What’s the difference between saying “He doesn’t eat very much” and saying “He eats like a bird”? The two phrases mean the same thing, but the first sentence is literal, and the second is figurative. **Literal meaning** refers to the dictionary definition of a word or phrase. Words or phrases with a **figurative meaning** express ideas in unusual or creative ways.

Words may also have positive, neutral, or negative **connotations**, which are the feelings or ideas associated with a word. And, some words have **technical meanings** specific to a certain subject area. When you read, be aware of these different types of meaning. It will improve your understanding of an author’s message.

**Read the magazine article below. Circle an example of figurative language, underline words with strong connotations, and put a box around any technical words or phrases.**

**Bald eagles** are majestic creatures. They sail and dive through the air like trained acrobats. They also have wingspans of up to 90 inches. That’s more than seven feet long!

**Read the chart to analyze some of the words you may have marked in the article.**

<table>
<thead>
<tr>
<th>Type of Language</th>
<th>Example</th>
<th>Effect on Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connotative</td>
<td>“majestic”</td>
<td>Majestic encourages readers to think that the birds are more than ordinarily beautiful.</td>
</tr>
<tr>
<td>Technical</td>
<td>“wingspan”</td>
<td>Wingspan is a specific term used to explain one of the eagle’s characteristics.</td>
</tr>
<tr>
<td>Figurative</td>
<td>“They sail and dive through the air like trained acrobats.”</td>
<td>The simile They sail and dive through the air like trained acrobats compares an eagle’s movement to an acrobat’s.</td>
</tr>
</tbody>
</table>

Authors choose words and phrases carefully to convey meaning and feeling. Determining word meanings can help you understand how an author’s specific word choice affects the text.
Read the beginning of the scientific account about mollusks.

The Mollusk Family  By Deshawn Miller

Did you ever imagine that a tiny snail and a giant octopus might be part of the same family tree? Most people don’t realize that snails, mussels, squid, and even octopods belong to the same category of creatures known as mollusks. These amazing creatures are invertebrates, which means they do not have spines.

Mollusks share three basic body parts: a foot, a body, and a mantle. The foot is a fleshy part of the mollusk’s body, made up mostly of muscle tissue. In a snail, the foot is the part of the mollusk that meets the ground and gently rolls the body forward. From this slow, measured motion comes the phrase “a snail’s pace.” A mollusk’s soft body is like a fragile bag that holds the heart, the guts, and various internal organs. The mantle, which is often a shell or a tough, sturdy covering, functions like a suit of armor to protect the body.

Explore how to answer this question: “How do the word choices in the scientific account help you understand the author’s intended meaning?”

Reread the account. Circle an example of figurative language, underline words with strong connotations, and put a box around any technical words or phrases.

In the account, find an example of each type of language named in the first column. Add it to the chart. Then, in the last column, explain the effect the word or phrase has on meaning.

<table>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

With a partner, discuss your completed charts. Then identify one more example for each type of language.
Continue reading the account. Use the Close Reading and the Hint to help you answer the question.

(continued from page 96)

Because many mollusks creep along slowly, they need defense mechanisms. Mollusks with shells simply retreat into their body armor to protect themselves from predators. But the Blue-Ringed Octopus, a mollusk found in the South Pacific, defends itself with a bite so fierce it is almost always fatal to humans.

Overall, mollusks are peaceful inhabitants of our planet. Whether they live on land or in the sea, they are not aggressive. Our taste for cooked mussels, clams, and oysters, in fact, makes us far more dangerous to mollusks than they are to us.

Circle the correct answer.
Which statement best explains why the author has used the words retreat, fierce, and fatal in the first paragraph above?

A  to warn readers that mollusks are often aggressive and dangerous
B  to emphasize the contrast between different mollusk defenses
C  to explain the mystery behind a mollusk’s defense system
D  to call attention to the unusual shells grown by the mollusk family

Show Your Thinking
Look at the answer you chose above. Explain how the connotations of the words helped you to understand the ideas about mollusk defense mechanisms that the author wants to convey.

With a partner, discuss how the use of figurative, connotative, and technical language in the account gives you a clearer picture of the characteristics of the mollusk family.
As I read, I’m going to look for any connotative, figurative, or technical language the author uses to describe the attributes of armadillos.

Close Reading

Underline examples of figurative language in the first and fourth paragraphs.

Circle words with strong connotations used to describe the armadillo.

Armadillo Attributes  By Karen Olson

1  The word armadillo comes from a Spanish word meaning “little armored one.” The armadillo earned its name from the bony carapace that shields the armadillo’s body like hinged plates of armor. This protective covering has helped this homely mammal survive for about 55 million years.

2  Armadillos are related to sloths and anteaters. They may also be descendants of ancient dinosaurs. Some scientists believe modern armadillos are related to an extinct mammal called the glyptodont (GLIP-toh-dont). Like armadillos, glyptodonts originated in South America.

3  Today, more than 20 species of armadillos live in Central and South America. The nine-banded armadillo is the only species in the United States. It is now found in Texas, Oklahoma, Arkansas, Missouri, Louisiana, and parts of Florida.

4  Armadillos have many strange yet fascinating traits. In order to swim, they can swallow air to inflate their stomachs, becoming as buoyant as a balloon floating on the water. When threatened, armadillos may react defensively by jumping three to four feet into the air. Some are able to curl up into tight balls.

5  Armadillos have terrible eyesight, so they use their foolproof sense of smell to find food. They probe grasses, decaying logs, or sandy soil with their pointy snouts. Once they locate beetles, ants, or other insects they like to eat, they eagerly dig them out with sharp claws and trap them with narrow, sticky tongues.

6  Armadillos are the only mammals with protective shells. You might assume that these shells and other traits make armadillos immune from danger; however, predators such as dogs, wolves, and coyotes hunt these peaceful animals. Sadly, speeding cars and trucks can also injure or kill them. Despite these ever-present threats, armadillos continue to survive in a variety of habitats and climates.
Part 4: Guided Practice

Hints

Find this word in paragraph 6.

Look for context clues in paragraph 6 that might help you understand the meaning of “immune.”

Look back at the descriptive words you circled. Which words have a positive connotation? Which words have a negative connotation?

Use the Hints on this page to help you answer the questions.

1. What does the word “immune” mean as it is used in the passage?
   - A defensive
   - B unaffected
   - C threatened
   - D unaware

2. Which of the phrases from the passage best helps the reader understand the meaning of “immune”?
   - A “may react defensively”
   - B “these peaceful animals”
   - C “can also injure or kill them”
   - D “in a variety of habitats and climates”

3. Explain why the author uses words like homely, strange, fascinating, terrible, foolproof, and peaceful to describe armadillos. Write a paragraph about what these word choices reveal about how the author would like readers to feel about armadillos. Use at least three specific details from the text in your response.
Read the scientific account. Then answer the questions that follow.

### Animal Regeneration

_by Aleya Brown_

1. Regeneration is the ability of an organism to regrow a lost body part. All creatures have the power to regenerate lost body parts to some degree. If a human scrapes a knee or breaks a bone, for example, tissue is regenerated to heal the wound. Even a lost fingernail will regenerate over time. If the finger is severed, however, the limits of regeneration have been reached; humans cannot regrow limbs or organs. In contrast, if an earthworm is cut in half, the end of the worm with a head can grow a new tail. If the end of the worm with the tail survives, it too may grow a new tail. Unfortunately, it starves to death eventually because it cannot feed itself without a head or mouth.

2. Which creatures have strong regenerative powers? Lower animals, such as worms, lizards, spiders, and starfish, have some of the greatest regenerative powers. Crayfish, for example, have a remarkable safety device at the base of each claw and leg called a “breaking joint.” When a predator grabs a limb or claw, the appendage breaks away so the crayfish can escape. Over time, as the crayfish molts, or sheds its soft shell, the broken limb or pincer grows larger and larger until it has been completely regenerated.

3. Some animals are able to survive in large part because of their regenerative powers. A type of flatworm called planaria lives under rocks in clear creeks and streams. The flatworm has no real defense mechanisms to protect it from predators, but it can be cut into as many as 32 pieces, and each piece may form a new worm, complete with a head, eyes, and internal organs. In the case of the planaria, an event that could be fatal is turned into an awesome act of procreation.

4. Many more animals display noteworthy regenerative powers. Sharks replace lost teeth throughout their lifetimes. A single shark may grow as many as 24,000 teeth in its lifetime, ensuring a long career at the top of the food chain. Much like planaria, sea cucumbers, which have bodies that grow up to three feet long, can be cut into pieces and survive. Each piece may grow into a new sea cucumber. Spiders, like crayfish, can regrow legs. Many lizards also have “breakaway” tails that snap off when caught by predators. They then grow new ones, which lack the original spine. Starfish can lose arms and grow new ones. Sometimes an entirely new starfish can grow from a single lost arm.

5. Interestingly enough, the scales of a fish tell stories about regeneration. Much like the rings inside a tree trunk, fish scales reveal details about an organism’s past. Each scale lies in a pocket of skin and grows along with the fish. Scientists read the markings on a scale to determine the age of the fish, seasons of famine or drought, and other important information. It is often necessary to look at many scales to get a complete story, however, because scales are often lost and regenerated. These new scales lack the markings that happen over time. They are like a blank page in the history of the fish.
Scientists are extremely interested in regeneration because of the possible implications for healing humans. Some scientists think it is possible that higher animals retain the ability to regenerate body parts, but that the reaction triggering the body to regenerate has been lost. By studying lower animals, such as worms, spiders, and sponges, scientists hope to discover what triggers regeneration. The dream is that this knowledge could one day be used to help humans regrow internal organs and limbs. Currently, human regeneration may sound like something out of a science-fiction movie. The implications of such a discovery, however, would be so far-reaching that they are hard to fathom. For now, the miracle of regeneration is intriguing enough to keep scientists working for years to come.

Answer the questions. Mark your answers to questions 1–5 on the Answer Form to the right.

1. What is the meaning of “procreation” as it is used in paragraph 3 of the passage?
   A. survival
   B. repetition
   C. cooperation
   D. reproduction

2. Read this sentence from the passage.
   Crayfish, for example, have a remarkable safety device at the base of each claw and leg called a “breaking joint.”

   Which of the following best matches the author’s connotative meaning of the word “remarkable” as it is used in the sentence?
   A. unusual
   B. significant
   C. extraordinary
   D. noticeable
### 3. As used in paragraphs 2, 3, and 4 of the passage, the word *powers* is closest in meaning to

A. influence  
B. authority  
C. forcefulness  
D. abilities

### 4. Which of the phrases from the passage best helps the reader understand the meaning of the word “appendage”?

A. “have a remarkable safety device”  
B. “grabs a limb or claw”  
C. “sheds its soft shell”  
D. “grows larger and larger”

### 5. Read this sentence from the passage.

The dream is that this knowledge could one day be used to help humans regrow internal organs and limbs.

Which word best matches the meaning of “dream” as it is used in this sentence?

A. hope  
B. fantasy  
C. plan  
D. illusion

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**Self Check**  
*Go back and see what you can check off on the Self Check on page 93.*