

### SECTION 29.4 Formation of Our Solar System

In your textbook, read about collapsing interstellar clouds and Sun and planet formation. Write the letter of the item in Column B next to its matching item in Column A.

#### Column A

- \_\_\_\_\_ 1. Gas and dust from which stars and planets form
- \_\_\_\_\_ 2. Rotating disk of dust and gas that formed the Sun and planets
- \_\_\_\_\_ 3. Solid bodies hundreds of kilometers in diameter that merged to form the planets
- \_\_\_\_\_ 4. Believed to be the first large planet to develop
- \_\_\_\_\_ 5. One of the first elements to condense in the early solar system
- \_\_\_\_\_ 6. Lacking in satellites because of proximity to the Sun

#### Column B

- a. inner planets
- b. tungsten
- c. planetesimals
- d. solar nebula
- e. interstellar cloud
- f. Jupiter

In your textbook, read about asteroids. For each statement, write *true* or *false*.

- \_\_\_\_\_ 7. Asteroids orbit the Sun and range from a few kilometers to about 100 kilometers in diameter.
- \_\_\_\_\_ 8. Most asteroids are located between the orbits of Mars and Jupiter in the asteroid belt.
- \_\_\_\_\_ 9. Asteroids are thought to be planetesimals that never formed planets.
- \_\_\_\_\_ 10. A meteoroid is a broken fragment of an asteroid or other interplanetary material.
- \_\_\_\_\_ 11. A meteor is a meteoroid that bypasses Earth's atmosphere.
- \_\_\_\_\_ 12. A large meteorite will cause an impact crater when it collides with Earth.

### SECTION 29.4 Formation of Our Solar System, continued

In your textbook, read about comets.

Use the words below to label the diagram

coma

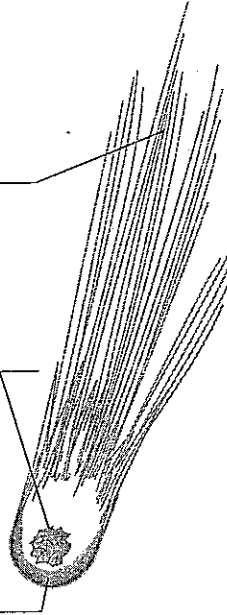
nucleus

tail

13.

14.

15.



Answer the following questions.

16. What type of orbit does a comet have? Describe a typical comet's perihelion and aphelion.

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17. What happens when a comet comes within 3 AU of the Sun?

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18. What is a periodic comet? Give an example.

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19. What is a meteor shower?

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