

Warm-Up

1

Name _____

Vermin of the Skies

Some space scientists have called asteroids “vermin of the skies.” They got this nickname because of their small size and the danger they can cause. “Vermin” is a term usually used for unpopular pests, such as rats, roaches, and lice. Asteroids are a large group of miniature planets. They orbit the sun between Mars and Jupiter. They are where most meteorites come from. These small space rocks travel through the solar system and sometimes hit Earth. On occasion, they cause great destruction.

Scientists first believed that asteroids were the remains of a planet. They thought that it had been destroyed when it hit another planet. Now asteroids are believed to be the pieces of a planet that never actually formed between

Mars and Jupiter. It didn’t become a planet because of the enormous pull of Jupiter’s gravity.

Ceres, the largest asteroid, was first seen in 1801. It is about 580 miles in diameter. Pallas, the second largest asteroid, was discovered the following year. About 1,000 asteroids are twenty miles wide or greater. Astronomers estimate that as many as one million asteroids are between half a mile and twenty miles wide. Asteroids got their name because they look like points of light when seen through a telescope. Have you ever seen an asteroid?

Check Your Understanding

- How big is the largest asteroid ever seen?
 - 580 miles in diameter
 - 850 miles in diameter
 - half a mile wide
 - twenty miles wide
- Why are asteroids called “vermin of the skies”?
 - They are known to have mice and rats living on them.
 - They sometimes have a smaller size and cause damage.
 - They look like mice through a telescope.
 - People don’t like asteroids.
- What is the main idea of the passage?
 - Astronauts should visit asteroids.
 - Asteroids look like points of light in a telescope.
 - Jupiter has a lot of gravitational force.
 - Asteroids are small mini-planets that can produce meteorites.
- Which piece of information about asteroids is least relevant to understanding asteroids?
 - There are more than one million asteroids.
 - Asteroids look like points of light in a telescope.
 - Asteroids have been featured in some space movies.
 - Parts of asteroids break off and become meteorites.

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The Lost Planet

Many Americans were upset when astronomers removed Pluto from the list of planets. It is no longer the ninth planet in the solar system. They labeled it a dwarf planet along with a larger object named Eris. Both objects are located in a zone beyond Neptune called the Kuiper Belt. Dwarf planets are much smaller than the other eight planets.

Pluto was the only planet discovered by an American. An astronomer from Kansas named Clyde Tombaugh found it. He had carefully compared photos of an area of space beyond Neptune. This area was thought to contain a ninth planet. He spent more than 7,000 hours over more than two years comparing photographs of light. He was trying to discover the movement of a planet against the background stars. On February 18,

1930, Tombaugh discovered this movement. An eleven-year-old English schoolgirl won a contest to name the planet. She suggested Pluto, who is the god of the underworld in ancient myths.

Why was Pluto removed from the list of major planets? In a word—size. Charon, a moon orbiting Pluto, was discovered. It was about half the size of Pluto. Moons are not that large compared to the planets they orbit. Scientists were also able to determine Pluto's actual size, which was quite a bit smaller than originally thought. Pluto was found to be smaller than several moons, including our own. Its orbit was also very different from the other planets. Pluto is, of course, still there. It just doesn't have as big of a reputation anymore.

Check Your Understanding

- What is the main idea of the passage?
 - Pluto got smaller.
 - Pluto is not a planet.
 - There are reasons Pluto is no longer considered a planet.
 - Pluto was discovered by an American.
- Which of the following statements is an opinion and *not* a fact?
 - Pluto was found to be smaller than several moons.
 - Pluto was the only planet discovered by an American.
 - Pluto should be considered a planet.
 - A schoolgirl won the competition to name the planet.
- What inference can you make about the description of a dwarf planet?
 - Planets have to be bigger than most or all moons to be considered a conventional planet.
 - Planets should be much larger than their own moon to be considered a regular planet.
 - Planets should have conventional orbits, rather than eccentric ones, to be labeled a regular planet.
 - all of the above
- How did Pluto get its name?
 - It was named for a child's pet.
 - It was named for a cartoon dog.
 - It was named for a god of the underworld.
 - all of the above

LESSON

14

Main Idea

WORDS
TO KNOW

Main idea the most important idea of a passage. It is what the passage is mostly about.

Review It!

Read these sentences. Use the Hint to help you figure out the main idea.

Warm-blooded animals maintain a constant body temperature, no matter what the temperature of their environment is. They stay warm by burning food for energy. They cool off by sweating, panting, or moving to a cooler place.

Hint Look at the first sentence. How is the broad idea it expresses different from the information in the rest of the passage?

Try It!

Read this passage. As you read, underline phrases and sentences that express the most important idea in the passage.

- 1 Desert plants have adapted to deal with the lack of water in the southwestern desert. Some plants store water. Some have a waxy covering on their leaves and stems. This prevents stored water from evaporating. Small leaves, spines, and camouflage are also ways plants deal with the water issue.
- 2 Desert animals, too, have adapted to the lack of water. Some recycle water from within their bodies. Some tap plants for water. Others get water from dry seeds they eat.
- 3 Desert plants have also adapted to deal with the high heat in their habitat. Many live for only one season. They release their seeds and die. The seeds remain dormant until cooler weather comes. Then they sprout and new plants appear.
- 4 Animals deal with desert heat in different ways. Some leave the desert during the hottest times. Others burrow beneath the ground. Some only move around at night, when temperatures are cooler.

Now, use the passage to answer the questions on the following page.

1. What is the main idea of paragraph 1?
 - A. There isn't enough water in the desert.
 - B. Desert plants have adapted to survive with little water.
 - C. Many different kinds of plants grow in the desert.
 - D. Some desert plants die because of lack of water.

2. The main idea of paragraph 2 is that desert animals
 - A. have adapted to the lack of water
 - B. adapt in the same ways as plants
 - C. cannot live without water
 - D. can live without water

3. Which sentence **best** states the main idea of paragraph 4?
 - A. Most desert animals can't tolerate the heat.
 - B. The best way animals escape the heat is by burrowing.
 - C. Different animals deal with desert heat in different ways.
 - D. Animals are better able to survive in the desert than plants are.

4. Which sentence **best** states the main idea of paragraph 3?
 - A. Most desert plants die when it gets very hot.
 - B. Plants are scarce in the southwestern desert.
 - C. Desert plants have developed ways to survive the desert heat.
 - D. Plants sometimes release their seeds when the desert gets hot.



2.

Which answer choice restates the most important idea from the paragraph?

3.

The main idea makes a general statement about the topic. Decide which answer choices are the most general. Then ask yourself: Which choice best matches the information in the paragraph?

In Your Own Words

5. Write the main idea of the passage in your own words.

5.

Don't get bogged down in details. Ask yourself, What was the passage mostly about?

LESSON

15

Supporting Details

WORDS
TO KNOW

Supporting details information that backs up the main idea

Review It!

Read these sentences. Use the Hint to help you locate supporting details.

People are interested in the benefits of electric cars. One reason is that they do not cause as much air pollution as other cars do. Another reason is that they are very quiet.

Hint First, look for the sentence that states the main idea. Then see how the other sentences back it up, or support it, with facts and information.

Try It!

Read this passage. As you read, underline the main idea in each paragraph and circle details that back it up.

- 1 West Indian manatees live along the coast of Florida and in the Caribbean. Today, these gentle animals face the risk of becoming extinct. Fewer and fewer of them are surviving.
- 2 The waters in which they live hold several dangers. The water can become too cold for them to stay alive. Boats that speed by pose another danger. They can hurt and even kill these large, gray creatures. Trash thrown into the water also harms the manatees. If swallowed, it can choke them or block their intestines.
- 3 But the greatest danger to the manatees' survival is the loss of habitat. The number of people moving to places where manatees live has grown a great deal over the past several years.
- 4 Efforts are being made to improve the manatees' chances for survival. Warm-water refuges have been created where manatees can live safely. Also, boaters are being made more aware of the need to protect these animals.

Now, use the passage to answer the questions on the following page.



1. Which detail from paragraph 1 supports the idea that West Indian manatees face possible extinction?
 - A. West Indian manatees are gentle.
 - B. Speeding boats are a problem.
 - C. West Indian manatees live in Florida.
 - D. Fewer of them are surviving.

2. Which detail from paragraph 2 does **not** support the idea that the water manatees live in holds danger for them?
 - A. Manatees are large and gray in color.
 - B. Trash thrown into the water harms the manatees.
 - C. Speeding boats can hurt or kill the manatees.
 - D. The water sometimes gets too cold for the manatees.

3. According to paragraph 4, what efforts are being made to stop boaters from harming manatees?
 - A. They are being fined for hitting manatees.
 - B. They are forced to study manatee behavior.
 - C. They are not allowed to boat in manatee areas.
 - D. They are being made aware of the need to protect manatees

4. What is the main idea of paragraph 3?
 - A. the manatees' enemies
 - B. the water in which manatees live
 - C. the manatees' loss of habitat
 - D. the need to help manatees survive

In Your Own Words

5. Rewrite two important details from paragraph 2 in your own words.

2. Which detail doesn't show how the water is dangerous for the manatees?

3. Are there key words that appear both in the answer choices and in the passage?

5. Often, the main idea comes at the beginning of a paragraph. Which facts in paragraph 2 back up that main idea?