Make a Comet on a Stick!

Make your own comet that can fly around the room!

Comets are chunks of ice, rock, and gas that orbit the Sun. When they get close to the sun, they heat up, forming a glowing tail.

Materials Needed:

Wooden stick (a chopstick or popsicle stick works well), aluminum foil, ribbons, scissors.

Instructions:

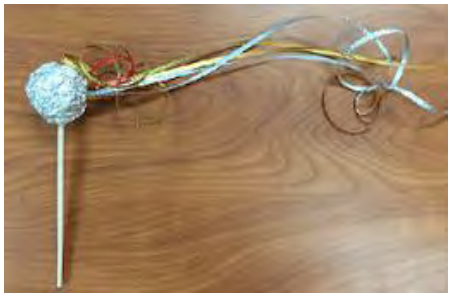
Step 1: Cut five pieces of ribbon: two long pieces (about 3 feet or 91 cm long), two medium pieces, and one short piece. Tie your ribbons around the end of your wooden stick.

Step 2: Cut three square pieces of aluminum foil. Hold the ribbon pieces off to one side and gather the foil around the end of the stick, where the ribbon is tied.

Step 3: Form the foil into a ball while holding the ribbon tail off to the side.

Step 4: Repeat with two more sheets of foil. If you want a bigger comet, add more foil!

Step 5: Take your comet on a stick and fly it around the room!



Left: Example comet on a stick.

Right: Comet ISON in 2013. *Image: NASA/MSFC/Aaron Kingery.*

Activity and images from NASA SpacePlace: spaceplace.nasa.gov/comet-stick/en/

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All About Comets

Comets are balls of frozen gases, rock and dust that orbit the Sun. When a comet's orbit brings it close to the Sun, it heats up and spews dust and gases, forming a tail that stretches away from the Sun for millions of miles. Comets have a *nucleus*, the main body of the comet; a *coma*, the glowing part around the nucleus; and two *tails*, a dust tail and a gas tail.

Comet Lovejoy in 2013. Image: NASA/Aaron Kingery.

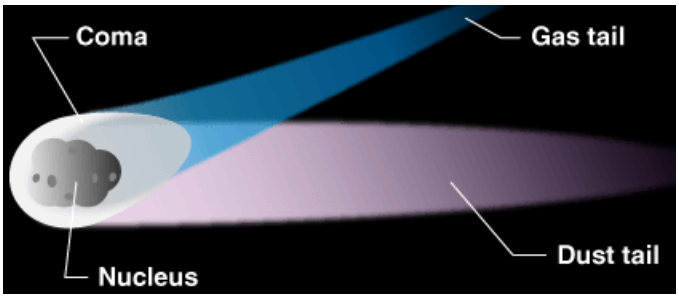


Diagram of a comet. Image: NASA SpacePlace.

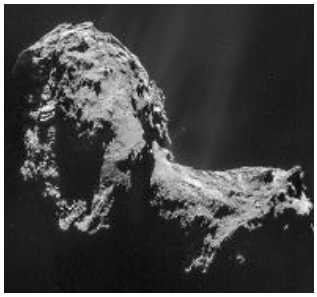
Some comets orbit the sun on a predictable schedule. Halley's Comet, the most famous comet, is visible from Earth about every 75 years. The next time we can see it is will be in 2061.

There are currently 3,668 known comets, but there are likely billions of comets orbiting our Sun in the Kuiper Belt and the distant Oort Cloud.

Comets are leftovers from the formation of the Solar System, about 4.6 billion years ago. As the sun, planets and moons were forming, small chunks of ice and rock did not have enough gravity to clump together. These chunks became asteroids and comets.

Scientists study comets to learn more about the early days of the Solar System. Astronomers think that comets may have brought water to Earth to in its early days!

In 2014, the European Space Agency's Rosetta probe sent the Philae lander to the comet Churyumov–Gerasimenko, landing a spacecraft on a comet for the first time!



Right: Surface of the comet Churyumov-Gerasimenko. Image: ESA/Rosetta/NAVCAM.

Information from NASA In Depth - Comets:
solarsystem.nasa.gov/asteroids-comets-and-meteors/comets/in-depth/