

## Quiz: Formation of The Solar System

1. In its earliest stage, our solar system was called a \_\_\_\_\_.

2. The early solar system consisted of dust and ice.

a. What **two** types of material comprised the dust?

b. Name one substance that was in the form of ice.

3. Describe the shape and motion of the solar system at this earliest stage.

Earliest Shape:

Earliest Motion:

4. Describe how the shape and **motion** of the Early solar system changed over time.

a. How did the shape change? In other words, what new shape did it become?

b. How did the motion change?

c. Why did the motion change in this way?

5. Even before the sun was born, the solar system was beginning to heat up. Why?

5.
  - a. What is the name of the process that produces most of the sun's energy?
  - b. What type of atoms serve as the fuel for this process?
  - c. What type of atoms does the sun produce during this process?
  - d. As this process occurs in the sun, does the sun's overall mass increase, or does it decrease?
  - e. Explain the reason for your answer to part d.
  
6.
  - a. Where in the solar system are the *gas giants* located?
  - b. In other parts of the solar system, the planets are mostly rock and metal. Why don't those planets have thick gas layers like the gas giants?
  
7.

At this very moment, we are orbiting the sun the sun at a speed of approximately 70,000 miles per hour. Our orbit represents a balance that keeps us from being pulled into the sun (and burned up) and also keeps us from flying away from the sun (and freezing in darkness).

  - a. What is preventing the Earth from being pulled in to the sun?
  - b. What is preventing the Earth from flying away from the sun?