

My Spray Bottle Solar System

Lesson plan for grades kindergarten - 8th

Length of lesson: 31-60 minutes

Adapted by: Cherish Park, Environmental Science Institute, November 2011

Authored by Perfectly Preschool

SOURCES AND RESOURCES:

- Space Animation
<http://www.kidsastronomy.com/index.htm>
- Solar System Animation
http://www.kidsastronomy.com/solar_system.htm

POTENTIAL CONCEPTS TEKS ADDRESSED THROUGH THIS LESSON:

§112.11. Science, Kindergarten: 8C

§112.14. Science, Grade 3: 8C, 8D

§112.16. Science, Grade 5: 8D

§112.18. Science, Grade 6: 11A

§112.19. Science, Grade 7: 9B

§112.20. Science, Grade 8: 8A

PERFORMANCE OBJECTIVES:

Students will be able to discuss facts about our solar system, as well as general concept of the universe including the planets, stars, and galaxies.

MATERIALS (per group of four):

- Paint, white or yellow
- Spray bottle
- Four pieces of paper, one per student
- Pictures of the planets in our solar system and the Sun, galaxy, and other stars and constellations in the universe

ENGAGE:

Tell the students that they will be creating their own universe. Show students pictures of the planets in our solar system, the Sun, pictures of the galaxies such as the Milky way and where the Earth is located in the Milky Way, and other stars of our universe. Do students understand these concepts/terms?

1. Prepare a diluted white paint with a small amount of water (to make it easier to spray) and pour it into a small spray bottle.

2. Hand out black construction paper to every student. Different colored paper can be used depending on the color of the paint being used.
3. Ask the students to imagine that the black construction paper is our universe and that they will be creating their own universe.
4. Allow the students to spray the mixture onto their black construction paper and let them know that each dots of white paint will represent a star. Make sure they don't spray too much and also remind them to let it dry before discussing with their groups
5. Have the students pick out the white dots from their universe to represent planets, moon, and stars.

EXPLORE AND EXPLAIN:

As a class, discuss the following questions and write responses in science journals:

- What is a star?
- What is a planet?
- Is our Sun a planet or a star?
- Name the planets in our solar system.
- What are moons?
- Do all planets have moons?
- What is a galaxy? Do you know the name of the galaxy we are living in?
- How big is our solar system?

Research the answers to these questions online or in library reference materials. Have their answers to any of these questions changed after their research? How? Record how the answers have changed.

Older students can research features of each planet in our solar system and compare them to Earth.

1. What are some of the shared features between some of the planets? What are some of the major physical differences?
2. Name unique physical characteristics about each planet.
3. Can there be new settlement on planets other than Earth?
4. What is the weather like other planets? Do they experience four seasons like we do on Earth?