

# Long passages

[Science](#), [Biology](#)



An upsurge of new research suggests that animals have a much higher level of brainpower than previously thought. If animals do have intelligence, how do scientists measure it? Before defining animals' intelligence, scientists defined what is not intelligence. Instinct is not intelligence. It is a skill programmed into an animal's brain by its genetic heritage. Rote conditioning is also not intelligence. Tricks can be learned by repetition, but no real thinking is involved. Cuing, in which animals learn to do or not to do certain things by following outside signals, does not demonstrate intelligence.

Scientists believe that insight, the ability to use tools, and communication using human language are all effective measures of the mental ability of animals. (2) When judging animal intelligence, scientists look for insight, which they define as a flash of sudden understanding. When a young gorilla could not reach fruit from a tree, she noticed crates scattered about the lawn near the tree. She piled the crates into a pyramid, then climbed on them to reach her reward. The gorilla's insight allowed her to solve a new problem without trial and error. (3) The ability to use tools is also an important sign of intelligence.

Crows use sticks to pry peanuts out of cracks. The crow exhibits intelligence by showing it has learned what a stick can do. Likewise, otters use rocks to crack open crab shells in order to get at the meat. In a series of complex moves, chimpanzees have been known to use sticks and stalks in order to get at a favorite snack—termites. To make and use a termite tool, a chimp first selects just the right stalk or twig. He trims and shapes the stick, then finds the entrance to a termite mound. While inserting the stick carefully into the entrance, the chimpanzee turns it skillfully to fit the inner tunnels.

The chimp attracts the insects by shaking the twig. Then it pulls the tool out without scraping off any termites. Finally, he uses his lips to skim the termites into his mouth. (4) Many animals have learned to communicate using human language. Some primates have learned hundreds of words in sign language. One chimp can recognize and correctly use more than 250 abstract symbols on a keyboard. These symbols represent human words. An amazing parrot can distinguish five objects of two different types. He can understand the difference between the number, color, and kind of object.

The ability to classify is a basic thinking skill. He seems to use language to express his needs and emotions. When ill and taken to the animal hospital for his first overnight stay, this parrot turned to go. " Come here! " he cried to a scientist who works with him. " I love you. I'm sorry. Wanna go back? "

(5) The research on animal intelligence raises important questions. If animals are smarter than once thought, would that change the way humans interact with them? Would humans stop hunting them for sport or survival? Would animals still be used for food, clothing, or medical experimentation?

Finding the answer to these tough questions makes a difficult puzzle even for a large-brained, problem-solving species like our own. 1. Crows use sticks to pry peanuts out of cracks. Which of the following is the kind of intelligence or conditioning the situation describes? a. rote learning b. tools c. communication d. instinct 2. The underlined word upsurge, as it is used in the first paragraph of the passage, most nearly means a. an increasingly large amount. b. a decreasing amount. c. a well-known amount. d. an immeasurable amount. 3. The concluding paragraph of this passage infers which of the following? . There is no definitive line between those animals

with intelligence and those without. b. Animals are being given opportunities to display their intelligence. c. Research showing higher animal intelligence may fuel debate on ethics and cruelty. d. Animals are capable of untrained thought well beyond mere instinct. 4. According to the passage, which of the following is true about animals communicating through the use of human language? a. Parrots can imitate or repeat a sound. b. Dolphins click and whistle. c. Crows screech warnings to other crows. d.

Chimpanzees and gorillas have been trained to use sign language or geometric shapes that stand for words. 5. In paragraph 3, what conclusion can be reached about the chimpanzee's ability to use a tool? a. It illustrates high intelligence because he is able to get his food and eat it. b. It illustrates instinct because he faced a difficult task and accomplished it. c. It illustrates high intelligence because he stored knowledge away and called it up at the right time. d. It illustrates high intelligence because termites are proteinpacked. 6. Which of the following is not a sign of animal intelligence? . shows insight b. cues c. uses tools d. makes a plan Passage 2 (1)

Photosynthesis is the process that plants use to convert sunlight into the food that they need to survive and grow. Most plants create some form of sugar from the sunlight, and this sugar is used by the plant as its primary food source. (2) Plants actually need only three things to create this sugar: sunlight, carbon dioxide, and water. The sunlight reacts with the plant's chlorophyll, a green chemical which is used to convert water and carbon dioxide into sugar. (3) As a general rule, photosynthesis occurs in a plant's leaves.

The leaf contains chlorophyll, which reacts when sunlight strikes the leaf. It is also the chlorophyll which gives the leaf its typical green color, since photosynthesis absorbs most light rays except green, which are reflected outwards. (4) The process of photosynthesis produces more than just sugar, however. One byproduct of the process is oxygen, which is "exhaled" by the plant into the atmosphere. In fact, plant photosynthesis is one of the primary sources of oxygen generation on our planet, making plant life essential to almost all living things on earth. 7.

According to paragraph 4, which of the following is a byproduct of photosynthesis? a. green pigment b. water c. carbon dioxide d. oxygen 8.

The underlined word essential, as used in paragraph 4, most nearly means a. necessary. b. optional. c. fragrant. d. growing. 9. The passage explains that photosynthesis is a. done in the plant stem. b. what makes plants edible. c. the way that plants feed themselves. d. the source of carbon dioxide in the atmosphere. 10. According to the passage, why do plant leaves look green? a. Leaves are actually not green. b. Photosynthesis absorbs all colors except green. .

Sugar is green. d. Photosynthesis requires green light to produce sugar. 11.

After reading the passage, what can you conclude about photosynthesis? a. Chlorophyll is part of the ozone layer. b. Photosynthesis is the process that feeds a plant. c. Plants need oxygen to survive. d. The roots of a plant provide water. 12. After reading the passage, what can you infer about photosynthesis? a. Human life would not survive without plants. b. Chlorophyll tastes sweet. c. Sunlight has both good and bad effects on plants. d. Too much water can interfere with photosynthesis.

Passage 3 1) Abraham Lincoln served as the 16th President of the United States, yet he never went to college. In fact, Lincoln had nearly no formal education whatsoever, attending schools for less than a year throughout his childhood. Yet this should not be construed to mean that Lincoln was ignorant or unlearned; on the contrary, he was one of the most well-read leaders of the time. The fact is that Abraham Lincoln educated himself by studying books of religion, philosophy, and literature, and he continued his voracious reading throughout his life. (2) A lack of public school education did not prevent Lincoln from becoming a great leader.

He led the United States through four years of civil war, which threatened to divide the nation into two separate countries. He was a powerful opponent of slavery, and it was largely through his leadership that slavery was abolished in this country. (3) Lincoln's determination to educate himself through diligent reading also led to his reputation as a great orator—and even today his speeches are quoted and studied worldwide.

He serves as an example of a great leader—and a great reader. His love of books and good literature enabled Abe Lincoln to rise to world renown. 3. What is the main idea of this passage? a. Abe Lincoln was the 16th President of the United States. b. Abe Lincoln demonstrated the value of reading. c. Abe Lincoln was a Republican. d. Abe Lincoln freed the slaves. 14. Lincoln accomplished all of the following EXCEPT a. preventing the United States from being divided. b. ending slavery. c. becoming a great leader. d. establishing the Lincoln Memorial. 15. A voracious reader is a. likely to become President. b. a person who makes reading a regular habit. c. someone who never went to school. d. probably poor. 16.

The underlined word construed, as used in paragraph 1, most nearly means

a. tormented. b. taken apart. c. unscrewed. d. interpreted.

17. According to the passage, what lesson can be learned from the life of Abraham Lincoln? a. Education is not important. b. All books are worth reading. c. Good reading habits can help a person do great things. d. Politicians are always good role models.

18. How does Lincoln still affect students today? a. His face is on money. b. His speeches are still quoted and studied today. c. People grow beards to look like him. d. Students quit school in hopes of becoming president.