

Comets and Asteroids

Part I

Purpose

The purpose of these activities is to learn about comets and asteroids, exploring their compositions and the paths they each take through space.

Students will be able to

1. Understand the components of a comet, noting in particular the different types of comet tails.
2. Describe the path of a comet.
3. Describe what happens as a comet nears the sun.
4. Understand the components of an asteroid.
5. Describe the path of an asteroid.

Important Vocabulary (key terms in bold)

comet	coma	halo	nucleus	head
tail	gas	water	envelope	ion tail
dust tail	ecliptic	parallax	orbit	solar wind
asteroid	planetoid	asteroid belt	Kirkwood gaps	

Comet Commentary

Students view images of comets, and begin a discussion based on what they already know (or don't know) about comets. During the discussion, students define terms related to comets, taking notes for future reference.

Biology of a Comet

Students discuss the composition of a comet. Students watch or participate in the making of a comet, making observations. Students write a five-paragraph summary of the demonstration and its conclusion, including a brief personal reflection on the experience. (Note: Directions for this experiment can be found online in various places, including the Views of the Solar System website at <http://www.solarviews.com/eng/edu/comets.htm>, and the National Optical Astronomy Observatory website at <http://www.noao.edu/education/crecipe.html>. Directions for other models of a comet, including an edible one, can be found at NASA's http://solarsystem.nasa.gov/educ/docs/Expl_Comets.pdf.)

Comet Art

Students create representations of comets from available materials, which might include paints, arts-and-crafts materials, recyclables, etc.

Helpful Resources

http://solarsystem.nasa.gov/educ/docs/Expl_Comets.pdf
<http://whyfiles.org/011comets/index.html>
<http://library.thinkquest.org/3645/comets.html>
<http://www.astronomy.com/asy/default.aspx?c=ss&id=78>
<http://www.nineplanets.org/comets.html>
<http://www.enchantedlearning.com/subjects/astronomy/>
http://nssdc.gsfc.nasa.gov/imgcat/thumbnail_pages/comet_thumbnails.html