



This year marks the 50th anniversary of the Apollo 11 mission to the Moon. In recognition of that incredible accomplishment, we've curated new NASA eClips™ videos and resources on the Moon and asteroids in addition to sharing other lunar and #Apollo50 resources.

If you want engaging and hands-on resources to inspire kids and spark their imaginations before summer, then look no further!

*photo credit: NASA*

## New Video Releases!

### What's the difference between rotation and revolution of the Moon?

Learn from NASA's Subject Matter Experts (SMEs) about how these repeatable patterns create lunar phases and tides and how NASA plans to explore the Moon's surface.



### [Our World: Moon Phases](#)

What causes the phases of the Moon? From New Moon to Full Moon, the Earth-Sun-Moon system is responsible for the Moon's changing phases. Learn more about rotation, revolution and this repeatable pattern. (Grades K-5)



### [Our World: The Moon's Impact on Earth](#)

The Moon impacts Earth through tides and moonlight. NASA missions to the Moon continue to help us discover more about our nearest neighbor. Learn more about Moon mapping and resources. (Grades K-5)

## Fun Fact:

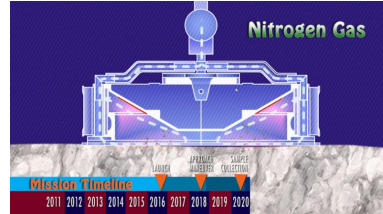
Currently, NASA has detected 795,015 asteroids!

Every year, near-Earth asteroids have close approaches-- less than 1 lunar distance (384,410 km; 238,860 mi) -- from Earth. That means that asteroids pass between the Moon and Earth!



### Real World: Small Bodies Orbiting the Sun

In addition to planets and their moons, there are many small bodies orbiting the Sun. How did these bodies form? Learn more about comets and asteroids and the role these play in our Solar System. (Grades 6-8)



### Real World: Close Encounters with an Asteroid

Picture this. NASA sends a satellite to land on an asteroid; grabs a piece of that asteroid; and then sends that sample back to Earth to study. Learn more about all that NASA can learn about the formation of the Solar System from this close encounter. (Grades 6-8)

## DID YOU KNOW?

1 lunar distance = 0.0025696 Astronomical Units [AU]. The distance between the Earth and Sun is 1 AU which is 149.6 million kilometers or 929571.3 miles! Want something to help students visualize those distances? Check out the NASA eClips video [Real World: Scaling the Solar System](#).

## NASA eClips™ Apollo 11 and Lunar Resources

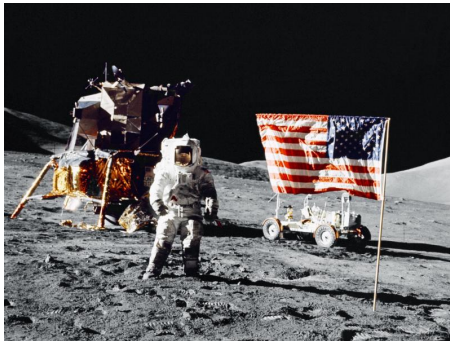


photo credit: NASA



## VIDEOS

### Launchpad: Apollo 11 - Challenges of Landing on the Moon

See how 21 hours, 38 minutes and 21 seconds changed history. Learn more about the challenges of landing on the moon, the science involved in the first moon walk and the artifacts left behind for future explorers. (Grades 9-12)

### Launchpad: Apollo 11 - History in the Making

Revisit the event that 20% of the world's population watched in awe on July 20, 1969. Learn more about the historic Apollo 11 mission and hear what President Obama had to say about the incalculable benefits of the Apollo Program. (Grades 9-12)

### Launchpad: Moon Magic

Learn about the effects the moon has on Earth. See what the difference is between an apogee moon and a perigee moon and what role the moon's orbit plays in both. Compare the moon illusion to its angular size. (Grades 9-12)

#### [Our World: Lunar Rock](#)

Learn about NASA's Lunar Sample Laboratory Facility at Johnson Space Center in Houston, Texas. See how NASA protects these precious moon rocks brought to Earth by the Apollo astronauts. Explore the special storage boxes filled with nitrogen where the moon rocks are kept. (Grades K-5)

#### [Our World: The Rock Cycle](#)

Find out how rocks brought to Earth by the Apollo astronauts have helped NASA learn more about the rock cycle. Compare igneous, sedimentary and metamorphic rocks found on Earth to three types of rocks found on the moon. (Grades K-5)

#### [Launchpad: LCROSS Finding Water on the Moon Music Video](#)

Learn about NASA's exciting LCROSS mission in this music video. Find out why finding water on the Moon is so important to future missions. (Grades 9-12) *\*This video is archived but contains historical knowledge and references.*

#### [Our World: The Lunar Reconnaissance Orbiter](#)

This video describes NASA's plans to launch the Lunar Reconnaissance Orbiter (LRO). Since this production, LRO was successfully launched and continues to gather data increasing our knowledge about the Moon. For more information about LRO, visit: <http://lunar.gsfc.nasa.gov/index.html> (Grades K-5) *\*This video is archived but contains historical knowledge and references.*

#### [Real World: Lunar Reconnaissance Orbiter Resources](#)

NASA's plans to return to the moon never materialized, but the ideas and innovations considered for lunar exploration advanced technology. Get a new perspective on moon resources with NASA's Lunar Reconnaissance Orbiter (LRO). Since this production, LRO was successfully launched and continues to gather data increasing our knowledge about the Moon. For more information about LRO, visit: <https://lunar.gsfc.nasa.gov/> (Grades 6-8) *\*This video is archived but contains historical knowledge and references.*

## RESOURCES - Hands-On Activities

#### [Educator Guide - Real World: Preparing for a Soft Landing](#)

**NASA's Real World: Preparing for a Soft Landing** introduces students to NASA's plans to return to the Moon. Thinking and acting like scientists and engineers, students design and build models representing Orion. Students calculate the speed and acceleration of the models during test flights. (Grades 6-8) *Educator Guide automatically downloads.*

#### [Educator Guide - Our World: Crater Maps and Earth Landforms](#)

**Crater Maps and Earth Landforms** asks students to compare physical features of the Moon to those found on Earth. Students first use a tennis ball and basketball to visualize scale relationships between the Earth and the Moon. Students then use maps of the Moon to identify lunar surface geography, comparing lunar landforms to similar ones on Earth. Students learn how NASA uses satellite technology, like the Lunar Reconnaissance Orbiter, to learn more about the Moon. (Grades K-5)

#### [Guide Lites: Crater Maps](#)

In this activity participants will make a crater map and compare the geologic features of the Moon to those on Earth. (Grades K-5)

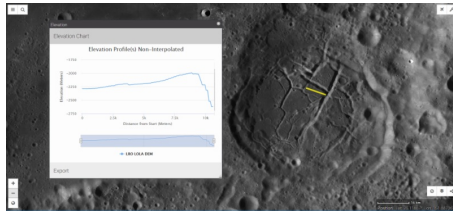
#### [Guide Lites: Distance to the Moon](#)

In this activity, participants will use sports balls as scale models of Earth and the Moon and use string to demonstrate the mathematical relationships between the size of Earth and the Moon in addition to the distance between the two. (Grades K-5)

Join NASA in going forward to the Moon in  
2024!

## Explore NASA Resources to Make Your Own Lunar Discoveries

### NASA Data Visualization Resources



#### [Moon Trek](#)

Explore all the details of the Moon, generate 3D printed models of the landscape, and download the highest resolution images available.

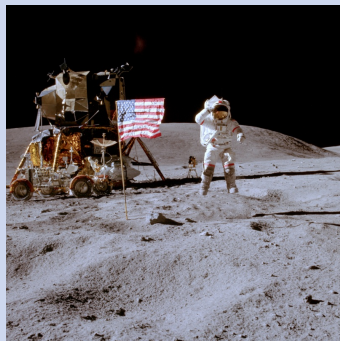
#### [NASA's Eyes on the Solar System](#)

Explore our solar system including our Moon! Using real trajectory data you can recreate famous moments in solar system exploration, or preview exciting adventures yet to come.

#### [Earth System View of Earthrise](#)

Using [My NASA Data](#) resources, students are introduced to the Earthrise phenomenon by seeing the Earth as the Apollo 8 astronauts viewed our home planet for the first time from the Moon. They will analyze a time series of mapped plots of Earth science variables that NASA monitors to better understand the Earth System. Students will document changes of a variable over time as they create a new visualization. They will share this visualization with a peer who has monitored a different Earth System variable and work collaboratively to make observations about temporal and spatial change making inferences about how these variables may be related. As a result, they develop research questions which students may use in future investigations.

<https://mynasadata.larc.nasa.gov/lesson-plans/earth-system-view-earthrise>



#### **Apollo 50th and Lunar Resources from Our Partners and NASA**

Learn about the history of the exploration of the Moon, make your own moon phase calendar, and learn why there are different names for the Moon. And here is a link to [Apollo 50th Anniversary posters, logos and other resources.](#)

*photo credit: NASA*

#### [NASA Science - Earth's Moon](#)

An in-depth website about the Moon containing lessons, hands-on activities, high resolution imagery, exploration missions, posters, viewing guides and *Observe the Moon* night information, and so much more! <https://moon.nasa.gov/about/in-depth/>

#### [Moon Landing 50th Anniversary – Apollo 11](#)

July 20, 2019 marks the 50th anniversary of the first humans landing on the Moon on July 20, 1969 as part of NASA's Apollo 11 lunar mission. [NISE Network](#) has pulled together resources for the anniversary.

#### [Make a Moon Phases Calendar and Calculator](#)

Have you ever wondered when the next full moon will be? How about the first quarter moon? Now you can have all the dates and times for all the moon phases for the year at your fingertips by building your own moon phases calendar and calculator!

#### [NASA Space Place](#)

This website features a range of interactive games, hands-on projects and fun facts about Earth, the Sun, our Solar System and Space. <https://spaceplace.nasa.gov/>. Check out these two resources; [Supermoon, Blood Moon, Blue Moon and Harvest Moon](#), and [How Far Away is the Moon?](#)



## Explore Moon to Mars

Do you love talking about space? Does the seemingly infinite amount of cosmic content leave you feeling a bit overwhelmed?

Before searching the internet for random images, try out these resources specifically curated by NASA to help you talk about everything from the Moon to Mars.

<https://www.nasa.gov/specials/m2m-toolkit/>

[nasaclips.arc.nasa.gov](https://nasaclips.arc.nasa.gov)

STAY CONNECTED

