

Classroom Activity

Grades 2-4

SCALE MODEL SOLAR SYSTEM

Build a Solar System

Materials

- Paper, Styrofoam balls, or any other material of your choice to make the nine planets and the sun
- 1 tape measure
- 1 compass to draw planets if using paper
- 1 pair of scissors
- 1 calculator
- 1 ruler
- Paint, crayons, or markers to color planets and sun models, if desired
- 1 long hallway or outdoor space of at least 110 feet (30.5 meters). You can make a partial model if your space is smaller.
- Pen or pencil
- Solar System – Planetary Data Worksheet
- Computer with Internet access

Procedure

1. Develop a sense of the planets' sizes and their distances from the sun.

How Do Scientists Know the Distances Between the Planets?

http://spaceplace.nasa.gov/en/kids/phonedrmarc/2002_november.shtml

This article describes the important people that helped us determine orbital patterns of the planets and provides a link to an activity to draw a scale of our solar system in your driveway.

2. Use the following website to determine the sizes and distances from the sun for each planet.

Grade 4-6 The School Yard Solar System

http://nssdc.gsfc.nasa.gov/planetary/education/schoolyard_ss/

You can determine the sizes and distances from the sun for each planet

3. Determine and record the scale that you will use to:
 - a. Create the planet models' sizes.
 - b. Place the planet models at the correct distance from the sun model
 - c. Remember to include units when you record the scales.
4. Draw or build the planet models to scale.
5. Place the planet models at the correct modeled distances from the sun.
6. Take a picture of your model to show when you present your solar system data.

Student Presentation

Students will be asked to demonstrate their solar system models & worksheets during the video teleconference.