Grade7
Reading Science
The Wonders of the Solar System

Our solar system is a fascinating collection of celestial bodies, all orbiting around our central star, the Sun. It consists of eight planets, including our own Earth, numerous moons, asteroids, comets, and other space debris. In this passage, we will delve into the unique characteristics of some of the planets and learn about recent scientific discoveries in space exploration.

Mercury, the smallest and innermost planet in our solar system, has a rocky surface and thin atmosphere. Despite its proximity to the Sun, temperatures can plummet to extremely low levels at night due to the lack of atmosphere to retain heat. Venus, our "sister planet," is similar in size and composition to Earth. However, its thick atmosphere traps heat, making it the hottest planet in our solar system.

Earth, our home, is the only known planet to support life. Its atmosphere and magnetic field protect us from the Sun’s harmful radiation, while its surface harbors a diverse range of ecosystems. Mars, known as the Red Planet due to its iron oxide-rich soil, has been the subject of numerous space missions. Scientists believe Mars once had liquid water and perhaps even supported life.

Jupiter, the largest planet in our solar system, is a gas giant with a massive storm known as the Great Red Spot, which has raged for at least 400 years. Saturn, famous for its stunning ring system, is also a gas giant. Its rings are made up of ice and rock particles, and it has over 60 known moons.

Uranus and Neptune, the outermost planets, are ice giants. Uranus has a unique rotation, spinning on its side, while Neptune is known for its strong winds and dark storm. Both planets remain largely mysterious, as they are challenging to study from Earth.

Recent advancements in technology have enabled space agencies to send probes and rovers to study these distant planets up close. The James Webb Space Telescope, set to launch in the near future, will allow us to observe the outer planets in unprecedented detail.

In conclusion, our solar system is a vast and varied place, full of wonders and mysteries. As technology advances, we continue to learn more about our celestial neighbors and their unique characteristics.

Questions:

1.What is the primary focus of this passage?

a) The history of space exploration

b) The characteristics of the planets in our solar system

c) The life forms on different planets

d) The future of space travel

2.Which planet is known as the Red Planet?

a) Venus

b) Mars

c) Jupiter

d) Saturn

3.What makes Venus the hottest planet in our solar system?

a) Its proximity to the Sun

b) Its large size

c) Its thick atmosphere trapping heat

d) Its fast rotation

4.Why is Earth unique in the solar system?

a) It has the strongest winds

b) It is the only known planet to support life

c) It has the largest moon

d) It is the smallest planet

5.What are the outermost planets of our solar system?

a) Mars and Jupiter

b) Venus and Earth

c) Uranus and Neptune

d) Saturn and Pluto

6.What is the Great Red Spot?

a) A storm on Mars

b) A storm on Jupiter

c) A storm on Saturn

d) A storm on Neptune

7.What is significant about Mercury's temperature?

a) It is always extremely hot

b) It has the highest temperature in the solar system

c) It can be extremely hot and extremely cold

d) It is always extremely cold

8.Which planet is known for its stunning ring system?

a) Mercury

b) Venus

c) Saturn

d) Neptune

9.What is the James Webb Space Telescope expected to provide?

a) Detailed observations of the outer planets

b) A map of Earth’s oceans

c) Images of distant galaxies

d) Both a and c

10.Which planet has a unique rotation, spinning on its side?

a) Jupiter

b) Saturn

c) Uranus

d) Neptune

1. Answer: b) The characteristics of the planets in our solar system Explanation: The passage primarily discusses the unique features and scientific knowledge of the planets in our solar system.

2. Answer: b) Mars Explanation: Mars is referred to as the Red Planet due to its iron oxide-rich soil.

3. Answer: c) Its thick atmosphere trapping heat Explanation: Despite being closer to the Sun, Venus is the hottest planet in our solar system because its thick atmosphere traps heat.

4. Answer: b) It is the only known planet to support life Explanation: Earth is unique because it has the right conditions to support a diverse range of life forms.

5. Answer: c) Uranus and Neptune Explanation: Uranus and Neptune are the outermost planets in our solar system.

6. Answer: b) A storm on Jupiter Explanation: The Great Red Spot is a massive storm on Jupiter that has been ongoing for at least 400 years.

7. Answer: c) It can be extremely hot and extremely cold Explanation: Mercury experiences extreme temperature fluctuations due to its lack of atmosphere to retain heat.

8. Answer: c) Saturn Explanation: Saturn is famous for its beautiful and extensive ring system.

9. Answer: d) Both a and c Explanation: The James Webb Space Telescope is expected to provide unprecedented detail of the outer planets as well as images of distant galaxies.

10. Answer: c) Uranus Explanation: Uranus is unique in our solar system because it rotates on its side compared to the other planets.