

Solar System Lesson Plan

Age Level: Grade 6

Subject(s) Area: Science

Materials Needed:

- *The Story of the Solar System* - DVD
- poster boards
- Crayons, markers, or colored pencils
- Glue/tape
- Note cards
- Black pens, and pencils
- Science textbook and other print resources (magazines, posters)
- Images of meteoroids (meteorites, meteors), asteroids, comets
- Laptops (if available)

Standards:

ESS1.B: Earth and the Solar System: The solar system consists of the sun and a collection of objects, including planets, their moons, and asteroids that are held in orbit around the sun by its gravitational pull on them. (MS-ESS1-2),(MS- ESS1-3)

Objectives:

- The learner will demonstrate an understanding that there are objects other than our Sun and the planets in our solar system.
- The learner will identify and describe characteristics of asteroids, meteoroids, and comets.

Learning Activities:

- Begin discussion about the night sky. (Ask: What kinds of objects do we see in the night sky? What kinds of things exist in our galaxy? In our solar system?)
- Have the class watch *The Story of the Solar System* to learn more about the Milky Way galaxy and our solar system.
- Review the information students learned about the objects in our galaxy and solar system. What did you learn about our solar system? What kinds of objects orbit the Sun or the planets? What are the smaller celestial bodies found in space?
- Ask students to talk about some of the facts or information they know or have learned from the program about asteroids, comets, and meteoroids (and/or meteors and meteorites).
- Divide the class into groups of 3-4.
- Tell them that they are going to be creating presentations for the rest of the class.
- Give students the option of researching asteroids, comets, or meteoroids (including meteors and meteorites) for their presentations. Tell the groups that they are to make posters with drawings and/or cut out or photocopied images of the celestial objects they are researching.
- Each poster must include 10 interesting facts about the object in a visible spot on the poster. The posters should be colorful and creative. Along with each poster, the groups are to prepare

a 2-3 minute presentation about the object they researched. The presentations need to address the following questions:

- What is the celestial object researched?
 - What does this celestial object look like?
 - How big or small can this celestial object be?
 - When and how did we discover this celestial object's presence in our solar system?
 - Where in the galaxy is this celestial object typically found and/or how can we detect this object in the night sky?
 - How does this celestial object affect life on Earth?
- Discuss ways the groups can divide up the presentation tasks. For example, perhaps one person in a group could be the interesting fact researcher, another person could find or draw images, two more students could write the presentation, and the final person in a group could be the oral presenter. Allow groups to divide their tasks however they see fit but make sure that all students are participating in some way. Give students time in class to research their presentations and make their posters. Students may use encyclopedias, astronomy texts, magazines, and other print sources to research their reports. The following Web sites also have good information on comets, meteoroids, and asteroids:
 - <http://www.solarviews.com//eng/homepage.htm>
 - <http://library.thinkquest.org/27930/asteroids.htm>
 - <http://www.windows.ucar.edu/tour/link=/comets/comets.html&edu=high>
 - http://www.windows.ucar.edu/tour/link=/our_solar_system/asteroids.html
 - Once students have finished their research, have each group orally present their posters and reports to the rest of the class. Allow time after each presentation for questions.
 - After the presentations are finished, review what students now know about the smaller celestial bodies in our solar system. What were some interesting facts they discovered while researching their reports? What are some interesting things they learned from other group presentations?
 - Display the group posters in the classroom so that students may examine them in detail.

Assessment:

Evaluate students' work during the lesson using the following rubric:

3 points: Students were highly engaged in class discussions; worked extremely well in their research groups; produced colorful and creative posters that identified at least 10 interesting facts about the celestial body they researched; and presented a complete 2-3 minute report that correctly addressed the set criteria.

2 points: Students were engaged in class discussions; worked well in their research groups; produced somewhat colorful and creative posters that identified at least 8 interesting facts about the celestial body they researched; and presented a 1-2 minute report that correctly addressed most of the set criteria.

1 point: Students participated minimally in class discussions; were unable to work in their research groups without outside assistance; produced unfinished or nondescript posters that identified 5 or fewer interesting facts about the celestial body they researched; and presented an incoherent, incomplete report that did not address the set criteria.

Reflection: