

# TITLE: Explore the Solar System with Augmented Reality

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**Timeframe of activity:** 30-40 min

**Tags:** Solar System Space, Sciences

**Grade Level:** K-6

**App/Tech Tools:** CleverBooks Space App, Mobile device (tablet or mobile phone)

**Additional material:** CleverBooks Space Poster

## Learning Objectives:

- Student can name the planets in the correct order from the Sun.
- Student can explain how the Earth and other planets move around the Sun.
- Student will describe the movement of the Earth
- Student will describe the movement of the other planets solar system
- Student will describe the movement of the sun in the solar system
- Student will describe the movement of the sun in the solar system

This team activity develops collaboration, critical thinking, information search and public presentation

## Lesson Activity:

**Starter:** What Do You Already Know:

Briefly discuss what children may already know about our solar system.

Split the children into four groups, ready for a carousel of activities. Each activity should take about 10 minutes.

- **Activity One.** A teacher-led guided tour of the solar system to explain how planets orbit the Sun.
- **Activity Two.** An activity sheet for children to record their learning from this.

By the end of the lesson, all children must have done Activities One and Two, in that order; other activities can be done independently and in any order without having done any of the other activities. A table to show a suggested order of activities can be found at the end of this plan.

- **The Solar System (Teacher-led activity):** Use the AR technology to lead children on a guided
    - Have the CleverBooks Space Poster.
    - Download the free Space App, from the Apple App Store for iOS or Google Play for Android devices.
    - Launch the App and choose between: Solar System, Rocket Info, Rocket Puzzle, and Rocket Launch modes.
    - Once the App is launched, face the camera of your mobile device on the physical image to have the full experience of each mode with AR.
  - **Tour of the solar system. How Do Planets Move around the Sun?:** Children use the AR technology to look at the solar system again and complete the differentiated worksheet. Tablets connected to the same tour that the teacher is running could be left on the table for children to complete this activity independently.
1. **Group 1:** Fill in the gaps to explain how planets orbit around the Sun.
  2. **Group 2:** Answer the questions to explain how planets orbit around the Sun.
  3. **Group 3:** Write an explanation of how planets orbit around the Sun.
- **Research a Planet:** Students choose one of the other planets in our solar system. Use a laptop, tablet or book to find out more about.
  - **Solar System Quiz:** students write a quiz with five questions about the solar system and test the other members of their group
  - **Planets Mnemonic:** Create your own mnemonic to remember the order of the planets and record it on the Mnemonic Activity Sheet.

A table to show a suggested order of activities can be found:

	The Solar System (teacher-led activity)	How Do Planets Move Around the Sun? Activity Sheet	Research a Planet	Solar System Quiz	Planets Mnemonic
<b>Group 1</b>	First	Second	Third	Fourth	Fifth
<b>Group 2</b>	Fourth	Fifth	First	Second	Third
<b>Group 3</b>	Third	Fourth	Fifth	First	Second
<b>Group 4</b>	Second	Third	Fourth	Fifth	First

## Questions outline:

- Assessment Questions
- What is an orbit?
- What is the force that keeps moons in orbit around planets and planets in orbit around the sun?
- In which direction does Earth orbit the Sun?
- In which direction does Earth spin on its axis?
- Are there any planets that rotate on their axes in a different direction to Earth?