

Name _____

Period _____

Video - The Universe: Saturn (Lord of the Rings)

1. Explain why Saturn is flattened into an oblate spheroid.
2. Even though Saturn has so much more mass than Earth, you would weigh less on Saturn than on the Earth. Explain.
3. Saturn is _____ times larger than Earth.
4. Saturn's rocky core developed first, and then it gathered gas around it. As the gas piled on, how did that affect the rotation of Saturn?
5. The rings of Saturn are 173,000 miles across, or as large as _____ Earths placed side-by-side. However, the rings are only about _____ feet thick.
6. What law states that inner rings must move faster than outer rings?
7. Describe two possible scenarios for the creation of the rings.
8. In 1610, who was the first person to observe the rings?
9. Explain how micrometeorites are affecting the rings.

10. Why do scientists think Saturn's rings are probably younger than the rings of Neptune or Uranus?
11. Explain what a sheppard moon is.
12. In the video clip of the F ring, describe the effects you see created by the sheppard moons Prometheus and Pandora.
13. Even on the dark side of the planet, explain why it is difficult to spot lightning in the atmosphere of Saturn.
14. In what respect is the South Pole Storm of Saturn more like an Earth-like hurricane than the Great Red Spot of Jupiter?
15. Saturn's moon Titan is the size of this planet: _____.
16. What makes Titan unique among all the moons in the solar system?
17. Why do scientists think Titan may be a good spot to look for other forms of life?
18. The moon Enceladus is about $1/8^{\text{th}}$ the size of Earth's Moon, and is the smallest body in the solar system to have _____.
19. What supplies the energy that powers the jets/geysers of Enceladus?
20. As a result of the ice/snow that is ejected from its geysers, Enceladus is the _____ object in the solar system.

