

**Official SAT Practice**

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# Lesson Plans

for Teachers by Teachers

## LESSON 4

## Reading—Synthesis/ Paired Passages

**Focus:** Working with paired passages

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**Objective:**

Students will synthesize information and ideas from paired texts.

**Before the Lesson:**

- Review Chapter 8 of *the SAT Study Guide for Students*.
- Review the “SAT<sup>®</sup> Reading Test: Synthesis” article at <https://www.khanacademy.org/test-prep/sat/new-sat-tips-planning/about-the-sat-reading-test/a/the-sat-reading-test-synthesis>.
- Preview and print (if necessary) the student materials.

## Introductory Activity | 15 minutes

1. Explain to students that each version of the Reading Test includes one set of two or more topically related informational passages on a subject in either history/social studies or science. The SAT calls these “paired passages” because in most cases there will be two passages in a set—one labeled Passage 1, and the other, Passage 2. Students will be expected to consider how these passages relate to each other.
2. Ask for a volunteer to read Passage 1 aloud in the Introductory Activity portion of their materials. Students should annotate the text and try to determine the main idea of the passage. Once students have a solid understanding of Passage 1, ask a volunteer to read Passage 2 aloud. Students should annotate the text by identifying similarities and differences between this passage and Passage 1.
3. Once students have read both passages. Discuss the following, perhaps using a Venn diagram to illustrate students’ responses:
  - a. What would the authors **disagree** about on the topic of de-extinction? Why?
  - b. What might the authors **agree** about on the topic of de-extinction? Why?
  - c. How likely is de-extinction to be in the near future, according to each author? What words or phrases communicate this perspective?
4. Ask students to consider Questions 45 and 46 that illustrate the kinds of questions they will be asked when they have to compare the passages. Be sure to let students know that they will still have some questions about each individual passage. The rationales for the correct answers are below. Share the correct responses with students and discuss and address any misunderstandings:

### Question 45 Rationale:

Choice B is the best answer. Passage 1 enthusiastically supports the idea of de-extinction, saying it is “profound news. That something as irreversible and final as extinction might be reversed is a stunning realization” (lines 22–24). Passage 2, on the other hand, recognizes the “gee-whiz appeal” (line 29) of de-extinction but is less certain about its implementation: “Yet with limited intellectual bandwidth and financial resources to go around, de-extinction threatens to divert attention from the modern biodiversity crisis” (lines 30–33). Therefore, Passage 2 urges restraint for an idea that Passage 1 enthusiastically supports. Choice A is incorrect because neither passage focuses on a political decision. Choice C is incorrect because Passage 1 does not mention a research study. Choice D is incorrect because Passage 2 does not consider practical uses (or “applications”) of de-extinction as much as the practical problems that result from its use.

**Question 46 Rationale:**

Choice C is the best answer. The author of the passage is amazed by the idea of de-extinction, while the authors of Passage 2 warn that a “program to restore extinct species poses a risk of selling the public on a false promise that technology alone can solve our ongoing environmental woes” (lines 42–45). This statement shows that the authors of Passage 2 view de-extinction as a “false promise” that may make the problem of shrinking biodiversity appear easier to solve than it actually will be. Choice A is incorrect because the authors of Passage 2 are less enthusiastic about the “prospect” of de-extinction than the author of Passage 1, as they state that de-extinction “threatens to divert attention from the modern biodiversity crisis” (lines 32–33). Choice B is incorrect because, while the authors of Passage 2 acknowledge that some extinctions may be inevitable, they are not resigned to de-extinction. Choice D is incorrect because the authors of Passage 2 do not suggest that people have little understanding of the biodiversity crisis.

5. Ask students to identify the skills that they will need to demonstrate when they “synthesize” texts on the SAT.

**Group/Pair Discussion/Activity | 20 minutes**

1. Ask students to return to the paired passages that they may have already read about the birds from Lesson 2. With a partner, one student should read or reread Passage 1 and the second should read Passage 2 individually. Both should annotate the text carefully.
2. After both students have read their passage, ask them to have a dialogue, speaking as if they were the authors. They should use the first person, “I,” pretending to be Susan Milius (Passage 1) and Bernd Heinrich (Passage 2), and answer the following questions:
  - a. What are the most important conclusions about your research?
  - b. What are some additional research topics you would probably like to explore?
  - c. What are your attitudes toward the birds you studied?
3. Once students have discussed the topics above, they should read the passage they had not read, and afterward, with their partner, discuss the following topics, perhaps constructing a Venn diagram to help illustrate some of the similarities and differences:
  - a. What are some similarities between the crows and the ravens?
  - b. What are some things you would not be likely to agree on?
  - c. How were the “experiments” conducted similarly and differently?
4. Ask students to write a question modeled on Question 46 that asks them to compare the two passages by considering the intelligence of birds that was observed in both passages. Discuss how this question illustrates synthesis.

**Individual Practice | 15 minutes**

1. Ask students to answer Questions 21–23 that ask them to compare the two passages they just read and discussed in the activity above. Share and discuss correct answers and the rationales as needed:

**Question #21 Rationale:**

**Explanation:** Choice A is the best answer. Both bird species studied modified their behavior in response to changes in their environment. The researchers described in Passage 1 “had gotten wild crows used to finding meat tidbits in holes in a log” (lines 19–20). In other words, the researchers had repeatedly placed meat in the log—that is, changed the crows’ environment—and the birds had responded by modifying their behavior, a point reinforced in line 21, which notes that the birds began “checking the log reliably.” The ravens in Passage 2 act in analogous fashion, responding to the introduction of new objects in their environment by “pick[ing] them out at a rate of up to tens of thousands of times greater than background or previously contacted objects” (lines 70–72).

**Question #22 Rationale:**

**Explanation:** Choice B is the best answer. The researchers described in Passage 1 “hid behind a blind” (line 22) to avoid being seen by the crow. The author of Passage 2, on the other hand, made no attempt to conceal his presence; in fact, as he describes it, he “led” the ravens in his study on “walks” (lines 44–46), during which he “touched specific objects” (line 48) and then watched to see whether the birds touched the same objects. The author of Passage 2 notes that the ravens “soon became more independent” (lines 54–55), going their own way rather than continuing to follow the author.

From this, it is clear that the author of Passage 2, unlike the researchers described in Passage 1, intentionally made the birds aware of his presence.

**Question #23 Rationale:**

**Explanation:** Choice D is the best answer. According to Passage 1, Morgan’s canon is “the principle that suggestions of humanlike mental processes behind an animal’s behavior should be rejected if a simpler explanation will do” (lines 2–4). The main conclusion drawn by the author of Passage 2 is that “ravens’ curiosity ensures exposure to all or almost all items in the environment” (lines 78–79). In referring to the ravens’ behavior as reflecting “curiosity,” a human trait, the author of Passage 2 would seem to be ascribing a humanlike mental process to an animal’s behavior without explicitly considering alternate explanations.

2. Ask students to reflect on their current abilities to synthesize texts. What do they think are their strengths and their areas for growth?

**Homework | 20 minutes**

- Students should continue to practice on Official SAT Practice on Khan Academy® until they reach and successfully complete at least one paired passage set. Students should target their practice in Reading Science or Reading History where paired passages are more likely.
- Students should also read the “SAT Reading Test: Synthesis” article in the Tips and Strategies tab.

<https://www.khanacademy.org/test-prep/sat/new-sat-tips-planning/about-the-sat-reading-test/a/the-sat-reading-test-synthesis>

## Student Materials—Lesson 4

### Introductory Activity

Passage 1 is adapted from Stewart Brand, “The Case for Reviving Extinct Species.” ©2013 by the National Geographic Society. Passage 2 is adapted from the editors at *Scientific American*, “Why Efforts to Bring Extinct Species Back from the Dead Miss the Point” ©2013 by Nature America, Inc.

#### Passage 1

Line Many extinct species—from the passenger pigeon to the  
woolly mammoth—might now be reclassified as “bodily, but not  
genetically, extinct.” They’re dead, Line but their DNA is  
recoverable from museum specimens and fossils, even those up to  
5 200,000 years old.

Thanks to new developments in genetic technology, that DNA  
may eventually bring the animals back to life. Only species whose  
DNA is too old to be recovered, such as dinosaurs, are the ones to  
consider totally extinct, bodily and genetically.

10 But why bring vanished creatures back to life? It will be  
expensive and difficult. It will take decades. It won’t always  
succeed. Why even try?

Why do we take enormous trouble to protect endangered  
species? The same reasons will apply to species brought back from  
15 extinction: to preserve biodiversity, to restore diminished  
ecosystems, to advance the science of preventing extinctions, and  
to undo harm that humans have caused in the past.

Furthermore, the prospect of de-extinction is profound news.  
That something as irreversible and final as extinction might be  
20 reversed is a stunning realization. The imagination soars. Just the  
thought of mammoths and passenger pigeons alive again invokes  
the awe and wonder that drives all conservation at its deepest level.

#### Passage 2

The idea of bringing back extinct species holds obvious gee-  
whiz appeal and a respite from a steady stream of grim news. Yet  
25 with limited intellectual bandwidth and financial resources to go  
around, de-extinction threatens to divert attention from the  
modern biodiversity crisis. According to a 2012 report from the  
International Union for Conservation of Nature, some 20,000  
species are currently in grave danger of going extinct. Species today  
30 are vanishing in such great numbers—many from hunting and  
habitat destruction—that the trend has been called a sixth mass  
extinction, an event on par with such die-offs as the one that befell  
the dinosaurs 65 million years ago. A program to restore extinct  
species poses a risk of selling the public on a false promise that  
35 technology alone can solve our ongoing environmental woes—an  
implicit assurance that if a species goes away, we can snap our  
fingers and bring it back.

Already conservationists face difficult choices about which  
species and ecosystems to try to save, since they cannot hope to  
40 rescue them all. Many so countries where poaching and trade in  
threatened species are rampant either do not want to give up the  
revenue or lack the wherewithal to enforce their own regulations.

Against that backdrop, a costly and flamboyant project to resuscitate extinct flora and fauna in the name of conservation  
45 looks irresponsible: Should we resurrect the mammoth only to let elephants go under? Of course not. That is not to say that the de-extinction enterprise lacks merit altogether. Aspects of it could conceivably help save endangered species. For example, extinct  
50 versions of genes could be reintroduced into species and subspecies that have lost a dangerous amount of genetic diversity, such as the black-footed ferret and the northern white rhino. Such investigations, however, should be conducted under the mantle of preserving modern biodiversity rather than conjuring extinct species from the grave.

**45**

Which choice best states the relationship between the two passages?

- A) Passage 2 attacks a political decision that Passage 1 strongly advocates.
- B) Passage 2 urges caution regarding a technology that Passage 1 describes in favorable terms.
- C) Passage 2 expands on the results of a research study mentioned in Passage 1.
- D) Passage 2 considers practical applications that could arise from a theory discussed in Passage 1.

**46**

How would the authors of Passage 2 most likely respond to the “prospect” referred to in line 21, Passage 1?

- A) With approval, because it illustrates how useful de-extinction could be in addressing widespread environmental concerns.
- B) With resignation, because the gradual extinction of many living species is inevitable.
- C) With concern, because it implies an easy solution to a difficult problem.
- D) With disdain, because it shows that people have little understanding of the importance of genetic diversity.



## Group/Pair Activity

Passage 1 is adapted from Susan Milius, “A Different Kind of Smart.” ©2013 by Science News. Passage 2 is adapted from Bernd Heinrich, *Mind of the Raven: Investigations and Adventures with Wolf-Birds*. ©2007 by Bernd Heinrich.

### Passage 1

In 1894, British psychologist C. Lloyd Morgan published what’s called Morgan’s canon, the principle that suggestions of humanlike mental processes behind an animal’s behavior should be rejected if a simpler explanation will do.

5 Still, people seem to maintain certain expectations, especially when it comes to birds and mammals. “We somehow want to prove they are as ‘smart’ as people,” zoologist Sara Shettleworth says. We want a bird that masters a vexing problem to be employing human-style insight.

10 New Caledonian crows face the high end of these expectations, as possibly the second-best toolmakers on the planet.

Their tools are hooked sticks or strips made from spike-edged leaves, and they use them in the wild to winkle grubs out of crevices. Researcher Russell Gray first saw the process on a cold morning in a mountain forest in New Caledonia, an island chain east of Australia. Over the course of days, he and crow researcher Gavin Hunt had gotten wild crows used to finding meat tidbits in holes in a log. Once the birds were checking the log reliably, the researchers placed a spiky tropical pandanus plant beside the log and hid behind a blind.

A crow arrived. It hopped onto the pandanus plant, grabbed the spiked edge of one of the long straplike leaves and began a series of ripping motions. Instead of just tearing away one long strip, the bird ripped and nipped in a sequence to create a slanting stair-step edge on a leaf segment with a narrow point and a wide base. The process took only seconds. Then the bird dipped the narrow end of its leaf strip into a hole in the log, fished up the meat with the leaf-edge spikes, swallowed its prize and flew off.

30 “That was my ‘oh wow’ moment,” Gray says. After the crow had vanished, he picked up the tool the bird had left behind. “I had a go, and I couldn’t do it,” he recalls. Fishing the meat out was tricky. It turned out that Gray was moving the leaf shard too forcefully instead of gently stroking the spines against the treat.

35 The crow’s deft physical manipulation was what inspired Gray and Auckland colleague Alex Taylor to test other wild crows to see if they employed the seemingly insightful string-pulling solutions that some ravens, kea parrots and other brainiac birds are known to employ. Three of four crows passed that test on the first try.

**Passage 2**

40 For one month after they left the nest, I led my four young ravens at least once and sometimes several times a day on thirty-minute walks. During these walks, I wrote down everything in their environment they pecked at. In the first sessions, I tried to be teacher. I touched specific objects—sticks, moss, rocks—and  
45 nothing that I touched remained untouched by them. They came to investigate what I had investigated, leading me to assume that young birds are aided in learning to identify food from the parents' example. They also, however, contacted almost everything else that lay directly in their own paths. They soon  
50 became more independent by taking their own routes near mine. Even while walking along on their own, they pulled at leaves, grass stems, flowers, bark, pine needles, seeds, cones, clods of earth, and other objects they encountered. I wrote all this down, converting it to numbers. After they were thoroughly familiar with the  
55 background objects in these woods and started to ignore them, I seeded the path we would later walk together with objects they had never before encountered. Some of these were conspicuous food items: raspberries, dead meal worm beetles, and cooked corn kernels. Others were conspicuous and inedible: pebbles, glass  
60 chips, red winterberries. Still others were such highly cryptic foods as encased caddisfly larvae and moth cocoons. The results were dramatic.

The four young birds on our daily walks contacted all new objects preferentially. They picked them out at a rate of up to  
65 tens of thousands of times greater than background or previously contacted objects. The main initial criterion for pecking or picking anything up was its novelty. In subsequent trials, when the previously novel items were edible, they became preferred and the inedible objects became “background” items, just like the leaves,  
70 grass, and pebbles, even if they were highly conspicuous. These experiments showed that ravens' curiosity ensures exposure to all or almost all items in the environment.

## Independent Activity

**21**

The crows in Passage 1 and the ravens in Passage 2 shared which trait?

- A) They modified their behavior in response to changes in their environment.
- B) They formed a strong bond with the humans who were observing them.
- C) They manufactured useful tools for finding and accessing food.
- D) They mimicked the actions they saw performed around them.

**22**

One difference between the experiments described in the two passages is that unlike the researchers discussed in Passage 1, the author of Passage 2

- A) presented the birds with a problem to solve.
- B) intentionally made the birds aware of his presence.
- C) consciously manipulated the birds' surroundings.
- D) tested the birds' tool-using abilities.

**23**

Is the main conclusion presented by the author of Passage 2 consistent with Morgan's canon, as described in Passage 1?

- A) Yes, because the conclusion proposes that the ravens' behavior is a product of environmental factors.
- B) Yes, because the conclusion offers a satisfyingly simple explanation of the ravens' behavior.
- C) No, because the conclusion suggests that the ravens exhibit complex behavior patterns.
- D) No, because the conclusion implies that a humanlike quality motivates the ravens' behavior.