

E6 Solar System

LEVEL(s): yr 3 - 13



LESSON FOCUS

- Identify basic facts about the planets that make up our Solar System
- For younger children - know the order of planets from the sun.
- For older children - Discuss different aspects of the habitability of the planets.

SPECIFIC LEARNING OUTCOMES

At the end of this lesson the students will be able to:

- 1) Name the planets in our solar system, in order from the sun.
- 2) Name several basic facts about each of the planets. eg. length of day, atmospheric conditions etc.
- 3) Discuss the potential habitability of some of the planets, and make predictions as to what challenges there would be for life.

LEARNING ACTIVITIES

- **Through the Solar System:** (yrs 3 - 4, approx 20 minutes)
Children will become familiar with the planets of the Solar System using kits, containing scale models of all 8 planets. They will participate in a discussion about attributes of the planets, the comparative sizes and order of planets from the Sun.
- **Solar System Detectives:** (yrs 5 - 7, approx 20-25 minutes)
Children will play the part of "Space Detectives" and be briefed by the educator on possible planetary "suspects" as part of an important investigation. The briefing will cover the sun, all eight planets of the Solar System and dwarf planets. After the briefing, they will be divided into groups where they have a detective note activity to complete, identifying different planets from "mugshots".
- **Where to from Here?** (yrs 8 - 10, approx 30 minutes)
The Educator will pose the scenario of a post apocalyptic Earth, the students have been chosen as "Task Force Teams" to make a decision as to which planet (or moon) we would choose to be the new home planet for the population of Earth. The students will be guided through their decisions, using their background knowledge of planets and moons, and information provided in a presentation and questionnaire, students have to justify their decisions.
This information can be taken back to school, so the students can further expand on their ideas and submit a completed report on their findings (could be in written, artistic or electronic form).
- **Through the Solar System:** (yrs 3 - 10)
This involves a highly visual presentation focusing on each of the planets of the Solar System, dwarf planets, asteroids and comets. It can also cover the Kuiper Belt and Oort Cloud. This is a discussion based activity, and is geared towards children being able to ask questions of their own.

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CURRICULUM LINKS

SCIENCE: Nature of Science
• Investigating in science

SCIENCE: Planet Earth and Beyond
• Astronomical systems

SCIENCE: Physical World
• Physical inquiry and physics concepts

KEY COMPETENCIES

Thinking

Using language, symbols and texts

Managing Self

Relating to Others

Participating and Contributing

PRIOR KNOWLEDGE AND EXPERIENCES

- Students need to have seen "size compare" in the planetarium show.
- Yr 3-4 will need to be familiar with the names of the planets in our solar system, and have looked at images of each.
- Yr 5-7 will need to be familiar with the planets in our solar system and to have discussed some of the features of each of the planets eg size, appearance, what the atmosphere is like, temperatures etc.
- Yr 8-10 will need to be very familiar with the planets of the Solar System, as well as knowing some basic facts about conditions on each planet. They need to have been introduced to the idea that conditions on the moons of the planets can also be very different, and to have researched some of the larger moons.