

Section 3

Reading Comprehension

36 Questions

Time: 35 minutes

This section contains six short reading passages. Each passage is followed by six questions based on its content. Answer the questions following each passage on the basis of what is stated or implied in that passage. You may write in your test booklet.

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Questions 1–6

1 The Great Library of Alexandria was a
2 marvel of ancient Egypt and of human
3 achievement. Established during the Hellenistic
4 period sometime between 324 and 246 BCE,
5 under Ptolemy I or perhaps Ptolemy II, the
6 Library was reputedly an architectural wonder.
7 More importantly, the Library housed a vast
8 collection of works from all across the ancient
9 world and was a major center of scholarship.
10 The Library was charged with the ambitious
11 mission of collecting all of the world’s books,
12 and it employed numerous methods to acquire
13 new works. A well-funded acquisitions
14 department scoured the book fairs of Rhodes
15 and Athens, purchasing individual texts or even
16 whole libraries. Ships that landed at the harbor
17 of Alexandria were searched for books, and the
18 books were confiscated and copied. The copies
19 were returned to the owners of the originals,
20 but the originals were kept in the library. The
21 Library also employed a number of scholars
22 who produced original works on Astronomy,
23 Mathematics, Physics, and many other subjects.
24 The scribes and scholars of the Great
25 Library not only collected books and conducted
26 research; they also assembled collections and
27 translated texts from around the world into
28 Greek. Many of the works translated or
29 assembled at Alexandria survive to this day:
30 some of the first translations of Biblical texts

31 into Greek may have occurred in the time of
32 Ptolemy I at the Library of Alexandria, although
33 the canonical versions would not be created for
34 some hundreds of years more. In addition,
35 much work was done to compile and edit
36 authoritative versions of the Homeric myths
37 for which the Greeks are so well known today.
38 These texts have played a fundamental role in
39 shaping our culture for hundreds of years, and
40 were only a few of the great works of
41 translation and editing that took place in
42 Alexandria in the Hellenistic period.

43 It is ironic that the fate of the Great
44 Library—an institution dedicated to the
45 collection and preservation of knowledge—is
46 shrouded in myth and mystery. Many sources
47 say it burned down, but they cannot agree
48 upon a date. It may have been burned more
49 than once, either by accident or intentionally.
50 Smaller sister institutions may have survived
51 the original library, only to be destroyed later.
52 The Great Library, or some version of it, could
53 have survived for anywhere from 300 to 1,000
54 years. Though the Library no longer stands,
55 there is little doubt that the scholarship of the
56 Great Library has had a great and lasting
57 impact on history. The works that were kept,
58 translated, or created there have had a
59 profound influence on our culture even to the
60 present day.

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1. Which sentence best expresses the main idea of the passage?
 - (A) The mysterious demise of the Great Library should serve as a warning to future generations.
 - (B) As the history of the Great Library shows, the confiscation of private property can sometimes be justified if it serves the common good.
 - (C) The Great Library was an impressive institution, which played an important role in shaping history and culture.
 - (D) The translation of existing works into a familiar language can be just as important as creating original works.

2. The author of this passage would most likely agree that
 - (A) The Great Library most likely survived for only about 300 years.
 - (B) The ultimate fate of the Great Library should always remain a mystery.
 - (C) The preservation and advancement of knowledge is very important.
 - (D) It is very surprising that ancient people were concerned about preserving books.

3. In line 33, “canonical” most nearly means
 - (A) original.
 - (B) translated.
 - (C) ancient.
 - (D) official.

4. Which best states the main point of the second paragraph (lines 24-42)?
 - (A) Ancient books were usually based on oral history.
 - (B) Even historically important texts are only useful once they’ve been translated into a familiar language.
 - (C) The scholars of the Great Library were more interested in editing existing works than in creating new ones.
 - (D) In addition to their other activities, the scholars of the Great Library translated and edited many important texts.

5. What does the author suggest is the main problem with theories about the destruction of the Great Library?
 - (A) There are no surviving eye-witnesses to give an account of the Great Library’s destruction.
 - (B) All of the historical records are in Ancient Greek, which it is difficult for modern researches to translate.
 - (C) There is some reason to believe that the Great Library may still exist somewhere in Alexandria.
 - (D) There are many conflicting stories, and the details vary widely among accounts.

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6. Which best describes the organization of the passage?
- (A) The author relates a personal story about his experience with a real place, and describes the historical context.
 - (B) The author describes a theory, discusses the evidence, and examines opposing viewpoints.
 - (C) The author describes the founding of a historical institution, its role in ancient society, and its decline or destruction.
 - (D) The author relates a story about the ancient world, and discusses its origins.

Questions 7–12

1 An early 19th century understanding of
2 the laws of gravitation predicted certain orbits
3 for each of the planets, and as a general rule the
4 seven planets known at that time politely
5 observed these orbits. Yet there was an
6 exception: Uranus, at the far outer reaches of
7 the solar system, refused to behave as
8 predicted. The irregularity of Uranus’s orbit
9 posed a problem for scientists: the data did not
10 match their models for how the planets should
11 behave.

12 Some believed the model must be
13 modified, speculating that the effect of the
14 sun’s gravity simply changed at such extreme
15 distances. Others were convinced that the data
16 was flawed; they believed it was more likely
17 that astronomers had botched their
18 observations than that current models of
19 gravitation and planetary orbits— which so
20 elegantly predicted the motions of other
21 orbiting bodies— were wrong. Still, it was
22 possible that the model was correct and the
23 observations had been accurate, but that the
24 data was incomplete. Those who believed this

25 to be the case took the position that some as-
26 yet-undiscovered object in the outer solar
27 system was perturbing the orbit of Uranus, and
28 that the discovery of that object would explain
29 the eccentric orbit of Uranus.

30 If this theory was correct, it meant that
31 there was a large orbiting body waiting to be
32 discovered in the outer solar system, and at
33 least two scientists—John Adams Couch and
34 Urbain Jean-Joseph Le Verrier— worked
35 separately to calculate the position of such a
36 body. By 1846, they had calculated the mass,
37 orbit, and position of what would soon be
38 recognized as the newest planet, using only
39 theories of gravitation and observations of the
40 orbit of Uranus. With the calculations done,
41 astronomers pointed their telescopes to the
42 location in the night sky where Couch and Le
43 Verrier had predicted the planet could be
44 found, and in a dramatic confirmation of their
45 work, Neptune could be observed directly in its
46 distant orbit at the outer edge of our solar
47 system.

7. Which sentence best summarizes the main point of the passage?
- (A) Uranus is probably the most important planet, because it helped us to understand more about our solar system than any other planet.
 - (B) Astronomers need more help making accurate measurements, because too often poor data leads to false conclusions.
 - (C) Just when we think we know everything about our solar system, we often make chance discoveries, such as the observation of the planet Neptune.
 - (D) While there were several possible explanations for the strange behavior of Uranus, scientists ultimately proved that the best explanation was a previously unknown planet.
8. In lines 4-5, “politely observed these orbits” can be best interpreted to mean that the planets
- (A) behaved according to known rules.
 - (B) were easy to observe in the night sky.
 - (C) revolved around the sun quietly.
 - (D) rarely changed their orbits.
9. The theory described in lines 24-29 proposed that
- (A) the effects of the sun’s gravity are different in the outer solar system.
 - (B) some other object was altering the orbit of Uranus.
 - (C) observations of the orbit of Uranus must be wrong.
 - (D) the seven known planets had predictable orbits.
10. Based on the context, “perturbing” (line 27) most nearly means
- (A) eliminating.
 - (B) circling.
 - (C) disturbing.
 - (D) alarming.
11. The passage provides evidence to support which of the following statements?
- (A) An understanding of the laws of physics allows scientists to make accurate predictions about the universe.
 - (B) Most of the planets of our solar system have been known since ancient times.
 - (C) John Adams Couch was primarily responsible for the discovery of Neptune.
 - (D) We have good reason to believe that there may be more planets waiting to be discovered in the outer solar system.

12. Which sentence best describes how the article is organized?
- (A) A hypothesis is proposed, the evidence is considered, and it is concluded that the original hypothesis was correct.
 - (B) A problem is introduced, several possible solutions are discussed, and the correct solution is identified and explained.
 - (C) A problem is introduced, and possible methods for finding a solution are discussed, but no conclusion is reached.
 - (D) Two scientists are named, their competition to solve a problem is discussed, and the one who ultimately made the greatest contribution is celebrated.

Questions 13–18

1 Oceans cover most of Earth’s surface,
2 and in their depths dwells most of the planet’s
3 life. We are drawn to certain aspects of the
4 ocean, yet most of the marine world is alien to
5 us. Just offshore, coral reefs dazzle us with rich
6 colors and complex ecosystems. Reef fish are
7 often quite beautiful, displaying a stunning
8 variety of colors and patterns, and are a
9 favorite choice for fish tanks. However, some
10 parts of the ocean are less familiar to us. Kelp
11 forests—thick, dizzying mazes of life—provide
12 food for snails and urchins, which in turn are a
13 source of food for otters, rockfish, and other
14 predatory animals. Far out beyond the coast,
15 where waves tower over ships, whales and
16 massive fish graze on microscopic plankton,
17 extracting their sustenance from what appears
18 to the naked eye to be nothing but water. And
19 deep down, beyond the continental shelf,
20 beyond the warming rays of the sun, lie the
21 abyssal plains.

22 Here flat grey plains of ooze stretch over
23 incredible distances, shrouded in darkness, fed
24 by a constant rain of decaying matter from the
25 seas above. At first glance, these appear to be
26 dead, empty places, but in truth they teem with
27 life. Most of the life on the abyssal plains is
28 bacterial, but there are larger creatures there
29 too. Deep sea corrals grow in the abyssal
30 plains, anchoring themselves to the sea floor.

31 There are also less familiar forms of life, like
32 the giant isopod and the sea pig. The giant
33 isopod is a crustacean, like a shrimp or lobster,
34 but it resembles a pill-bug, and can grow to be
35 more than a foot long. The sea pig is a kind of
36 sea cucumber. Most sea cucumbers resemble
37 slugs, but the sea pig has developed small
38 tubular legs and walks along the sea floor. It
39 gets its name from these legs and from its soft
40 pink flesh. There are fish, too, like the tripod
41 fish which uses long thin fins to perch on top of
42 the ooze, or the anglerfish which uses a
43 glowing rod-like appendage to lure prey into
44 its hungry jaws. And there must be much more
45 than we yet know; although this vast region
46 covers more than half of the entire solid
47 surface of the planet, it is one of the most
48 poorly explored places on Earth.

49 We have explored less than 1% of the
50 area covered by the abyssal plains, and most of
51 that exploration has been conducted by
52 remotely operated vehicles. Although we do
53 have small submarines capable of carrying
54 people to the depths of the ocean, fewer people
55 have gone to the abyssal plains than have gone
56 into space. This deep frontier, vast and
57 mysterious, will surely yield many new
58 discoveries in years to come if we only go and
59 look for them.

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13. Which sentence best summarizes the author's main idea in this passage?
- (A) Plankton are an essential part of ocean food chains even in the deepest areas.
 - (B) We should invest more in exploring the ocean than in exploring space.
 - (C) The ocean is a strange and wonderful place which is not yet fully explored.
 - (D) We don't know very much about space and the oceans.
14. Which best states the main point of the first paragraph (lines 1-21)?
- (A) People should spend more time in the ocean so that it will seem less alien.
 - (B) Coral reefs are probably the most beautiful part of the ocean.
 - (C) The earth's oceans contain a great variety of organisms and environments.
 - (D) The abyssal plains are the deepest parts of the ocean.
15. As it is used in line 17, "sustenance" most nearly means
- (A) activity.
 - (B) reproduction.
 - (C) nourishment.
 - (D) body size.
16. What is the author's purpose in pointing out that "fewer people have gone to the abyssal plains than have gone into space" (lines 54-56)?
- (A) To highlight how dangerous the abyssal plains are for human beings.
 - (B) To support the idea that there is a great deal of exploration left to be done in the abyssal plains.
 - (C) To suggest that there is an unfair lack of funding for marine exploration compared to space exploration.
 - (D) To imply that it is more difficult to reach the ocean floor than it is to get into space
17. The author's attitude toward the ocean could best be described as
- (A) fascinated.
 - (B) ambivalent.
 - (C) stern.
 - (D) indifferent.
18. The passage implies that rockfish and otters
- (A) only feed on snails.
 - (B) are both predators.
 - (C) are more familiar than most sea creatures.
 - (D) feed on the kelp that grows in kelp forests.

Questions 19–24

1 In 18th century France, the masses
2 suffered greatly and ate poorly. The main
3 staple of the common diet was bread, and half
4 of the paltry income of the regular French
5 citizen was dedicated to acquiring this simple
6 commodity. As crops failed, shortages
7 occurred, compounding the suffering of the
8 poor. But while the common people suffered in
9 the streets, the privileged classes, cloistered
10 away in opulent mansions, ate and drank
11 luxuriously in their private worlds of wealth
12 and pleasure.

13 The stark inequalities of the era did not
14 escape the notice of the poor, and a smoldering
15 resentment built among them, later to be
16 expressed in a conflagration of violence and
17 rebellion. Indeed, the lavish lifestyles of the
18 aristocracy may have had even more to do
19 with the coming of revolution than the
20 troubles of the peasantry.

21 Upon hearing of the agonies of the
22 people, that they had “no bread to eat,” Marie
23 Antoinette, then Dauphine and later Queen of
24 France, is reputed to have replied, “Let them
25 eat cake!” The utterance acquired a great
26 symbolic importance in the aftermath of the
27 French Revolution, when historians used it to
28 illustrate the ignorance and indifference of the

29 upper classes to the suffering of the poor. The
30 story expressed the feelings of the people,
31 spoke clearly and powerfully to the sentiment
32 of the time, and agreed with the judgment of
33 the Revolutionary Tribunal that the Dauphine
34 was a traitor to the people— a judgment which
35 would lead her to the guillotine. It is an
36 excellent tale, but it does have one minor flaw:
37 it is almost certainly not true.

38 It is, at the very least, a misattribution,
39 but very likely a total fabrication. It appeared
40 first in *Confessions*, the autobiography of Jean-
41 Jacques Rousseau, attributed only to a “great
42 princess.” Rousseau’s *Confessions* was not
43 noted for its reliability, and even if we take the
44 tale to be true, it would almost certainly have
45 been written while Marie Antoinette was still
46 only a small child.

47 Alas, a good story’s survival rarely rests
48 on whether or not it actually happened. This
49 tale has survived the Queen as one of the most
50 widely acknowledged “facts” of her life, and it
51 is likely to persist, marching down into history,
52 bearing with it the spirit of an age— and
53 followed always by a chorus of historical
54 pedants, chanting persistently, “But of course,
55 it isn’t true.”

19. According to the passage, the poor citizens of 18th century France faced which of the following problems involving bread?
- (A) Bakeries went out of business because the poor had no money to buy bread.
 - (B) People did not have enough bread to eat, even though they spent much of their money on it.
 - (C) People didn't like eating bread all the time, and craved something different.
 - (D) People weren't willing to pay outrageous bread prices and demanded cheaper alternatives.
20. The quotation "Let them eat cake" first appeared in
- (A) the popular culture of revolutionary France.
 - (B) the trial of Marie Antoinette.
 - (C) a book by Jean-Jacques Rousseau.
 - (D) a biography of Marie Antoinette.
21. The author's main purpose in this passage is to
- (A) dispute a popular historical myth.
 - (B) tell an exciting story about revolutionary France.
 - (C) persuade the reader that Marie Antoinette was actually a kind and generous person.
 - (D) describe how false stories begin and are spread.
22. According to the passage, why did people tend to believe the story about Marie Antoinette?
- (A) Historians did not discover until much later that the source was unreliable.
 - (B) It was the sort of thing Marie Antoinette was often known to say.
 - (C) The story confirmed what people already felt about the rich at that time.
 - (D) Only true stories last through history, so it was safe to assume it was reliable.
23. We can infer from the passage that Marie Antoinette was
- (A) not very well educated.
 - (B) only a small child at the time of her death.
 - (C) executed by French revolutionaries.
 - (D) never acquainted with Jean-Jacques Rousseau.
24. According to the passage, good stories
- (A) must be true, or they're merely myths.
 - (B) are usually fictional, but sometimes become facts.
 - (C) often persist whether or not they are true.
 - (D) must have a villain, even if one has to be made up.

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Questions 25–30

1 Since prehistoric times, people have
2 grown cotton to make clothing: archaeologists
3 have found pieces of cotton fabric in Mexico
4 and Pakistan dating from as far back as 5000
5 BC. Not only is cotton one of our most ancient
6 clothing materials, it is also the most
7 commonly used fiber in clothing today.

8 Although many people wear it daily, they may
9 not be aware of the role cotton has played in
10 history.

11 In the United States, most cotton was
12 produced in the fertile South. Until the end of
13 the 18th century, the US cotton industry was
14 small, yielding only about 900,000 kilograms
15 of cotton in 1791. The industry began to grow
16 tremendously in 1793, when the American Eli
17 Whitney invented the cotton gin. Before the
18 cotton gin, a bale of cotton required over 600
19 hours of labor to produce. With Whitney’s
20 invention, the process took only about 12
21 hours. With this increase in efficiency, cotton
22 soon became the dominant industry in the
23 South, and by 1801 the United States was
24 producing more than 22 million kilograms of
25 cotton every year.

26 By 1860, one year before the start of the
27 American Civil War, the Southern States
28 supplied the majority of the world’s cotton.
29 The cotton industry brought in huge profits for
30 the plantation owners. However, these profits
31 were accompanied by a substantial growth in
32 the slave industry, since slaves comprised the
33 majority of the workforce on cotton

34 plantations. By 1860, slaves constituted more
35 than 50% of the population of the cotton-
36 producing states of Alabama, Mississippi, and
37 Louisiana. The growth of the slave-based
38 cotton industry contributed in turn to the
39 American Civil War, since the North opposed
40 the use of slave labor, and the South was
41 emboldened by the power of the cotton
42 industry.

43 During the Civil War, the Southern States
44 attempted a policy called “cotton diplomacy.”
45 Most of the cotton produced in the American
46 South was exported to Europe, which was
47 dependent on American raw cotton for its
48 textile industry. The Southern States
49 attempted to use their economic influence to
50 persuade Great Britain to side with them in the
51 Civil War by drastically reducing the amount of
52 cotton they supplied. So strong was their belief
53 that Great Britain would accede to their
54 request that the plantation owners dubbed
55 their crop “King Cotton.” Unfortunately for
56 them, the warehouses of Great Britain had
57 already imported and stockpiled a huge
58 surplus of cotton. Cotton diplomacy failed, and
59 neither Great Britain nor any other European
60 power intervened during the Civil War.

61 The history of cotton is woven together
62 with agricultural slavery, industrial advances,
63 civil war, and foreign diplomacy. It has not
64 only been a fiber of choice in our clothing for
65 thousands of years, but also a significant
66 strand in the fabric of history.

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25. Which sentence best describes the main point of the second paragraph?
- (A) The South was the most fertile region of the United States.
 - (B) Eli Whitney was partially responsible for the Civil War.
 - (C) Cotton fields were mostly worked by slave labor.
 - (D) New technology transformed cotton production from a minor industry to a major one.
26. According to the passage, what was Eli Whitney's main contribution to the cotton industry?
- (A) Eli devised the policy of "cotton diplomacy" during the civil war.
 - (B) Eli increased the slave population in the south, allowing plantation owners to grow more cotton.
 - (C) Eli invented a machine that made it easier to process large quantities of cotton.
 - (D) Eli invented a device which allowed cotton to be processed for the first time.
27. Cotton diplomacy might have been a more successful policy if
- (A) all American farmers had produced cotton.
 - (B) plantation owners had produced less cotton.
 - (C) Northern mill towns had not exported any cotton to Great Britain.
 - (D) Great Britain's cotton warehouses had been empty.
28. When plantation owners called their crop "King Cotton," they were suggesting that
- (A) they grew a special variety of cotton that was larger than other types.
 - (B) their cotton was used mainly by royalty.
 - (C) the crop was technically owned by the Crown.
 - (D) the crop gave them a great deal of power.
29. Based on the context, "accede" (line 53) most nearly means
- (A) surpass.
 - (B) submit.
 - (C) answer.
 - (D) deny.
30. Which best describes the organization of the passage?
- (A) A subject is introduced, and events are described in chronological order.
 - (B) Each paragraph discusses a different aspect of the same problem.
 - (C) The passage describes a particular historical event and discusses its importance.
 - (D) Questions are posed and then answers are considered.

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Questions 31–35

1 Modern chemistry can seem like a
2 strange domain: mysterious chemicals are
3 manipulated and produced in massive,
4 expensive laboratories. Sometimes we even
5 use the word “chemical” as though it means
6 something artificial and dangerous— “Be sure
7 to wash your apples thoroughly, to get the
8 chemicals off!” It’s true that there might be
9 some dangerous chemical pesticides on apples,
10 but it turns out that apples themselves are also
11 made of chemicals! Everything around us is
12 made of chemicals, some natural and some
13 synthetic. The practice of chemistry has a long
14 history, beginning with the observations of
15 simple chemical interactions with the natural
16 world.

17 In the ancient world, as far back as the
18 historical record extends, people made use of
19 medicinal plants. This is not quite the practice
20 of chemistry as we know it today: ancient
21 peoples did not know why the plants they used
22 worked as they did to treat pain, fever, or
23 other maladies. But through a process of trial
24 and error, they discovered many medicinal
25 properties that would lay the groundwork for
26 pharmaceutical chemistry. We can examine the
27 case of willow bark, a raw plant substance that
28 has the useful property of relieving pain. At
29 first, people mostly chewed raw pieces of the

30 bark to relieve aches and pains, a practice
31 which continues today. Over time, simple
32 herbal remedies were processed in many ways
33 to create more potent medicines: extracts,
34 tinctures, distillates.

35 By the 17th century, people gained a
36 better understanding of chemical properties,
37 and began to isolate chemical compounds. In
38 the early 19th century, efforts to isolate the
39 active compounds in willow bark yielded
40 salicylic acid, the chemical that was
41 responsible for the bark’s pain-relieving
42 effects. Unfortunately, salicylic acid in its raw
43 form was hard on the stomach, and for that
44 reason wasn’t a practical medicine. But with
45 the active compound discovered, and with
46 advancing knowledge of chemistry, another
47 step could be taken: salicylic acid was
48 eventually combined with other chemicals to
49 create a new synthetic chemical, acetylsalicylic
50 acid, which retained its pain-relieving effects
51 while being easier on the stomach. This
52 became the drug which we now know as
53 aspirin. Aspirin, like many other modern
54 drugs, is produced in the laboratories of
55 modern chemists using modern techniques,
56 but its origins can be traced back to ancient
57 herbal remedies.

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31. The passage focuses primarily on
- (A) the evolving field of chemistry.
 - (B) laboratory practices today.
 - (C) the best herbal remedies for aches and pains.
 - (D) the invention of aspirin in the 19th century.
32. As used in line 26, the word “pharmaceutical” most likely means
- (A) menacing
 - (B) ingenious
 - (C) medicinal
 - (D) ancient
33. According to the passage, willow bark was used
- (A) to treat pain.
 - (B) to upset the stomach.
 - (C) as a food.
 - (D) only in the ancient world.
34. The author most likely uses the example of willow bark in order to
- (A) demonstrate that modern chemistry is not always better than ancient medicine.
 - (B) show how a natural substance could be refined into new forms as scientists’ knowledge of chemistry improved.
 - (C) show how ancient people often failed to use resources in the best way because they did not understand chemistry.
 - (D) provide an example of something in our everyday lives that is made of chemicals.
35. Based on the passage, we can infer that extracts of medicinal plants generally
- (A) have stronger effects than the raw plants.
 - (B) require knowledge of modern chemistry to produce.
 - (C) take a very long time to produce.
 - (D) have to be taken in larger doses than raw plants.
36. The author states that apples are made of chemicals in order to make the point that
- (A) apples are a much more dangerous food than people generally understand.
 - (B) it’s not actually important to wash apples before eating them, because apple chemicals are safe.
 - (C) synthetic apples can easily be produced using modern chemistry.
 - (D) the way that we use the word “chemicals” suggests that we don’t always recognize chemicals in nature.

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