TEKS for Activities and Presentation

Kindergarten: K.2 (A), K.2 (E), K.6 (E), K.6 (D), K.8 (C)
First Grade: 1.4 (B), 1.6 (C), 1.6 (D)
Second Grade: 2.2 (A), 2.6 (C)
Third Grade: 3.3 (C), 3.8 (D)
Fourth Grade: 4.3 (C)
Fifth Grade: 5.3 (C)

Program Vocabulary
Distance, Model, Orbit, Scale, Solar System

Students Will:
• Identify each planet and its order in the Solar System
• Understand the scale of size and the distance between objects in the solar system
• Understand a scale model is one way of looking at distances that are too large to visualize

Pre-visit Activity: Name Those Planets

Materials:
Copy of NASA illustration: All Planet Sizes, pencils, and paper

Prep-work:
• Print out a copy of the NASA illustration: All Planet Sizes
• Gather additional supplies

Procedure:
1. Show the class the picture of the planets. Challenge students to point out which planet is Earth.
2. Next, challenge students to identify the rest of the planets. Outward from the sun, the planets are as follows: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune, and Pluto. Remind students that Pluto is no longer considered a planet; it was downgraded to the status of dwarf planet.
3. Explain that this illustration shows the planets in relative size. Ask students what they think this means. (How big the planets are in comparison to each other and the Sun).

4. Tell the class that they will work in groups to create a mnemonic to help remember the names and the order of the planets. Explain that a mnemonic is a memory aid, such as an abbreviation, rhyme, or mental image that helps you to remember something.

5. Write the following mnemonic on the board: My Very Educated Mother Just Served Us Nine Pizzas. Explain that this is a very common mnemonic used to remember the planets and their positions in the Solar System. Tell the class that they will invent their own aids to remember the planets and their order.

6. Separate students in groups of four to five.

7. Distribute paper and pencils and allow groups time to invent a new mnemonic.

8. When groups are finished, allow time for groups to present their ideas to the class.

Post Visit Activity: Human Scale Model of the Solar System

Materials:
Copy of NASA illustration: All Planet Sizes from Pre-visit activity

Prep-work:
• Locate a safe space that is large enough to create the model Solar System (Gym, sports field, or playground)

Procedure:
1. Show the class the NASA illustration: All Planet Sizes. Explain that this picture show the relative size of the planets in relation to one another. Explain that they are going to create a model of the distance between the planets.

2. Ask the class for volunteers to represent the Sun and the eight planets. Assign a part to each of the volunteers.

3. Proceed with the class to the chosen site. Have the volunteer representing the Sun stand at the edge of the area and then use the following guide to place the other volunteers.
   • Mercury = 1 step from sun
   • Venus = 2 steps from sun
   • Earth = 2.5 steps from sun
   • Mars = 4 steps from sun
   • Jupiter = 13 steps from sun
   • Saturn = 24 steps from sun
   • Uranus = 49 steps from sun
   • Neptune = 76 steps from sun
4. Explain to the students, that at this scale, the Sun would be less than .5 inches in diameter. Encourage students to share their observations about the distances between the planets in the model.
NASA illustration: All Planet Sizes