

Complete this observation activity. Follow the instructions below and answer any questions in complete sentences.

Solar System Scale Activity

Our solar system is incredibly vast. In this activity, you will make a scale model of the solar system to help you visualize the distance between the planets.

Materials

- Several sheets of paper
- Scissors
- Ruler
- Tape measurer or ruler

Building a Solar System Model

1. To conserve paper, use all sheets of paper lengthwise in this activity.
2. Cut several sheets of paper in half lengthwise.
3. Tape two strips of paper together to make one long strip.
4. During this activity, whenever you run out of room on one strip of paper, tape another strip to it paper to it.
5. Draw a circle and label it "Sun" at one edge of the strip.
6. Measure 4 $\frac{3}{4}$ inch (in.) from the sun and draw a circle. Label it Mercury.
7. Measure 4 in. from Mercury and draw a circle. Label it Venus.
8. Measure 3 $\frac{1}{4}$ in. from Venus and draw a circle. Label it Earth.
9. Draw a circle right next to the Earth. Label it Moon.
10. Measure 6 $\frac{1}{4}$ in. from the Earth and draw a circle. Label it Mars.
11. Measure 14 $\frac{3}{4}$ in. from Mars and draw a wavy line. Label it Asteroid belt.
12. Measure 2 ft. 6 in. from the Asteroid belt and draw a circle. Label it Jupiter.

Continuing your model is optional. You need to at least read the distance between each of the final planets.

13. *Optional: Measure 4 ft. 4 in. from Jupiter and draw a circle. Label it Saturn.*
14. *Optional: Measure 9 ft 8 in from Saturn and draw a circle. Label it Uranus.*
15. *Optional: Measure 11 ft from Uranus and draw a circle. Label it Neptune.*



Questions

Answer the questions below in complete sentences.

1. As you get further and further from the sun, what happens to the distance between the planets?
2. How would you compare the distance between the inner planets to the distance between the outer planets?
3. The entire solar system is surrounded by a giant sphere of tiny space rocks called the Oort Cloud. On our scale, the Oort Cloud would be about 26 miles from Neptune! Remember that our scale was so small that Earth and the Moon were right next to each other. What does this teach us about the size of the solar system?