense of smell first pop up?

I blame Plato, who wrote in Timaeus—[his account of the formation of the universe]—that vision is the greatest gift given to us by the gods and the basis of philosophy, whereas smell is a half-formed thing about which not much can be said.

What about the idea that we can distinguish 10,000 odors? Where’d that come from?

This number is based on theoretical work from the early 20th century. [It] was based on the assumptions that (a) there are four elementary odor qualities—fragrant, acidic, caproic [or sweaty], and burnt—and (b) that we can discriminate around ten different intensities of each of these qualities, 10x10x10x10=10,000. Unfortunately, both assumptions were wrong.

Did it surprise you to find that humans can smell a trillion odor mixtures?

Not at all. From my experience working with odors, I knew that it is very unusual to find two mixtures of odors that cannot be discriminated. And because the number of possible mixtures is astronomically high, it always seemed to me that 10,000 was much too small a number. I suspect that most other people working with smells would have agreed with me.

You tested whether people would be able to distinguish one mixture of odors from another. Is there a difference between being able to smell those mixtures as opposed to single odors?
There is a condition called specific anosmia, or odor-blindness, in which people with an otherwise OK sense of smell cannot perceive a specific type of odor, like musk. To them, some single odors that have a smell to others are odorless. For mixtures, one will not find this effect because even if people cannot smell some of the components in a mixture, they will be able to smell [the other odors].

Is there a scent that’s universally considered a good smell? What about a universal bad one?

I published a paper in which a few hundred people rated how much they liked around 60 different odors. I think vanillin was the favorite and isovaleric acid [a compound that gives smelly cheese its pungent odor] the least favorite.

However, all the subjects were from the New York area, so that doesn’t count as universal. But from an evolutionary standpoint, fruit odor would be a good candidate for a universally pleasant odor and the odor of decaying flesh a good candidate for an unpleasant one.

Are there “supersmellers,” just like there are supertasters—people with an extremely good ability to distinguish flavors?

There probably are. There is enormous variability in an individual’s olfactory abilities. Much of it is probably due to genetic variability in the [odor] receptors.

However, there are different ways to measure how good a person’s sense of smell is—sensitivity, the ability to discriminate similar smells, the ability to identify components in mixtures—and it is not clear which one would have to be unusual to qualify as a “supersmeller.”

Where will our noses lead your research next?
Like many others in our field, I want to better understand what makes odors smell similar or different. So this is the question my research is now focusing on. I’m especially interested in pairs of mixtures that share none of their components, yet smell similar.

Magnetic resonance imaging of the brain (MRI). Olfaction, the sense of smell, occurs when chemical substances stimulate special nerves situated in the upper part of the nasal cavity.


1. Read the sentence from paragraph 5 of “Beam Me Up, Smell-ie!”

   But the vividness of memory—its sensation of accuracy—is an illusion created by that rush of emotion.

   What is the meaning of the word illusion as it is used in the sentence?

   a) a specific feeling
   b) a reference to something
   c) something that can be seen
   d) something that is misleading

2. Which statement shows how psychologists played a role in the study of the human nose in “Beam Me Up, Smell-ie!”?

   a) They determined which sense is the strongest.
   b) They examined the connection of emotion to scents.
   c) They examined all parts of the body including the nose.
   d) They determined which scents prompt certain memories.
3. Read the sentence from paragraph 5 in “Beam Me Up, Smell-ie!”

The architecture of the brain explains the Proust phenomenon, Herz thinks.

Why does the author use the word architecture to describe the brain in the sentence?

Ⓐ to compare the artistry of brains and buildings
Ⓑ to compare the brain and designer’s purposes
Ⓒ to compare the brain’s design to a building’s design
Ⓓ to compare the brain’s components to a building’s components

4. Which statement best describes how the author develops the central idea that sense of smell is an important part of memory recall in “Beam Me Up, Smell-ie!”?

Ⓐ by describing experiments scientists have done about memory and smells
Ⓑ by sharing stories about how smells triggered memories for certain people
Ⓒ by illustrating a specific example of how a smell triggered a memory in an individual
Ⓓ by explaining the scientific connection between the human brain and the sense of smell
5. Read the quotation from paragraph 5 of “Beam Me Up, Smell-ie!”

“I believe that the Proust phenomenon can be subtly redefined,” Herz says. “Odors may trigger a memory of uncommon emotional power, it is true. But the vividness of memory—its sensation of accuracy—is an illusion created by that rush of emotion.”

How does the author use this quotation to support her argument in the passage?

A to add to the Proust phenomenon experience by stating odors retrieve old memories

B to support the Proust phenomenon experience by agreeing that odor retrieves old memories

C to modify the Proust phenomenon experience by combining odors and emotions to retrieve old memories

D to disprove the Proust phenomenon experience by stating that emotions are what retrieves old memories
The following question has two parts. First, answer Part A. Then, answer Part B.

**Part A**
Identify one claim made by the author in “Beam Me Up, Smell-ie!”

- Smells bring back childhood fears.
- Smell has a special connection to feelings.
- Vision is the most important sense for memory recall.
- Findings of past research are incorrect and need to be revised.

**Part B**
Which quotation from the passage supports the answer to Part A?

- “The same sights, sounds, and odors that are present when we learn something new help us to recall it later.” (paragraph 2)
- “Odor cues brought back older memories—things that happened when the respondents were ages 6 to 10.” (paragraph 3)
- “Subjects rated their smell-cued memories as more emotional and richer in detail than the word- or picture-stimulated ones.” (paragraph 3)
- “Regardless of whether they had smelled the odor or just heard the word, people were no more accurate in remembering the painting.” (paragraph 4)
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7. Which quotation should be included in an accurate summary of the passage “Beam Me Up, Smell-ie!”?

A “Talk about instant travel in space and time!” (paragraph 1)

B “In our everyday experience, it seems that nothing jogs the memory better than a smell.” (paragraph 2)

C “The researchers gave people tests of facts about the museum, asking what they remembered about their visits. . . .” (paragraph 2)

D “Odors are processed and memories are retrieved (but not stored) in the brain’s right half.” (paragraph 5)

8. Why does the author include paragraphs 1–6 in the passage “How Can Our Noses Smell a Trillion Different Odor Mixtures?”

A to describe the research that has been done

B to introduce the different scientists that conducted studies

C to show that studies from the past have given incorrect information

D to share information about the different studies that have been conducted
9. How does paragraph 8 contribute to the development of the passage “How Can Our Noses Smell a Trillion Different Odor Mixtures?”

- It introduces a reason for the study.
- It gives an example of a central concept.
- It provides an example for the phenomenon.
- It serves as a transition from the previous paragraph.

10. What is an advantage of using the photograph of the MRI to present information about the sense of smell?

- It shows the emotional effect of odors on the brain.
- It adds information about how odors reach the brain.
- It adds information about the poor sense of smell that humans have.
- It shows how the right half of the brain stores information on emotion.
11. How do the authors of “Beam Me Up, Smell-ie!” and “How Can Our Noses Smell a Trillion Different Odor Mixtures?” differ in their emphasis of information on the nose?

☐ In “Beam Me Up, Smell-ie!” the author acknowledges a psychological connection, while the author of “How Can Our Noses Smell a Trillion Different Odor Mixtures?” exposes failed past inquiries.

☐ In “Beam Me Up, Smell-ie!” the author provides an explanation of a phenomenon, while the author of “How Can Our Noses Smell a Trillion Different Odor Mixtures?” explains a theory written by Plato.

☐ In “Beam Me Up, Smell-ie!” the author describes anecdotes, while the author of “How Can Our Noses Smell a Trillion Different Odor Mixtures?” provides data from research and lingering questions.

☐ In “Beam Me Up, Smell-ie!” the author points out the strength of senses, while the author of “How Can Our Noses Smell a Trillion Different Odor Mixtures?” provides a detailed description on the future of nasal research.
DIRECTIONS: Read the passage and then answer the questions that follow.

The Wood-Pile
by Robert Frost

OUT walking in the frozen swamp one grey day
I paused and said, “I will turn back from here. No, I will go on farther—and we shall see.”
The hard snow held me, save where now and then
5   One foot went down. The view was all in lines
Straight up and down of tall slim trees
Too much alike to mark or name a place by
So as to say for certain I was here
Or somewhere else: I was just far from home.
10   A small bird flew before me. He was careful
To put a tree between us when he lighted,
And say no word to tell me who he was
Who was so foolish as to think what he thought.
He thought that I was after him for a feather—
15   The white one in his tail; like one who takes
Everything said as personal to himself.
One flight out sideways would have undeceived him.
And then there was a pile of wood for which
I forgot him and let his little fear
20   Carry him off the way I might have gone,
Without so much as wishing him good-night.
He went behind it to make his last stand.
It was a cord of maple, cut and split
And piled—and measured, four by four by eight.
25   And not another like it could I see.
No runner tracks in this year’s snow looped near it.
And it was older sure than this year’s cutting,
Or even last year’s or the year’s before.
The wood was grey and the bark warping off it
30   And the pile somewhat sunken. Clematis
Had wound strings round and round it like a bundle.
What held it though on one side was a tree
Still growing, and on one a stake and prop,
These latter about to fall. I thought that only
Someone who lived in turning to fresh tasks
Could so forget his handiwork on which
He spent himself, the labour of his axe,
And leave it there far from a useful fireplace
To warm the frozen swamp as best it could
With the slow smokeless burning of decay.

“The Wood-Pile” by Robert Frost from NORTH OF BOSTON. Copyright © 1914, Henry Holt and Company.

Photograph of footprints in the snow (Image RTR40C3G) by Phil Noble, copyright © 5 Feb. 2015. Phil Noble/Reuters Pictures. Used by permission.
12. How is the point of view of the bird different from the speaker in lines 10–19?

- The bird imagines what the speaker thinks, while the speaker wants to get a feather from the bird.
- The bird appears fearful of the speaker, while the speaker imagines what the bird is thinking.
- The bird does not pay attention to the speaker, while the speaker observes the bird closely.
- The bird is careful where he sits, while the speaker seems careless about nature.

13. Read line 11 from the passage.

To put a tree between us when he lighted,

What is the meaning of the word lighted as it is used in this line?

- burned
- chirped
- illuminated
- landed
Session 1

14. What does the speaker imply about the bird when he states “One flight out sideways would have undeceived him” in line 17?

A. The bird is startled and takes off in flight.
B. The speaker needs to communicate with the bird.
C. The bird could approach the speaker to see the truth.
D. The speaker is really trying to steal a feather as the bird takes flight.

15. What does the speaker mean in lines 18–19 by saying “there was a pile of wood for which I forgot him”?

A. The speaker overlooked the wood.
B. The speaker stumbled on the wood.
C. The speaker lost all memory of the wood.
D. The speaker became distracted by the wood.
16. Which quotation from the passage supports the inference that the speaker is curious?

- “Out walking in the frozen swamp one grey day” (line 1)
- “I paused and said, ‘I will turn back from here.’” (line 2)
- “‘No, I will go farther—and we shall see.’” (line 3)
- “And not another like it could I see.” (line 25)

17. Which statement is a central idea of the passage?

- The speaker is intrigued by natural elements.
- The speaker meets the creatures of the woods.
- The speaker examines the plant life of the woods.
- The speaker struggles with which direction to choose.
The following question has two parts. First, answer Part A. Then, answer Part B.

**Part A**
What do the woodpile and the bird have in common in the passage?

- Both are decaying.
- Both are forgotten.
- Both are far from home.
- Both are covered in snow.

**Part B**
Which quotation from the passage supports the answer to Part A?

- “Out walking in the frozen swamp one grey day” (line 1)
- “The hard snow held me, save where now and then” (line 4)
- “Or somewhere else: I was just far from home.” (line 9)
- “Without so much as wishing him good-night.” (line 21)
19. Read lines 18–20 from the passage.

   And then there was a pile of wood for which
   I forgot him and let his little fear
   Carry him off the way I might have gone,

   How do these lines from the passage develop a central idea?

   A. by illustrating the fascination that nature holds
   B. by describing the importance of completing a task
   C. by showing that past actions can impact the future
   D. by introducing an example of continuing when it seems pointless

20. Read line 26 from the passage.

   No runner tracks in this year’s snow looped near it.

   What can the reader infer about the swamp based on this line?

   A. There is a path surrounding the swamp.
   B. There is a small population in the swamp.
   C. There has not recently been anyone in the swamp.
   D. There has not normally been snowfall in that particular area.
21. How does the author’s use of the word **burning** in line 40 affect the meaning of the passage?

- It compares natural light and light from a fire.
- It suggests the speaker wanted to build a campfire.
- It creates a contrast between natural decay and fire.
- It implies there was a wildfire that destroyed the woodpile.

22. How would the meaning of the passage change if it was written about the photograph?

- The mood would be gloomy.
- The resolution would happen sooner.
- The speaker would no longer feel isolated.
- The speaker would have no need for the woodpile.
The following question has two parts. First, answer Part A. Then, answer Part B.

**Part A**

Which sentence is a theme of the passage?

- Nature is full of mysteries to discover.
- Exploration of the world is often rewarding.
- Humans have the same motivations as animals.
- Inspiration drawn from nature can lead to success.

**Part B**

Which line(s) from the passage support the answer to Part A?

- “He thought that I was after him for a feather—” (line 14)
- “The white one in his tail. . . .” (line 15)
- “And then there was a pile of wood for which / I forgot him. . . .” (lines 18–19)
- “. . . and let his little fear / Carry him off the way I might have gone,” (lines 19–20)
The Disadvantages of Prescribed Fires
by Michael Belcher

1. Prescribed fires are used by land management agencies, such as the National Park Service, the USDA Forest Service and state-level park services, to maintain and restore fire-dependent environments. Low-intensity, prescribed fires are used to remove the buildup of what is called wildland fuel load, which is made up of fallen leaves and timber. If left to accumulate, this fuel load can cause devastating damage during a wildfire. While there are many advantages to using controlled burns, several criticisms can be leveled at the practice.

Air pollution

2. Smoke, made up of particulate matter, can cause respiratory problems if inhaled. Prescribed fires set near towns can send smoke into population centers and aggravate asthma sufferers’ symptoms. Pollution problems can be mitigated by burning on days when wind direction blows away from populated areas.

Decreased visibility

3. Smoke hovering over roadways and blown into populated areas can decrease visibility and increase the risk of auto accidents. Signs should be posted along roadways adjacent to the burning area to warn drivers of the risk.

Prescribed fire escapes

4. Uncontrolled prescribed fires can leave the prescribed area, turning into a wildfire. All prescribed fires are required to have an agency-approved burn plan. Each agency has different requirements for their burn plans, but each is required to list the exact area to be burned and include emergency burn plans for the surrounding area, if the fire escapes the original burn area. Uncontained escaped fires can lead to larger, uncontrollable wildfires.
Manpower

Prescribed fires require several highly trained people to be present for the duration of the burn. Even low-intensity burns require dozens of people to set the fires, cut control lines and monitor the surrounding area for escaped fires. While many people are needed to control a small, planned fire, several hundred more are needed to extinguish an unplanned wildfire.

◆ ◆ ◆

The following question has two parts. First, answer Part A. Then, answer Part B.

**Part A**

What is the meaning of the word *prescribed* as it is used in paragraph 1?

- A. arranged
- B. claimed
- C. rushed
- D. triggered

**Part B**

Which quotation from paragraph 1 supports the answer to Part A?

- A. “. . . fires are used to remove the buildup of what is called wildland fuel load. . . .”
- B. “. . . this fuel load can cause devastating damage during a wildfire.”
- C. “. . . there are many advantages to using controlled burns. . . .”
- D. “. . . several criticisms can be leveled at the practice.”
25. Read the sentence from paragraph 2.

*Pollution problems can be mitigated by burning on days when wind direction blows away from populated areas.*

What does the word *mitigated* mean as it is used in the sentence?

- A disturbed
- B eliminated
- C escalated
- D reduced

26. Read the sentence from paragraph 3.

*Signs should be posted along roadways adjacent to the burning area to warn drivers of the risk.*

What does the word *adjacent* mean as it is used in the sentence?

- A above
- B beside
- C inside
- D under
27. Select a quotation that supports the argument that prescribed fires can cause damage.

A “Pollution problems can be mitigated by burning on days when wind direction blows away from populated areas.” (paragraph 2)

B “Smoke hovering over roadways and blown into populated areas can decrease visibility and increase the risk of auto accidents.” (paragraph 3)

C “Each agency has different requirements for their burn plans, but each is required to list the exact area . . . if the fire escapes the original burn area.” (paragraph 4)

D “Even low-intensity burns require dozens of people to set the fires, cut control lines and monitor the surrounding area for escaped fires.” (paragraph 5)

28. Why does the author use description to develop his ideas throughout the passage?

A to explain how uncontrolled fires affect an area

B to show the planning that goes into prescribed fires

C to reveal why prescribed fires concern him and should not be used

D to list the reasons prescribed fires are refuted and should be carefully planned
29. The following question has two parts. First, answer Part A. Then, answer Part B.

**Part A**

Based on the passage, what can the reader infer about prescribed fires?

- Prescribed fires only happen in rural or country areas.
- Prescribed fires take careful planning and consideration.
- Prescribed fires are less beneficial than unplanned fires.
- Prescribed fires can cause a city to spend a great deal of money.

**Part B**

Which quotation supports the inference made in Part A?

- “Prescribed fires are used by land management agencies, such as the National Park Service, the USDA Forest Service and state-level park services, to maintain and restore fire-dependent environments.” (paragraph 1)

- “Low-intensity, prescribed fires are used to remove the buildup of what is called wildland fuel load, which is made up of fallen leaves and timber.” (paragraph 1)

- “Each agency has different requirements for their burn plans, but each is required to list the exact area to be burned and include emergency burn plans for the surrounding area, if the fire escapes the original burn area.” (paragraph 4)

- “While many people are needed to control a small, planned fire, several hundred more are needed to extinguish an unplanned fire.” (paragraph 5)
Session 1

30. Choose two statements that express central ideas of the passage.

① Prescribed fires can be very useful.

② Prescribed fires have a few disadvantages.

③ Prescribed fires can affect the human body.

④ Prescribed fires are controlled by a variety of agencies.

⑤ Prescribed fires are used to reduce flammable material found in nature.
DIRECTIONS: Read the passage and then answer the questions that follow.

Excerpt from Anne of Avonlea
by Lucy Maud Montgomery

A Question of Color

1. “That old nuisance of a Rachel Lynde was here again today, pesterling me for a subscription towards buying a carpet for the vestry¹ room,” said Mr. Harrison wrathfully. “I detest that woman more than anybody I know. She can put a whole sermon, text, comment, and application, into six words, and throw it at you like a brick.”

2. Anne, who was perched on the edge of the veranda, enjoying the charm of a mild west wind blowing across a newly ploughed field on a gray November twilight and piping a quaint little melody among the twisted firs below the garden, turned her dreamy face over her shoulder.

3. “The trouble is, you and Mrs. Lynde don’t understand one another,” she explained. “That is always what is wrong when people don’t like each other. I didn’t like Mrs. Lynde at first either; but as soon as I came to understand her I learned to.”

4. “Mrs. Lynde may be an acquired taste with some folks; but I didn’t keep on eating bananas because I was told I’d learn to like them if I did,” growled Mr. Harrison. “And as for understanding her, I understand that she is a confirmed busybody and I told her so.”

5. “Oh, that must have hurt her feelings very much,” said Anne reproachfully. “How could you say such a thing? I said some dreadful things to Mrs. Lynde long ago but it was when I had lost my temper. I couldn’t say them DELIBERATELY.”

6. “It was the truth and I believe in telling the truth to everybody.”

7. “But you don’t tell the whole truth,” objected Anne. “You only tell the disagreeable part of the truth. Now, you’ve told me a dozen times that my hair was red, but you’ve never once told me that I had a nice nose.”

8. “I daresay you know it without any telling,” chuckled Mr. Harrison.
“I know I have red hair too . . . although it’s MUCH darker than it used to be . . . so there’s no need of telling me that either.”

“Well, well, I’ll try and not mention it again since you’re so sensitive. You must excuse me, Anne. I’ve got a habit of being outspoken and folks mustn’t mind it.”

“But they can’t help minding it. And I don’t think it’s any help that it’s your habit. What would you think of a person who went about sticking pins and needles into people and saying, ‘Excuse me, you mustn’t mind it . . . it’s just a habit I’ve got.’ You’d think he was crazy, wouldn’t you? And as for Mrs. Lynde being a busybody, perhaps she is. But did you tell her she had a very kind heart and always helped the poor, and never said a word when Timothy Cotton stole a crock of butter out of her dairy and told his wife he’d bought it from her? Mrs. Cotton cast it up to her the next time they met that it tasted of turnips and Mrs. Lynde just said she was sorry it had turned out so poorly.”

“I suppose she has some good qualities,” conceded Mr. Harrison grudgingly. “Most folks have. I have some myself, though you might never suspect it.”

vestry: a room in a church, used as an office and for changing

adapted text from Anne of Avonlea by Lucy Maud Montgomery. Copyright © 1908, L.C. Page & Co.
31. **Read the sentence from paragraph 1.**

“That old **nuisance** of a Rachel Lynde was here again today, pestering me for a subscription towards buying a carpet for the vestry room,” said Mr. Harrison wrathfully.

What is the meaning of the word *nuisance* as it is used in the sentence above?

- ☐ a nosy person
- ☐ an irritating person
- ☐ a respectful person
- ☐ an intelligent person

32. **Read the sentence from paragraph 1.**

“**She can put a whole sermon, text, comment, and application, into six words, and throw it at you like a brick.**”

How does this statement impact the plot of the passage?

- ☐ It defines the problem Mrs. Lynde faced.
- ☐ It describes the conflict between Mrs. Lynde and Anne.
- ☐ It shows how the other characters are affected by Mrs. Lynde.
- ☐ It explains how Mr. Harrison and Anne come to a resolution over Mrs. Lynde.
Session 1

33. How does paragraph 2 define Anne’s character?

⑤ by showing how the setting is reflected in her personality

⑥ by describing how the setting of the story impacts her life

⑦ by contrasting Anne’s viewpoint with her father’s viewpoint

⑧ by implying that Anne is more concerned with her surroundings than with her father

34. What does Mr. Harrison imply by calling Mrs. Lynde “an acquired taste” in paragraph 4?

⑤ Mrs. Lynde reminds Mr. Harrison of things he dislikes.

⑥ Mrs. Lynde involves herself in other people’s business.

⑦ Mr. Harrison may learn to like Mrs. Lynde if he gets to know her.

⑧ Mr. Harrison refuses to be around Mrs. Lynde because of his dislike for her.
35. The following question has two parts. First, answer Part A. Then, answer Part B.

**Part A**

Read the sentence from paragraph 12.

“I suppose she has some good qualities,” conceded Mr. Harrison grudgingly.

What word means the same as *grudgingly* as it is used in the sentence?

- disrespectfully
- gratefully
- suspiciously
- unwillingly

**Part B**

Which word from the sentence helps define *grudgingly* as it is used in the sentence in Part A?

- conceded
- never
- qualities
- suspect
Session 1

36. Which paragraphs from the passage represent the contrasting points of view of Mr. Harrison and Anne?

A  paragraph 1 and 2
B  paragraph 3 and 4
C  paragraph 7 and 8
D  paragraph 9 and 10
37. The following question has two parts. First, answer Part A. Then, answer Part B.

**Part A**

Based on the passage, what can be inferred about Anne’s feelings toward Mrs. Lynde?

- Anne feels scornful toward Mrs. Lynde.
- Anne feels resentful toward Mrs. Lynde.
- Anne feels adoration toward Mrs. Lynde.
- Anne feels compassion toward Mrs. Lynde.

**Part B**

Which quotation from the passage supports the answer to Part A?

- "’I detest that woman more than anybody I know.’” (paragraph 1)
- "’I didn’t like Mrs. Lynde at first either; but as soon as I came to understand her I learned to.’” (paragraph 3)
- "’... I understand that she is a confirmed busybody and I told her so.’” (paragraph 4)
- "’And as for Mrs. Lynde being a busybody, perhaps she is.’” (paragraph 11)
Session 1

38. Which quotation from Mr. Harrison suggests he agrees with Anne about Rachel Lynde?

A “‘Mrs. Lynde may be an acquired taste with some folks. . . .’” (paragraph 4)

B “‘And as for understanding her, I understand that she is a confirmed busybody and I told her so.’” (paragraph 4)

C “‘It was the truth and I believe in telling the truth to everybody.’” (paragraph 6)

D “‘Well, well, I’ll try and not mention it again since you’re so sensitive.’” (paragraph 10)
39. The following question has two parts. First, answer Part A. Then, answer Part B.

**Part A**

What is a theme of the passage?

- Always speaking the truth is impolite.
- People’s opinions are not easily changed.
- Gossiping about others can lead to hurt feelings.
- People should strive to see the good characteristics in others.

**Part B**

Which quotation from the passage supports the answer to Part A?

- “‘The trouble is, you and Mrs. Lynde don’t understand one another. . . .’” (paragraph 3)
- “‘It was the truth and I believe in telling the truth to everybody.’” (paragraph 6)
- “‘Well, well, I’ll try and not mention it again since you’re so sensitive.’” (paragraph 10)
- “‘I’ve got a habit of being outspoken and folks mustn’t mind it.’” (paragraph 10)
Satellite Tagging
by Rich Press

1. If you want to protect a species, you have to know where it is. That can be difficult in the ocean, where animals are often hidden beneath the waves. To find out where ocean animals go and the routes they take to get there, scientists attach electronic tags to them. Those tags collect data on temperature, depth, and location, then transmit their data via satellite.

2. Jeffrey Polovina is a scientist with NOAA’s Pacific Islands Fisheries Science Center in Honolulu, and he and his colleagues have tagged hundreds of loggerhead sea turtles, bigeye tuna, swordfish, moonfish, and whale sharks. “The tags allow us to see tracks in the ocean,” Polovina said, “but we’re also interested in the bigger picture.”

3. As Polovina explains in this interview, the bigger picture comes from combining tag data with data from ocean-observing satellites. That oceanographic data shows large-scale features in the ocean such as currents, fronts, and eddies. The tracking data from the tags show how animals navigate through and around these features.

4. Rich Press: Your research involves combining tag data with data from ocean-observing satellites. What do you learn by doing this?

5. Jeffrey Polovina: We look out on the ocean and see this homogenous expanse. But animals see it very differently, and that’s why it’s useful to send fleets of animals out with tags on them. By combining tag data with oceanographic data, we get to see how animals perceive the ocean, and that provides some amazing insights.
It’s clear that these animals aren’t just wandering randomly over the ocean. They’re following well-defined paths. Sometimes they’ll get into an eddy, which is a big circulation pattern that can be 100 km across, and they’ll ride around the edge, maybe once or twice, each time taking maybe a month to go around. And then they’ll get off right where they got on, and continue on their way. They get pushed around by strong currents, but then they’ll travel back to resume their trajectory. They’re able to stay within different features of the ocean, something that for a ship would require GPS and satellite imagery. You get a sense that these animals not only know where they are but they know where they’re going in this big ocean.

**Rich Press:** What was the biggest surprise you’ve had upon downloading data from an electronic tag?

**Jeffrey Polovina:** Loggerhead sea turtles showed us a new aspect of the ocean that we didn’t expect. The loggerheads we tagged nest on beaches in Japan, and they also turn up off the Baja Peninsula in Mexico. So we assumed that after hatching they swam across the Pacific to Mexico. We tagged about 400 loggerheads, and we found that quite a number of them spend years and even decades in the open ocean far from shore, migrating back and forth along a well-defined oceanographic front.

That front separates a nutrient-rich mass of water to the north from nutrient-poor waters to the south, and the turtles were moving back and forth across that boundary. People had studied these regions before, but until the turtles showed us that it was important, no one had paid attention to the boundary between them, which stretches most of the way across the Pacific Ocean. So they showed us an important feature of the ocean that we didn’t know was out there.

**Rich Press:** What was the most challenging tagging situation you’ve encountered?

**Jeffrey Polovina:** Each animal has its peculiar challenges and problems. We’ve tagged moonfish—they’re also known as opah—which are these big, slow-swimming, deep-diving animals. We were getting a lot of data from opah that showed standard dive distributions of 300 to 400 meters depth.

Then after a couple weeks one of the tags started showing completely different behavior. They were going deeper, the water temperature was much warmer, and the light sensors recorded total darkness. [Editor’s note: data from the light sensors are used to calculate location, since GPS doesn’t work underwater.]
We thought the tag had malfunctioned and sent it back to the manufacturer. But it turned out that a shark ate the tag, and maybe the opah with it. The tag was in the stomach of an endothermic shark, so it was warmer than the ambient water temperature, and of course it was totally dark. After a couple of weeks in the shark it came out one way or another, popped up to the surface, and we got tracks of two different species from the same tag.

Rich Press: So the tags are also collecting information on the animals’ diving behavior. What are we learning about the three-dimensional aspect of the ocean from tagging data?

Jeffrey Polovina: It seems that every time we put a tag on an animal, it’s diving a lot deeper than we had previously imagined. For instance, we used to think that whale sharks mainly used the shallow surface layer of the ocean. But our tagging showed that they often dive to at least 980 meters. We don’t really know how deep they’re going—the tags only register up to 980 meters. They might be going a lot deeper.

These deep dives are a puzzle. It may be that they’re finding prey organisms at those depths. Maybe they go there to escape from predators, or maybe they’re just going down there to cool off after building up heat at the surface layer.

We’ve also seen swordfish in the Central Pacific going down to 800 meters and feeding all day in that cold dark water and then coming up at night to warm up. Bigeye tuna shoot down to around 300 meters, but they only stay for an hour or two then shoot back up to warm up and oxygenate.

Different species seem to be partitioning the vertical depth structure in the ocean, each foraging on different species in a different depth range, so that they’re not all at the same depth competing for the same resources.

Rich Press: What’s the next step for tagging research?
20 Jeffrey Polovina: Longer-lasting tags so we can collect multi-year data and smaller tags so we can tag smaller animals. For example, longer-lasting tags would allow us to analyze how the movements and habitats of equatorial tuna change between El Niño and La Niña conditions. Smaller tags would allow us to learn about movements of hatchling sea turtles.


40. How do paragraphs 1–3 support the author’s purpose?

○ The paragraphs describe a scientist’s interest in studying ocean life.

○ The paragraphs introduce a scientist as well as the topic of the interview.

○ The paragraphs indicate reasons why the reader may be interested in the topic.

○ The paragraphs pose several questions that are answered later in the passage.

41. Read the sentence from paragraph 6.

You get a sense that these animals not only know where they are but they know where they’re going in this big ocean.

What additional quotation supports the inference that the author makes in the sentence?

○ "But animals see it very differently, and that’s why it’s useful to send fleets of animals out with tags on them." (paragraph 5)

○ "By combining tag data with oceanographic data, we get to see how animals perceive the ocean. . . ." (paragraph 5)

○ "Sometimes they’ll get into an eddy, which is a big circulation pattern that can be 100 km across. . . ." (paragraph 6)

○ "They get pushed around by strong currents, but then they’ll travel back to resume their trajectory." (paragraph 6)
42. In the passage, Jeff Polovina states, “The tags allow us to see tracks in the ocean. . . .” Which quotation from the passage supports this statement?

- “We look out on the ocean and see this homogenous expanse.” (paragraph 5)
- “You get a sense that these animals not only know where they are but they know where they’re going. . . .” (paragraph 6)
- “That front separates a nutrient-rich mass of water to the north from nutrient-poor waters to the south. . . .” (paragraph 9)
- “Then after a couple weeks one of the tags started showing completely different behavior.” (paragraph 12)

43. Read the sentence from paragraph 6.

They get pushed around by strong currents, but then they’ll travel back to resume their trajectory.

What is the meaning of the phrase to resume their trajectory as it is used in the sentence?

- to travel off course
- to become lost in the ocean
- to arrive at a specific location
- to continue on the same path
44. What does the author’s use of the word *shoot* in paragraph 17 illustrate about the fish?

- It explains the different depths in which the fish forage in their search for food.
- It indicates the speed at which the fish move from one depth of the water to another.
- It shows that moving from one depth to another while looking for food is dangerous for the fish.
- It demonstrates that the fish are releasing food as they move between different depths of the water.

45. Read the sentence from paragraph 18.

*Different species seem to be partitioning the vertical depth structure in the ocean, each foraging on different species in a different depth range, so that they’re not all at the same depth competing for the same resources.*

What is the meaning of the word *partitioning* as it is used in the sentence?

- defining
- hiding
- layering
- registering
46. How does the author’s use of the interview format aid in the understanding of the passage?

○ It allows the author to introduce various types of sea life and talk about their habitats.

○ It offers a clear understanding of the relationship between sea creatures and humans.

○ It provides steps that the reader can take in order to conduct research about ocean life.

○ It introduces an expert who gives examples of how animal tagging and satellite imaging lead to discoveries.

47. What is the author’s point of view about tagging different species of ocean animals for data?

○ The author disapproves of the tags because they cannot track different species effectively.

○ The author approves of the tags because he believes it is important to help conserve different species.

○ The author disapproves of the tags because they provide false information on the swimming patterns of different species.

○ The author approves of the tags because he assists with the research and has already tagged hundreds of different species.
Session 1

48. How does the photograph help develop an understanding of the satellite tags?

A. It shows how satellite tags are attached to animals.

B. It shows the effects of smaller satellite tags on smaller animals.

C. It shows where satellite tags are located on the loggerhead sea turtles.

D. It shows how satellite tags affect where loggerhead sea turtles migrate.
The following question has two parts. First, answer Part A. Then, answer Part B.

**Part A**

What did scientists learn after tagging loggerhead turtles on the beaches of Japan?

- There were 400 loggerhead turtles on the beach.
- Most of the Pacific Ocean had never been studied.
- Loggerheads migrate after hatching on Japanese beaches.
- There was an important feature of the ocean that was not known before.

**Part B**

What effect would the information in the answer to Part A have on future scientific investigations?

- Scientists will not explore that section of ocean anymore.
- Scientists will decide that turtles are no longer endangered.
- Scientists will look even more closely for unexpected results.
- Scientists will assume all ocean animals migrate right after birth.
Session 1

50. What is a central idea of “Satellite Tagging”?

- Scientists are constantly developing new ways to study animal habitats.
- Scientists use satellites to create images of the ocean floor to learn about animal habitats.
- Scientists tag ocean animals to analyze the causes of certain migration patterns.
- Scientists utilize electronic tags and satellite images to learn how to better protect ocean species.
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DIRECTIONS: Read the passage and write a response to the prompt that follows.

Clover
by Billy Lombardo

1 By the time Graham entered the class, the go-around had already begun. What had developed over the past two months—without captaincy, it seemed, without organization or deliberation—was an informal Monday morning circle in which each student shared the best moment of her weekend with the rest of the class.

2 Graham waited for the ritual to feather away and for the girls to take out their novels and note-books before he cleared his throat and pointed to his hair, which a couple of the girls had already noticed. Emma Neary seemed to look everywhere but at Graham during the Monday ritual. Leigh Fanning disguised her alarm at his hair by passing it off as a crick in her neck.

3 “Before I begin with a poem,” Graham said, “if I might just talk about my hair a moment.”

4 There were smiles, there was the folding of arms across chests, the lovely and generous gestures of smart and confident young women who appreciated the perquisites that sometimes came with being smart and responsible—these anecdotal asides, for example, from teachers who treated them like grownups.

5 “You know, of course,” Graham began, “that I’ve been working feverishly on my house since the day I bought it two years ago.”

6 Of course they knew. They had been in on the ongoing saga of Graham’s home renovations from the first day of class. They knew about his plumbing issues and the crumbling chimney, the gutter debacle, the ancient wiring, the plaster and lath. They knew about the never-ending trips to Peasley’s Hardware. Graham believed in these small revealings of his life to his students; they had been part of his pedagogy from early in his teaching career. There were teachers who complained incessantly about the lack of classroom time, about the chippings away of the day, about bathroom visits and early dismissals for swim meets and soccer games, but Graham made no apologies for the few minutes he allowed his students some respite from the rigors of the school day.
“You remember Previous Owner,” he said, and the girls smiled. The previous owner had taken on a kind of literary value in their class. He was a secondary character, a clown who had a habit of taking the easy way out. The girls sat back in relaxed anticipation while Graham reminded them of the time Previous Owner had painted over wallpaper and then wallpapered over that. Graham reminded them of the layers of linoleum and tile built upon each other like kitchen strata.

“Well,” Graham continued, “one of the last remnants of Previous Owner’s terrible taste in everything is the bathroom mirror.”

He couldn’t say why he had kept the ancient relic up so long. He had cut his index finger twice before finally covering the bottom corner of the mirrored cabinet with duct tape. It was a rusting tin box with shelves, painted white, to which looking glass had been glued.

“Well,” Graham said, “I’ve finally taken the mirror down.” There was applause, smattered and light. Graham nodded, right-angled his arms at the front and back of his waist, and bowed at their recognition of this small triumph. But there was more.

The plan was to install the new mirror last night as well, but the installation turned out to be trickier than he had anticipated. He’d purchased the new mirror months before but had forgotten electrical work would be involved. There were lights.

“Well,” Graham said. “I realized late last night that it would have to wait until another day. It’s looking to become one of those projects that requires numerous trips to Peasley’s.”

“What does that have to do with your hair?” Leigh Fanning asked.

Graham set his palms in the air before him, two gentle stop signs for Leigh Fanning, and the class smiled. Leigh Fanning was not patient.

“The long and short of it is this,” Graham said. “In the morning, when I showered and dried my hair and otherwise prepared for the school day, I did so without the benefit of a bathroom mirror. Ergo this.” He pointed to the tuft.

“It’s like an ossicone,” McKenzie Caldwell said.

“I knew someone in this class would use that word,” Graham said.

“What’s an ossicone?” asked another girl.
“Giraffes have them,” someone said, and Ellery White raised her hand.

Ellery was sitting that day where Caroline Dahl usually sat—between McKenzie Caldwell and Lizzy Bell. Always the first to enter the room, she took a different seat each day, and in this manner she worked her clockwise way around the oval table. Among the other ways she distinguished herself from the girls in the classroom was this: she was the only student who ever raised her hand.

“Yes, Ellery?” Graham said, and Ellery’s right hand drifted slowly and lightly downward before settling on her left. She was graceful and lovely and smart. “Don’t you have another mirror, Mr. Koglin?” she asked.

1. Read the following prompt and write your complete response in the answer document.

You have read “Clover,” a passage about a man named Graham. Write an essay describing Graham’s interactions with his students. Analyze how the author describes Graham’s unique characteristics in the classroom and at home and how the students react to him. Provide key details and examples from the passage to support your response.

Your writing will be scored based on the development of ideas, organization of writing, and language conventions of grammar, usage, and mechanics.
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**MARKING DIRECTIONS**
- Use only soft black pencil (No. 2).
- Do NOT use ink pen or felt-tip marker.
- Make heavy, dark marks that completely fill the circle.
- Erase completely any marks you wish to change.

**SAMPLE MARKS**

- **RIGHT**: ●●●
- **WRONG**: ☒☒☒

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If student barcode labels are being used, position label **WITHIN** the dotted lines.