



Construct a Comet

What exists way out in our solar system, beyond Pluto, in the Kuiper Belt - Comets! Made up of materials from the birth of our solar system, comets give us clues to the past. What better way to learn about them, then to build your own!

Time

- Purchase dry ice
- Collect materials
- Prep materials for use
- 30 min class time

Grade

- 5-8

Next Gen Science Standards

- MS-ESS1-2 Develop and use a model to describe the role of gravity within galaxies and the solar system.

Utah Core Science Standards

- 6.1 Structure and Motion within the Solar System. The solar system consists of the Sun, planets, and other objects within Sun's gravitational influence.

Materials

- | | |
|--|-----------------------------------|
| ◇ 1 rubber mallet to crush dry ice | ◇ 1 tsp dirt per group |
| ◇ 1 canvas tote to place ice in when crushing | ◇ 1 tsp Karo dark corn syrup |
| ◇ 1 small cooler to store crushed dry ice | ◇ 1 tsp ammonia |
| ◇ Safety goggles | ◇ 2 cups crushed dry ice (1 lb) |
| ◇ 2 pairs heavy garden gloves per group | ◇ 1 large plastic mixing bowl |
| ◇ 2 heavy duty kitchen bags per group | ◇ 1 long handled wooden spoon |
| ◇ 3 small drinking cups (dixie or plastic) per group | ◇ 2 measuring cups |
| | ◇ 2 cups water |
| | ◇ 1 10 inch plastic plate or bowl |

Directions

- You may prepare the dry ice earlier, by placing 1 lb. per group into a canvas bag, smashing it with a mallet into powder and small chunks, and placing it into your cooler, or keeping it in your freezer until ready and then bringing to school in your cooler.
- It can be helpful to have extra adults for this activity and to set up all of your materials ahead of time.
- Follow the Building a Comet instruction sheet to complete activity.

You may want to use this video to introduce comets

- Birth of a Comet - How The Universe Works <https://www.youtube.com/watch?v=MC8Nj1m3e5Y>

You may want to show this video for a conclusion

- The Rosetta Mission Asks: What is a Comet? <https://www.youtube.com/watch?v=BUvrwPBS03A>