

## Build a Comet

Comets are sometimes called 'dirty snowballs.' Each comet has a solid center called a *nucleus* made of ices of water, carbon dioxide, methane, and ammonia, and gas, rock, dust and organic material. The nucleus of a typical comet is usually a few miles across.

Comets orbit the Sun, just like planets. They come from the chilly space beyond the orbit of Neptune. When they get close to the Sun, The flow of energy and particles from the Sun – the solar wind – sweeps the gas and dust of the comet into long tails – a dust tail and an ion tail. These can extend for *millions of miles*. The tail of the comet always points away from the Sun no matter what direction the comet travels because the solar wind always blows out from the Sun.

Comets are named after the person who discovers them. They sometimes run into a planet or moon, delivering their ice to that planetary body.

This activity will teach your child the parts of a comet and remind them what a comet is made of.

### What You Need:

- Glue
- Tape
- Scissors
- Various craft materials such as Styrofoam balls, foil, colorful plastic wrap, quilt batting, pipe cleaners, glitter, tissue paper, ribbon, yarn

### What to Do:

- Using various craft items help your child use their imagination in building a comet. BE CREATIVE and HAVE FUN! Every comet will be different.
- Make sure that your child NAMES his or her comet when done! Comets are named after their discoverer. Some famous comets are Halley, Hyakutake, and Shoemaker-Levy 9. Around a dozen 'new' comets are discovered each year.
- Once your child has completed his or her comet, ask that they share with you the different parts of their model. Do they have a nucleus? Two tails?



Parent Prompts:

What are comets made up of?

What are the parts of a comet?

Where are comets found?

Why might comets be important to other planets and moons? What do they deliver to those places?

