

HOW THE SOLAR SYSTEM WORKS

Discussion Questions

Directions: Answer the following questions as directed by your teacher.

1. What is the job of a cosmologist? What is the difference between a cosmologist and an astrologist?
2. Do you think that cosmologists' jobs will be available in the future, since they already can explain how the world is formed?
3. Explain what a nebula is.
4. What is gravity? Can you provide an example of gravity?
5. What is inertia? Can you provide an example of inertia?
6. How could a nebula become something as huge as the sun?
7. How were the planets formed?
8. What keeps the planets and sun in place? In other words, why are they not floating around and bumping into one another?
9. Why do humans prefer to live on a Rocky Planet?
10. Can you name the nine planets?
11. Why do we know so much about Mars and so little about the Neptune, comparatively?
12. Why is Pluto considered neither a Gas Giant nor a Rocky Planet?
13. What objects are found in the Kuiper Belt?
14. How do comets come towards the Earth?
15. What do you think lies beyond the Heliopause?

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Cloze Activity

Directions: Choose the correct word from the word box to complete the paragraph below.

direction	spheres	balance
gravity	bigger	ground
force	planets	straight
holds	inertia	

(1.) _____ not only helped build the solar system by pulling gas, dust, and other space debris into (2.) _____, it also helps to keep it together. Without gravity, planets would fly away from the sun. One of the laws of gravity states that (3.) _____ objects have stronger gravity. The sun is 99.8% of the solar system's total mass. This makes the sun's gravity so powerful, it holds the (4.) _____. But if gravity were the only force at work on the planets, the planets would be pulled into the sun, like an apple falling to the (5.) _____. The second force that keeps the planets away is called (6.) _____. This force keeps things moving in certain ways. For example, objects such as spacecraft would move in a (7.) _____ line forever, unless another (8.) _____, such as gravity, slowed it down or changed its (9.) _____. Inertia tries to carry planets on a straight line out into space, away from the sun, but gravity (10.) _____ them in. Fortunately for each of the nine planets, gravity and inertia are in (11.) _____ with each other, and the planets go around the sun.