SPACE Reading Comprehension – Key Stage 2 – Year 6

The Wonders of the Solar System

Our solar system is a vast, awe-inspiring collection of planets, moons, asteroids, and comets that orbit around a single, bright star – the Sun. At its heart, the Sun provides warmth and energy to everything around it, making life on Earth possible. But beyond our home planet, there are many other fascinating worlds, each unique in its own way.

Closest to the Sun is Mercury, a rocky planet that experiences extreme temperatures. It is so close to the Sun that one side is scorched while the other is freezing. Next is Venus, often called Earth's twin because of its similar size. However, Venus is covered in thick clouds of toxic gas, making it one of the hottest planets in the solar system.

Earth, the third planet from the Sun, is the only known place in the universe where life exists. With its blue oceans, green lands, and breathable atmosphere, Earth is perfectly suited to support millions of species, including humans.

Beyond Earth lies Mars, the "Red Planet," famous for its dusty, reddish appearance. Scientists are particularly interested in Mars because it has signs of ancient rivers and lakes. Could it have once supported life?

Further out are the gas giants, Jupiter and Saturn. Jupiter is the largest planet in the solar system and has over 70 moons, including one called Europa, which may have an ocean beneath its icy surface. Saturn is well known for its magnificent rings, made of ice and rock, which can be seen with a small telescope from Earth.

The outermost planets, Uranus and Neptune, are cold, distant, and mysterious. Uranus spins on its side, and Neptune is known for its strong winds and deep blue colour. Both are filled with gases like methane, which give them their bluish appearance.

Finally, at the edge of our solar system lies Pluto, once considered the ninth planet. Now classified as a dwarf planet, Pluto remains an object of fascination for scientists.

As we continue to explore space, we may one day find new worlds beyond our solar system, places that could answer some of the biggest questions about the universe and our place in it.

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1. What is the primary source of energy in our solar system?

2. Why is Venus often called Earth's twin, and how is it different from Earth?

3. The text describes Uranus as "spinning on its side." What might this phrase suggest about the way Uranus rotates?

4. If scientists discovered liquid water on Mars, what predictions could they make about life on the planet?

5. How many moons does Jupiter have, and why is Europa of particular interest to scientists?

6. What is the meaning of the word "magnificent" in the sentence, "Saturn is well known for its magnificent rings"?

7. Explain why Neptune appears blue in colour.

8. Summarise the characteristics of the gas giants Jupiter and Saturn.

9. Based on what you know about the planets, which planet would be the most difficult to visit and why?

10. What could the exploration of new worlds beyond our solar system help us discover?

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MARK SCHEME

1. The Sun is the primary source of energy in our solar system.
2. Venus is called Earth's twin because of its similar size, but it is different due to its thick clouds of toxic gas and extreme heat.
3. "Spinning on its side" suggests that Uranus rotates at a different angle compared to other planets, with its axis tilted almost horizontally.
4. If scientists found liquid water on Mars, they might predict that the planet could have once supported life or that life could still exist in some form.
5. Jupiter has over 70 moons, and Europa is of particular interest because it may have an ocean beneath its icy surface, which could harbour life.
6. "Magnificent" means impressive, grand, or splendid.
7. Neptune appears blue because of the presence of methane in its atmosphere, which absorbs red light and reflects blue.
8. Jupiter is the largest planet and has many moons, while Saturn is known for its spectacular rings made of ice and rock.
9. The most difficult planet to visit could be Venus due to its extreme heat, toxic atmosphere, and thick clouds that make landing hazardous.
10. Exploring new worlds beyond our solar system could help us discover new forms of life, different environments, or answer questions about the universe's formation.