NATIONAL GEOGRAPHIC GIANT MAPS

SOLAR SYSTEM

SIMON SAYS ... EXPLORE!

RECOMMENDED GRADES: K-12

TIME NEEDED: 15 MINUTES OR MORE

(activity is flexible as to grade level, size of group, and amount of time)

Description

Students play this popular and fun game while exploring the solar system.

Learning Objectives

Students will:

- explore the features of the solar system, including individual planets
- identify the differences between a galaxy, a comet, a meteor, and an asteroid
- engage with solar system vocabulary and terminology

Materials

- Lanyards (40 total, 10 of each color: red, blue, yellow and green) (optional)
- Hourglass timer (optional)

Preparation

5 minutes

- Review the "Simon Says" statements for your group size and familiarize yourself with the statements, including locating the solutions to any Simon Says commands that are unfamiliar.

Tips/Modifications

Tip

- This activity can also be used as a pre-assessment or post-assessment tool.

Modification

- This activity can be tailored to grade level, group size, and amount of time. "Simon Says" commands for large groups and small groups are provided.

Rules

Have students remove shoes before walking on the map.

DIRECTIONS

1. Depending on experience and prior knowledge, students may need a general introduction or tour of the Solar System map. This teacher-led activity can serve as an introduction or a review of some of the major geological features that the game will require students to visit. Walk over the map and show (or have selected students locate and stand on) the following:

Mercury
Mars
Uranus
Pluto
Venus
Jupiter
Neptune
Asteroid Belt
Earth
Saturn
The Sun
Orbital paths

2. Divide the class into four teams—comet, asteroid, Milky Way galaxy, and meteor—and give each team a different colored lanyard. Make the teams as even as possible. Instruct each team to gather behind their " Base Camp," by locating their team " mascot" on one of the four corners of the map. Ask teams to work together to correctly identify the image of their namesake. Explain the differences between an asteroid, a meteor, the Milky Way galaxy, and a comet as students locate their basecamps. Definitions are located in the vocabulary guide. [Correct locations: Milky Way galaxy (lower left corner), meteor (upper left corner), comet (upper right corner), asteroid (lower right corner)].

3. Review the rules of "Simon Says" with students. No running is allowed. Students who run, touch, or impede other students will be "out." Remind students if they move toward a location that did not begin with the direction "Simon Says," or they choose an incorrect place, they will be "out." When a student is out, he or she will walk off the map and sit on the border of the map near his or her team's corner until the start of a new game. Use the hourglass timer (optional) to signal the end of each game. The team with the most team members still on the map will be declared the winner of that game. Assure students that each game will have a time limit of 5 to 10 minutes to keep "out time" to a minimum. (This time is governed by the timer.)

4. Using the "Simon Says" statements provided, direct students to visit various locations in the solar system. Allow students a few seconds to get to each location that Simon Says.

   Make the game more difficult and control traffic with qualifiers, like these:

- Simon Says **everybody ...**
- Simon Says **comet team ...**
- Simon Says **all girls ...**
- Simon Says **all boys ...**

   Remember to mix in statements without saying "Simon Says" to catch students who are not paying close attention.

   Feel free to create your own "Simon Says" statements.

5. When the timer is up, the game is over. Have students gather at their "Base Camp" for the start of a new game. Repeat as many times as you'd like!

"SIMON SAYS" STATEMENTS FOR LARGE GROUPS

"Simon Says" statements for the start of the game or with larger numbers of students:

➧ Simon Says ...

- Stand on any gas giant. (Jupiter, Saturn, Uranus, Neptune)
- Stand on any terrestrial planet. (Mercury, Venus, Earth, Mars)
- Sit on the planet with the largest volcano in the solar system. (Mars)
- Swirl around like a storm on the planet with the massive storm known as the Great Red Spot. (Jupiter)
- Stand on any planet with one or more moons. (Earth, Mars, Jupiter, Saturn, Uranus, Neptune)
- Revolve around the planet with the greatest number of rings. (Saturn)
- Walk a lap around the asteroid belt.
- Stand next to the planet knows as Earth's "sister planet." (Venus)
- Stand next to the smallest planet in the solar system. (Mercury)
- Sit on the largest planet in the solar system. (Jupiter)
- Spin around on the planet with the shortest length of day. (Jupiter)
- Revolve around on the planet with the longest length of day. (Venus)
- Walk around on the orbital path for one of the dwarf planets in our solar system. (Pluto)
- Make one revolution around the sun using an orbital path of an outer planet.

"SIMON SAYS" STATEMENTS FOR SMALL GROUPS

"Simon Says" statements for the end of the game or with smaller numbers of students:

➠ Simon Says ...

- Orbit around the planet with the moon Deimos. (Mars)
- Orbit around the planet with the moon Io. (Jupiter)
- Stand near the planet that has the most volcanoes. (Venus)
- Travel from the coldest planet in our solar system to the hottest planet in our solar system. (Uranus to Venus)
- Lie down on a space body that came from the Oort cloud. (Comet)
- Stand on the planet whose gravity can force asteroids located in the asteroid belt out of orbit. (Jupiter)
- Walk around the planet that has the densest atmosphere. (Venus)
- Touch the planet home to the largest canyon in the Solar System, the Valles Marineris. (Mars)
- Spin around on the fastest spinning planet in the solar system. (Jupiter)
- Line up on the orbital path of the planet whose seasons last more than 40 years, which is longer than any other planet. (Neptune)
- Stand on the edge of a planet with no solid surface to walk on. (Jupiter, Saturn, Uranus, Neptune)