

## WHAT'S UP IN SPACE SERIES (7-PART)

- EARTH
- EXPLORING SPACE
  - MARS
  - MOON
- PLANETS
- STARS
- SUN

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## THE SOLAR SYSTEM FOR KIDS

# WHAT'S UP IN SPACE?



# THE MOON

MEETS NATIONAL  
SCIENCE STANDARDS

*STUDY GUIDE*

## **COMPREHENSION QUESTIONS:**

- Why is the moon called a satellite of Earth?
- How does the size of the moon compare to the size of Earth? How does gravity on the moon compare to gravity on Earth?
- What is the weather like on the moon?
- What are craters? How do scientists believe that craters were formed on the surface of the moon?
- How do scientists believe the moon was created?
- When did humans first land on the moon?
- What makes the moon look bright in the night sky?
- Why does the moon look different from Earth every day? What are the four main phases of the moon?
- What is an eclipse? How is a lunar eclipse different from a solar eclipse?
- How can the moon be used to measure the passage of time?
- What effect does the moon have on the Earth's oceans?

## VOCABULARY:

**Satellite** – A moon or other celestial body that orbits another larger body, like a planet.

**Craters** – Round, bowl shaped dents in the surface of the moon.

**Phases** – The moon goes through four phases: new moon, first quarter, full moon and last quarter. As it goes through the changes the moon looks different in the sky.

**Wax** – When the moon appears to grow in size in the sky.

**Wane** – When the moon appears to get smaller in the sky.

**Lunar Eclipse** – When the Earth gets directly between the sun and the moon, the Earth's shadow falls on the moon. The full moon gets dark for as long as the three are in perfectly in line.

**Solar Eclipse** - When the moon gets directly between the sun and the Earth, the moon's shadow falls on the earth.

**Tractive Force** – The gravitational force from the moon that causes tides on Earth.

## INTRODUCTION TO SERIES

**What's UP In Space?** Is a refreshingly new series that introduces young learners to the solar system. These fascinating topics are presented at a developmentally appropriate level, using a combination of live action footage, illustrations and computer animation. Each program answers important questions in space science using the latest research and in line with the American National Science Education Standards.

As a complementary device with each program, an instructional guide suggests exercises to enhance the learning for teachers, parents and students. These interactive exercises will reinforce and further develop a student's level of comprehension.

### TABLE OF CONTENTS:

<i>Introduction to Series</i> . . . . .	1
<i>Additional Resources</i> . . . . .	2
<i>Prior Knowledge / Discussion Questions / Follow Up Activities</i> . . .	3
<i>Vocabulary</i> . . . . .	4
<i>Comprehension Questions</i> . . . . .	5

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# MOON

Even the youngest students are familiar with the moon in our night sky. This program takes viewers to the surface of the moon and outlines the history of lunar exploration. Discussions include the impact of the moon on Earth's tides and calendar.

## **ADDITIONAL RESOURCES:**

<http://www.pbs.org/wgbh/nova/tothemoon/>  
<http://www.enchantedlearning.com/subjects/astronomy/>  
<http://kids.msfc.nasa.gov/>  
<http://nssdc.gsfc.nasa.gov/planetary/planets/moonpage.html>  
<http://home.hiwaay.net/~krcool/Astro/moon/>  
<http://www.astronomy.com/content/static/AstroForKids/moon.asp>

### Man on the Moon

by Anastasia Suen, Benrei Huang

### Moonwalk: The First Trip to the Moon

by Judy Donnelly, Dennis Davidson

### The Moon Book

by Gail Gibbons

### The Moon

by Seymour Simon

## **ASSESSMENT OF PRIOR KNOWLEDGE:**

- What is the moon? Is it a planet? Is it a star?
- What is the moon made of? What does it look like from Earth?

## **DISCUSSION QUESTIONS:**

- Why do you think that people have always been fascinated with the moon?
- What kinds of scientific challenges did people have to overcome before they could put people on the surface of the moon? What did people need to learn about space and the moon before they could imagine sending people into space?

## **FOLLOW UP ACTIVITIES:**

Keep a timeline of the moon's phases. Students can make sketches each night of the moon's appearance, and can chart changes on a calendar.

Students may enjoy learning about moon mythology. From the ancient Greeks to Native Americans, and in cultures all around the world, the moon has inspired countless stories and myths. Students can collect these stories and compare them across cultures and periods in history.