

Grade6**Reading Science****The Mysteries of Space**

Passage: Space, the final frontier, is vast and filled with mysteries that have fascinated humans for centuries. It is a place of extremes, with temperatures that can soar to thousands of degrees and then plummet to nearly absolute zero. Space is a vacuum, meaning it has no air or atmosphere, making it a silent world where sound waves cannot travel.

Our solar system is a tiny part of the Milky Way galaxy, which itself is just one of billions of galaxies in the universe. The sun, a giant ball of hot, glowing gasses, is the center of our solar system. Eight planets, including Earth, orbit around the sun. Each planet has its own unique characteristics and mysteries.

Mars, the fourth planet from the sun, has been a subject of interest for scientists for many years. With its reddish color and rocky terrain, it is often called the Red Planet. Scientists believe that Mars once had water and perhaps even life. Today, robots explore the Martian surface, sending back valuable data to help us understand more about this intriguing planet.

Jupiter, the largest planet in our solar system, is known for its Great Red Spot, a giant storm that has raged for hundreds of years. The planet's strong magnetic field and numerous moons make it a fascinating subject of study for astronomers.

Beyond our solar system, there are countless other celestial bodies, including stars, black holes, and nebulae. Stars are giant balls of hot gas that produce light and heat through nuclear reactions. Black holes are regions of space where gravity is so strong that nothing, not even light, can escape. Nebulae are vast clouds of gas and dust where new stars are born.

The study of space, or astronomy, helps us to understand more about our place in the universe. It teaches us about the forces that shape our world and the other worlds around us. As technology advances, we continue to push the boundaries of what we know about space, uncovering new mysteries and answering age-old questions.

Multiple Choice Questions:

1. What is space?
 - A. A vacuum
 - B. A planet
 - C. A galaxy
 - D. A star

2. How many planets are in our solar system?
 - A. Four
 - B. Six
 - C. Eight
 - D. Ten

3. What is Mars often called?
 - A. The Blue Planet
 - B. The Green Planet
 - C. The Red Planet
 - D. The Rocky Planet

4. What is the Great Red Spot?
 - A. A planet
 - B. A star
 - C. A storm on Jupiter
 - D. A moon

5. What is a black hole?
 - A. A star
 - B. A planet
 - C. A region of space with strong gravity
 - D. A moon

6. What is the sun?
- A. A planet
 - B. A moon
 - C. A galaxy
 - D. A giant ball of hot, glowing gasses
7. What does the study of space teach us?
- A. About other planets
 - B. About the forces that shape our world
 - C. About stars
 - D. All of the above
8. What are nebulae?
- A. Stars
 - B. Planets
 - C. Vast clouds of gas and dust
 - D. Moons
9. Which planet is known for its rocky terrain?
- A. Earth
 - B. Mars
 - C. Jupiter
 - D. Venus
10. What can astronomers study beyond our solar system?
- A. Stars
 - B. Black holes
 - C. Nebulae
 - D. All of the above

1. Answer: A. A vacuum Explanation: The passage mentions that space is a vacuum, meaning it has no air or atmosphere.
2. Answer: C. Eight Explanation: The passage states that eight planets, including Earth, orbit around the sun.
3. Answer: C. The Red Planet Explanation: Mars is referred to as the Red Planet in the passage because of its reddish color and rocky terrain.
4. Answer: C. A storm on Jupiter Explanation: The passage describes the Great Red Spot as a giant storm on Jupiter.
5. Answer: C. A region of space with strong gravity Explanation: Black holes are described in the passage as regions of space where gravity is so strong that nothing can escape.
6. Answer: D. A giant ball of hot, glowing gasses Explanation: The passage states that the sun is a giant ball of hot, glowing gasses.
7. Answer: D. All of the above Explanation: The passage mentions that the study of space helps us understand more about our world, other worlds, and the forces that shape them.
8. Answer: C. Vast clouds of gas and dust Explanation: Nebulae are described as vast clouds of gas and dust in the passage.
9. Answer: B. Mars Explanation: The passage mentions that Mars has rocky terrain.
10. Answer: D. All of the above Explanation: The passage lists stars, black holes, and nebulae as celestial bodies that can be studied beyond our solar system.