

Read the science article. Then answer the questions that follow.



- Imagine walking through the park on a sunny day. You look up to see a spider twice the size of your head. It looks so real that it seems to be creeping down its web toward you.
- Before you scream and run away, look closer. That 50-pound spider is a wood sculpture. It was made by artist David Rogers and is one of 14 bugs he has on display in parks and gardens around the United States.



Ants the Size of a Bus!

- David's collection is called **Big Bugs**. It includes three monster ants. Each one stretches 25 feet long. That's almost as long as a school bus! The collection also includes a praying mantis that weighs 1,200 pounds. How heavy is that? It would be like picking up six grown men at once. Some of David's other bugs are a grasshopper, an assassin bug, and a ladybug—all big enough to sit on.
- 4 Real bugs are tiny. So why did David build his so large?
- David hopes his jumbo sculptures will help us to stop and notice bugs. We may not see them working. Sometimes we may not even want them around. But David points out that bugs are an important part of nature. They make the soil a better place for plants to grow, they pollinate flowers, they eat other insects, and they are food to many creatures.

Bugs Under Construction

- 6 Making such massive art is not easy. Some of the bugs took three months to construct.
- 7 David began by carving pieces of wood into just the right shape and size. He used a mix of black walnut, red cedar, and black locust woods to craft each bug. He also used young willow trees to show texture in his ladybug and ants.
- 8 He then connected the parts using metal rods. Finally, he gave them a coat of varnish for a smooth, shiny finish.

Sticks and Strings

- 9 As a child, David Rogers did not get the best grades. He was not even the best painter. But he loved to make things. Using only sticks and string, he would build tiny villages small enough for an insect.
- One day when he was older, he saw a bent tree that reminded him of the backbone of an animal. He decided to form a giant beast by adding more branches. The result was a dinosaur named Goliath. Goliath was his first large sculpture.
- David has also made sculptures by welding metal. By joining together old car parts, he made a housefly

and a dragonfly. Does this sound like fun to you? Good news—David believes there's an artist in everyone.

12 Of course, you probably won't start out by making a 25-foot ant. It took David years to come up with his huge bugs. But as David says, "There's no right or wrong way to express yourself with art. Let your imagination run free."



Think

- Next to each fact about David Rogers and his Big Bug art, write the letter of the heading that shows where the fact can be found.
 - A Ants the Size of a Bus!
 - **B** Bugs Under Construction
 - C Sticks and Strings

| David built tiny villages when he was a child. |
|--|
| All of David's bugs are big enough to sit on. |
| Different kinds of wood are used in David's art. |
| David named his first large sculpture "Goliath." |
| David hopes his art will help people notice bugs more. |

- 2 Read paragraphs 4 and 5 from the article.
 - 4 Real bugs are tiny. So why did David build his so large?
 - 5 David hopes his jumbo sculptures will help us to stop and notice bugs. We may not see them working. Sometimes we may not even want them around. But David points out that bugs are an important part of nature. They make the soil a better place for plants to grow, they pollinate flowers, they eat other insects, and they are food to many creatures.

What does the word jumbo mean in paragraph 5?

- A beautiful
- **B** large
- **C** new
- **D** tiny

- **3** With which statement would the author **most likely** agree?
 - **A** Although David's sculptures are interesting, they are too large and heavy.
 - **B** Although bugs are an interesting subject for sculptures, they are not an important part of nature.
 - **C** Although David was not the best painter as a child, he became a talented artist as an adult.
 - **D** Although David's sculptures are huge, they are not difficult to make.
- Which text feature would **best** help you find facts about how David built his bug art?
 - **A** the heading "Ants the Size of a Bus!"
 - **B** the heading "Bugs Under Construction"
 - **C** the keywords **Big Bugs** in paragraph 3
 - **D** the picture of the ant sculpture
- This question has two parts. First answer Part A. Then answer Part B.

Part A

Reread paragraph 11. What does the word welding mean as it is used in paragraph 11?

- **A** connecting
- **B** making bigger
- **C** adding branches
- **D** imagining

Part B

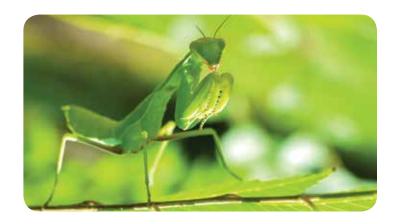
Which phrase from paragraph 11 **best** supports the answer to Part A?

- A "joining together old car parts"
- **B** "he made a housefly and a dragonfly"
- **C** "sound like fun"
- **D** "there's an artist in everyone"



Read the science article. Then answer the questions that follow.

Praying Mantid



by Sophie Burmeister

The praying mantid is an insect that looks like a thin green or brown stick. It gets its name from the way its two front legs can bend. It looks as if it were praying. Most people call this insect a "praying mantis." But its real name is the "praying mantid."

Helpful Eaters

- 2 Praying mantids are carnivores. They eat other small animals and insects. They eat moths, grasshoppers, and flies. Some even eat lizards and frogs!
- The eating habits of mantids are helpful to people. Farmers like mantids because they eat insects that could hurt their crops. Gardeners also like mantids. Mantids eat pesky insects that eat fruit and flowers.



Mighty Hunters

Tiny but mighty, mantids are skillful hunters. They have an interesting way of hunting their meals. Mantids camouflage themselves. They change their body color to match plants and trees near by. This makes them seem like a part of their background.

They can sit patiently for a long period of time and look like a branch or leaf. When their prey gets close enough, they quickly catch and hold it with their front legs. These legs have sharp spines that prevent escape. Most mantids eat the head of the animal first.

The Amazing Mantid

- The mantid has three main body parts. The **head** is shaped like a triangle. It sits on a long thin neck, called a **thorax**. The thorax is connected to a long body, called an **abdomen**. Mantids are the only insects in the world that can turn their heads 180 degrees. That's a full half turn.
- 7 One of the most amazing features of mantids are their eyes. They have five of them!
 Two large eyes are on either side of their head. Three smaller eyes are set between the larger eyes. This gives the mantid excellent eyesight, which helps it catch its prey.



- Mantids are super fast, graceful jumpers. They can make a complete leap in less than a second. Right before it leaps, the mantid wiggles its body back and forth. It can twist and turn its body in different directions. When it finally leaps, its body spins as it shoots through the air.
- 9 People have been fascinated with praying mantids for thousands of years. There are even rock paintings of mantids made by ancient people. The mantid is an awesome insect!

Fast Facts

- North America has only 20 kinds of mantids, while Africa has 880 species.
- Mantids live in warm or hot areas of the world.
- Most mantids are less than six inches long.

Think

This question has two parts. First answer Part A. Then answer Part B.

Part A

What does the word prey mean in paragraph 5?

- A an animal that is very similar in size to another animal
- **B** an animal that is caught and eaten by another animal
- **C** an animal that looks like it is praying
- **D** an animal with legs that look like spines

Part B

Which **two** sentences from paragraph 5 **best** support the answer to Part A?

- **A** "They can sit patiently for a long period of time and look like a branch or leaf."
- **B** "When their prey gets close enough, they quickly catch and hold it with their front legs."
- **C** "These legs have sharp spines that prevent escape."
- **D** "Most mantids eat the head of the animal first."
- With which **two** statements would the author **most likely** agree?
 - **A** Farmers should keep mantids away from their crops.
 - **B** The way mantids catch and eat their prey is cruel.
 - **C** It's not surprising that mantids have fascinated people for a long time.
 - **D** It's unlikely that mantids can make a complete leap in less than a second.
 - **E** Most farmers would be glad to find mantids on their farms.
 - **F** Mantids have bad eyesight that make it hard for them to catch prey.
- 8 Mantids have three main body parts. Which text feature calls attention to these body parts?
 - **A** heading
 - **B** sidebar
 - **C** key words
 - **D** title

19 This question has two parts. First answer Part A. Then answer Part B.

Part A

Which text feature would help you find out why gardeners like mantids?

- **A** the heading "Helpful Eaters"
- **B** the picture of the mantid on a leaf stem
- **C** the key word "carnivores" in paragraph 2
- **D** the sidebar "Fast Facts"

Part B

Which sentence from the article **best** supports the answer to Part A?

- **A** "Mantids eat pesky insects that eat fruit and flowers."
- **B** "Mantids are super fast, graceful jumpers."
- **C** "One of the most amazing features of mantids are their eyes."
- **D** "People have been fascinated with praying mantids for thousands of years."
- 10 Read the sentences from the article.

They have an interesting way of hunting their meals. Mantids camouflage themselves. They change their body color to match plants and trees near by.

Which phrase from these sentences provides the **best** clue to the meaning of camouflage?

- **A** "an interesting way"
- **B** "hunting their meals"
- **C** "change their body color"
- **D** "plants and trees near by"



Write

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Writing Prompt What is the author's point of view about praying mantids? Find examples in the article to support your answer.

Your writing will be scored based on the development of ideas and the language conventions of grammar, usage, and mechanics.

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