



## Space Our Solar System

### Provided by:

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Information	Program Description
Kindergarten-5th Grade	Students will explore the planets in our Solar System and learn key concepts of relative mass, size, and distance from the sun and from each other. Students will learn about the relationship between the Sun-Moon-Earth, the phases of the Moon, and the craters of the moon. Students will learn about the first lunar landing
Curriculum Format	Each lesson can be presented in 45-60 minutes.  Teaching Guide with complete instructions is provided.  Teaching Kit with materials needed to present lessons is provided. User may need to provide standard classroom supplies (pencils, scissors, glue). If a lesson requires perishable items (e.g. milk), user is responsible for these purchases.

Lesson	Overview
<b>One:</b> All About the Planets	Students learn about the planets in the solar system through watching a video, discussing why Pluto is no longer considered a planet, reading letters children wrote when they found Pluto missing from a planetary exhibit, and by creating a mnemonic device to help remember the order of the planets.
<b>Two:</b> Distance and Size	Students are guided in an experiential learning exercise to see a scale simulation of the distance of the planets from the sun and from each other, as well as how they orbit around the sun. Students then use play dough to model the relative size of the planets, and to make an "adding tape model" of the solar system to take home.
<b>Three:</b> The Moon Part 1 – Phases of the Moon	Students create a kinetic model using flash light and Styrofoam spheres to understand why the Moon looks different depending on where it is in the sky relative to the Sun and the Earth. Students build a Sun-Moon-Earth model. Youth make a delicious model of the phases of the Moon out of Oreo cookies.

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Lesson	Overview
Four: Moon Part 2 – Craters	Students use this inquiry based lesson from <u>Wonderwise</u> called Space Geologist. Students create actual craters in flour covered with powdered cocoa with different sized and massed objects from different heights. Students record and analyze the data to further understand what is observed on the on the Moon’s surface. Students also use NASA photographs to compare the two sides of the Moon’s surface.
Five: Moon Part 3 – Really! Getting to Know Our Closest Neighbor	Students discuss the origins of the Moon, make a phases of the Moon flipbook, and create a Birthday card to themselves from the Moon.
Six: Rocket Engineers	Students discuss rockets and space travel. Students watch a video of the actual first lunar landing. Students learn how all the different parts of the paper rocket control different aspects of its flight, and then make their own rocket. After launching the rockets, students have the opportunity to rebuild their rockets to make them better.
Extra sessions:	<p><u>Can you Planet? Sorting game</u> – Students sort picture of the planets physically into different categories.</p> <p>The Magic School Bus: Out of this World Students are introduced to concepts such as asteroids, comets, and meteorites.</p>

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