



## Discussion Questions?

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*These questions are offered to start astronomical discussions*

1. Do the stars rise and set like the Sun? What makes that happen?
2. Are constellations in the sky during the daytime?
3. What makes day and night?
4. Why do we have seasons?
5. Why do we see different constellations in the winter than we do in the summer?
6. How long does it take Earth to rotate once?
7. What's the difference between rotation and revolution?
8. Why does the Sun look bigger than all the other stars?
9. Is the Sun on fire?
10. How many stars are in our solar system?
11. What makes the Sun shine?
12. Which planet is the hottest? Why?
13. Why is Pluto no longer classified as a planet?
14. Earth orbits the Sun. What orbits the Earth?
15. What is Jupiter's Great Red Spot?
16. Name four planets that have rings.
17. Which planet revolves around the Sun quickest? Why?
18. The Curiosity Rover is exploring which planet in search of signs of water?
19. Why is it that when we see a half moon in the sky, we call it a quarter moon?
20. What is the water cycle? What powers the motion of water through this cycle?





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21. What makes the zodiac constellations unique?
22. What is the name of our galaxy?
23. Galaxies come in a variety of shapes: spirals, barred spirals, elliptical, and irregular. What type of galaxy is our Milky Way?
24. Do other stars have planets?
25. Without a telescope, everything you can see in the night sky is part of the Milky Way except for one small dot in the constellation of Andromeda. What is this tiny dot and why is it so special?

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Answers:

1. Yes, the stars rise and set just like the Sun, but in reality, neither the Sun nor the stars are moving across the sky, instead the Earth is turning beneath our feet—day and night.
2. Yes there are, but you can't see them because of the glare of the Sun.
3. The rotation of the Earth—facing the Sun makes day, facing away from the Sun makes night.
4. The seasons are caused by the tilt of the Earth.
5. We see different constellations during different seasons because we are on opposite sides of the Sun at different times of the year.
6. 24 hours or 1 day.
7. Rotation is a planet spinning on its axis; revolution is a planet orbiting the Sun.
8. The Sun looks big because it's the closest star.
9. No, there is no fire on the Sun/
10. One, the Sun.
11. Thermonuclear fusion in the Sun's core.
12. Venus has a surface temperature of 900° F.
13. Pluto is part of a large belt of icy objects just beyond Neptune called the Kuiper Belt, many of which are round, just like planets.
14. The Moon.





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15. The Great Red Spot is a giant storm three times the size of Earth.
16. Jupiter, Saturn, Uranus, Neptune.
17. Mercury, because planets that are closer to the Sun have shorter orbits and they actually move faster.
18. Mars.
19. Only half the Moon's surface faces Earth, so when we see half the Moon, it is actually only one fourth of the Moon's entire surface. Also, the Moon is only one-fourth the way around its orbit at this phase.
20. Water evaporates into the atmosphere, condenses into clouds, precipitates as rain or snow, flows over the surface filling rivers and lakes, and seeps in the ground to maintain groundwater. Eventually it all works toward the oceans where it evaporates again. The power source is the Sun.
21. The zodiac constellations are the constellations that the Sun appears to travel through in a year's time.
22. Milky Way.
23. Barred spiral.
24. Yes, scientists have discovered hundreds of stars that have planets.
25. The Andromeda Galaxy, our nearest large galactic neighbor.

