

## Science Shorts -6

# Comets, Meteors, and Asteroids

**Comets** are lumps of ice and rock. Millions of comets circle our Sun, but are invisible except when they are near the Sun. The solar heat makes them glow as they start to evaporate. Jets of gas and dust form long tails we can see from Earth. These tails can be millions of miles long.

- Most comets have orbits that take them far beyond the orbit of Pluto. Some comets make repeated trips around the Sun and can be seen from Earth at regular intervals.

- The earliest record of a comet sighting was made by a Chinese astrologer in 1059 B.C. People once thought comets were a sign that something bad was about to happen.

- Since comets are brightest when near the Sun, they are usually visible only at sunrise or sunset. A comet has no light of its own. What we see is the reflection of the Sun's light off the comet.

- Each time a comet passes close to the Sun, it loses some of its material. Over time, it breaks up and disappears completely, leaving a rocky object. Many asteroids may, in fact, be "dead" comets.

Meteorites vary in size from microscopic to very large. Most meteorites measure between 2 inches and 2 feet in diameter. Meteorites are usually very irregular and come in a variety of different shapes. The largest meteorite found in the United States weighs 30,000 pounds and was found in Willamette, Oregon in 1902.

A **meteoroid** is a piece of stony or metallic material that travels in space. Meteoroids travel around the Sun in a variety of orbits and at various speeds. Most meteoroids are about the size of a pebble.

A **meteorite** is a meteor that doesn't burn up in the atmosphere. If meteors do not burn up completely, the remaining portion hits the Earth. Over 100 meteorites hit the Earth each year. Fortunately, most of them are very small.

A **meteor** is meteoroid that enters the Earth's atmosphere, burns up, and falls as dust. Every day, hundreds of tons of dusty space material falls on Earth. Friction between meteors and Earth's atmosphere cause them to glow for a few seconds. They become visible as streaks of light in the sky.

**Asteroids** are round or irregularly shaped rocky objects in space. They may be only a few hundred feet wide or several hundred miles across. Asteroids may be debris left over from the formation of the Solar System 4.6 billions years ago.

- More than 100,000 asteroids orbit the Sun in a region between Mars and Jupiter. It takes from three to six Earth years for them to complete one revolution around the Sun. Scientists think this asteroid belt may be the remains of a planet, which broke up early in the Solar System. Asteroids are also found in other regions of our Solar System.

## Comets, Meteors and Asteroids Questions

1. What is a comet? \_\_\_\_\_
2. Why are most comets invisible? \_\_\_\_\_
3. What did ancient people think when they saw a comet? \_\_\_\_\_
4. What time of day is best for seeing a comet? \_\_\_\_\_
5. Where does a comet get its light to be visible? \_\_\_\_\_
  
6. What is a meteoroid? \_\_\_\_\_
7. How big are most meteoroids? \_\_\_\_\_
  
8. What is a meteor? \_\_\_\_\_
9. What causes a meteor to glow? \_\_\_\_\_
  
10. What is a meteorite? \_\_\_\_\_
11. About how many meteorites hit the earth each year? \_\_\_\_\_
12. How big are most meteorites? \_\_\_\_\_
13. What was the largest meteorite ever found in the U.S.? \_\_\_\_\_
  
14. What are asteroids? \_\_\_\_\_
15. How big are asteroids? \_\_\_\_\_
16. About how many asteroids are between Mars and Jupiter? \_\_\_\_\_
  
17. In the space below draw and label a comet, meteor, meteoroid, meteorite and an asteroid.