



READING PASSAGES · ANSWER KEY

SATURN

All 3 reading levels · Sample answers shown — accept reasonable variations

Teacher tip: Answers shown are model responses. Many comprehension questions can be correctly answered in multiple ways — the goal is to check that students can pull key ideas from the text in their own words. For Level 1, accept any answer that shows comprehension; phrasing doesn't need to match.

1 EMERGING

AGES 6–8 · 4 QUESTIONS

Saturn: The Planet With Rings

1. What makes Saturn easy to recognise?

A: Saturn has bright, beautiful rings — that's what makes it easy to recognise.

3. What would happen if you put Saturn in a really big bathtub of water?

A: Saturn would float on top of the water, because it is so light.

2. What are Saturn's rings made of?

A: Saturn's rings are made of millions of pieces of ice and rock. Some are as small as snowflakes; others are as big as houses.

4. What is the name of Saturn's biggest moon, and what is unusual about it?

A: Saturn's biggest moon is called Titan. Titan is bigger than the planet Mercury, and it has thick orange clouds.

2 ON-GRADE

AGES 8–10 · 5 QUESTIONS

Saturn: Lord of the Rings

1. How are Saturn's rings different from the rings of other planets?

A: Saturn's rings are much wider and brighter than other planets' rings — they're easy to see even with a small telescope from Earth.

3. Why would Saturn float in a giant ocean?

A: Saturn would float because it is the least dense planet in the solar system — its density is less than water.

5. What does Enceladus do that suggests it might have a hidden ocean?

A: Enceladus shoots out plumes of water from its icy crust — suggesting there is a hidden ocean of liquid water below the ice.

2. What are Saturn's rings made of, and how big are the pieces?

A: The rings are made of billions of pieces of water ice and rock, ranging from tiny dust-sized grains to chunks as big as houses.

4. What is unusual about Titan compared to other moons in our solar system?

A: Titan is the only moon in the solar system with a thick atmosphere. It also has lakes and rivers of liquid methane and ethane.

3 ADVANCED

AGES 10–12 · 6 QUESTIONS

Saturn: Worlds Within Worlds

1. What makes Saturn's rings stand out compared to the rings of other planets?

A: Saturn's rings are much brighter and more extensive than the rings of the other gas giants — they span 280,000 km but are remarkably thin (often less than 30 m deep).

3. What is the hexagonal storm at Saturn's pole, and why is it so unusual?

A: It's a vast six-sided storm at Saturn's north pole. Each side is about 14,500 km long. It's unusual because no other planet has anything like it; scientists think it's created by interacting bands of wind.

5. What was the Cassini–Huygens mission, and why was it important?

A: Cassini–Huygens orbited Saturn from 2004 to 2017. It studied the planet, rings, and moons in detail, and dropped the Huygens probe onto Titan — the only spacecraft ever to land on a moon in the outer solar system.

2. Describe what scientists think Saturn looks like below its outer atmosphere.

A: Below the visible atmosphere, the gases get thicker and thicker until they become liquid metallic hydrogen, which surrounds a small rocky core at the centre.

4. Compare Titan and Enceladus. What makes each one interesting to scientists?

A: Titan is the largest moon, bigger than Mercury, with a thick atmosphere and rivers/lakes of liquid methane and ethane. Enceladus is much smaller and shoots geysers of water from its south pole, suggesting a hidden ocean — and a possible home for microbial life.

6. What will NASA's Dragonfly mission do that no other mission has done before?

A: Dragonfly will fly through Titan's atmosphere as a rotorcraft (like a drone), exploring its alien surface from the air.