

Instruction Sheet — Take a Walk on the Wild Size

Directions for Pacing the Solar System

1. Pick a location for the Sun, and have the group start their “giant” paces from there. (The giant paces should be about 1 yard long each.) Read off the distances as you go.
2. Take 10 paces. Call out “Mercury.”
3. Take 9 more paces. Call out “Venus.”
4. Take 7 paces. Call out “Earth.” At this point, have everyone look back at the Sun. Ask, “What do you notice?” “How big does the Sun look from Earth?” “Looking from our model Earth, does the model Sun look about the same size as we see it in the sky?” (It should.)
Share fun facts:
 - Earth is 93 million miles from the Sun.
 - Astronomers give the distance from Earth to the Sun a special name — an astronomical unit.
5. Take 14 more paces. Call out “Mars.” Ask everyone if they know which planet they will pass next on their journey to Saturn.
6. Take 95 paces. Call out “Jupiter.” Ask the group which planet is next. Have them predict how many more paces it will be to Saturn.
7. Take 112 paces. Call out “Saturn.” Saturn is 247 paces from the Sun, and 221 paces from Earth!
8. Stop at Saturn and discuss the model with the group. Ask them what they think about the size of the model they created. Are they surprised? Where do they think Earth’s Moon would be located? How big does the model Sun look from the model Saturn?
 - Saturn is 890 million miles from the Sun, or 9.5 astronomical units.
 - So — Saturn is about 800 million miles from Earth, when they are both on the same side of the Sun.
 - Walking at 3 miles per hour, it would take you 30,441 years to get from Earth to Saturn.
 - Driving a racecar at 100 miles per hour, it would take you 913 years to get from Earth to Saturn.
 - Flying to Saturn in a jet plane, traveling at 600 miles per hour, it would take you 152 years to get to Saturn.
 - Flying in a rocket, traveling at 17,500 miles per hour, it would take you 5 years to get to Saturn.
 - It took the Cassini-Huygens spacecraft nearly 7 years to get to Saturn, because it did not travel directly to Saturn. It had to fly by several planets on its way, using their gravity to give it the “energy boost” needed to get all the way to Saturn. Cassini’s journey covered nearly 3 billion miles.
9. If you have the space and the time, you can continue to the outer planets, and to Pluto!
 - It is 249 paces from Saturn to Uranus.
 - It is 281 paces from Uranus to Neptune.
 - It is 242 paces from Neptune to Pluto.