

FIND YOUR PLACE IN SPACE WEEK ACTIVITY TOOLKIT



APRIL 6-13, 2024

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Vast. Infinite. Limitless.

Space has, well, a lot of space! This week organizations across the country are coming together to help everyone see there's a place for them in the amazing world of exploration, science, and technology.

From Saturday, April 6 through Saturday, April 13, 2024, federal departments and agencies, museums, science centers, companies, and community organizations will open their doors to the public (in person and virtually) for Find Your Place in Space Week. The week draws on the strengths of partners to open the doors of the space industry to people who already love space, those who want to know more about space, and those that do not know how they can be a part of this industry.

The week coincides with the April 8 total solar eclipse that will cross North America, passing over Mexico, the United States, and Canada. A total solar eclipse happens when the Moon passes between the Sun and Earth, completely blocking the face of the Sun. The sky will darken as if it were dawn or dusk.

Beyond inspiring people, this week will also engage communities within local space ecosystems to communicate the benefits of space and why space matters for Earth and to the communities that people live in.

There are many ways to participate in Space Week and the eclipse wherever you are. The following pages show you a few places to find events and activities near you and online.

RESOURCES



NATIONAL AIR AND SPACE MUSEUM

airandspace.si.edu/explore/stories/eclipse

Learn about eclipses and events for the 2024 solar eclipse

SMITHSONIAN SCIENCE EDUCATION CENTER

ssec.si.edu/fed-space-resources

K-12 space STEM materials from the Smithsonian, NASA, the National Oceanic and Atmospheric Administration, National Science Foundation, US Geological Survey, and Department of Defense.



Smithsonian
Science Education Center

SPACE WEATHER PREDICTION CENTER

spwc.noaa.gov/content/education-and-outreach

Information and resources about space weather.



#FindYourPlaceInSpace

ONLINE ACTIVITIES



PERSEVERANCE LANDING SITE

<https://d9-wret.s3.us-west-2.amazonaws.com/assets/palladium/production/s3fs-public/atoms/files/Jezero%20Crater%20Color%20by%200Number%20-%20Final%20Version.pdf>

Color the USGS Perseverance Landing Site by number and help the mission team land the rover and discover new rocks and sediments.

ECLIPSE SOUNDSCAPE PROJECT

<https://eclipsesoundscapes.org/>

Learn how eclipses affect life on Earth.



ECLIPSE EXPLORER JUNIOR RANGER PROGRAM

spwc.noaa.gov/content/education-and-outreach

National Park Service



#FindYourPlaceInSpace

Print and Do Activities

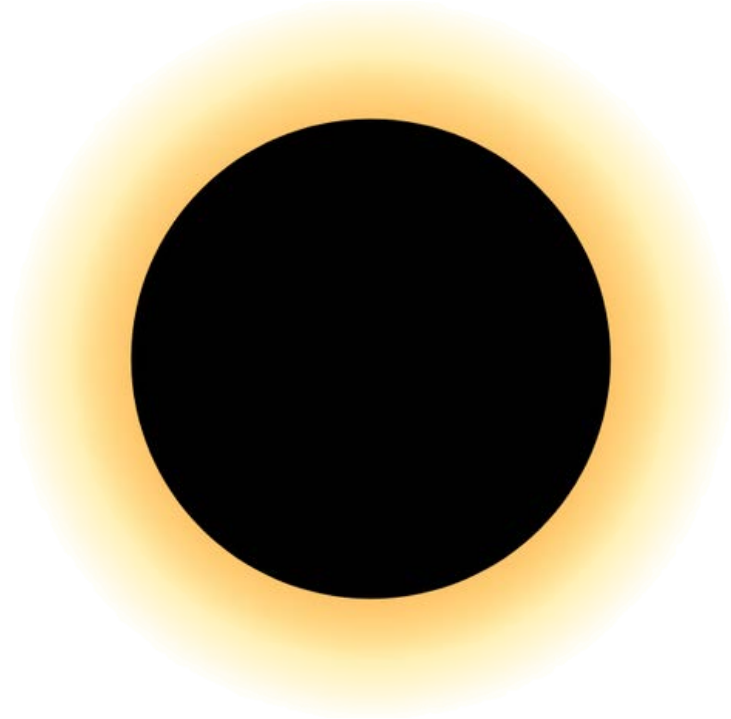


#FindYourPlaceInSpace

YARDSTICK ECLIPSE MODEL

For ages 10 and up

This activity can be done before or after the eclipse



For an eclipse to happen, the sun, moon, and Earth have to line up just right!

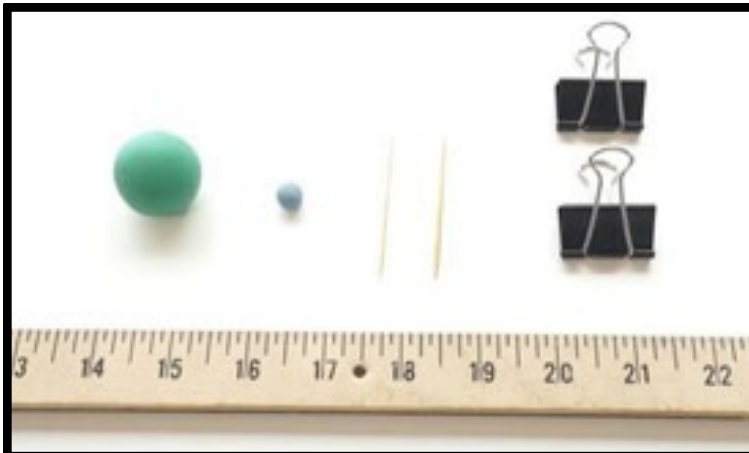
Give it a try using materials you can find around your home.

MATERIALS NEEDED:

- ONE YARDSTICK OR DOWEL MEASURING AT LEAST 30 INCHES LONG
- CLAY SUCH AS MODELING CLAY, PLAY-DOH OR MODEL MAGIC
- 2 TOOTHPICKS
- 2 BINDER CLIPS
- BRIGHT LIGHT SOURCE. IT COULD BE THE SUN ON A CLEAR DAY OR A FLASHLIGHT

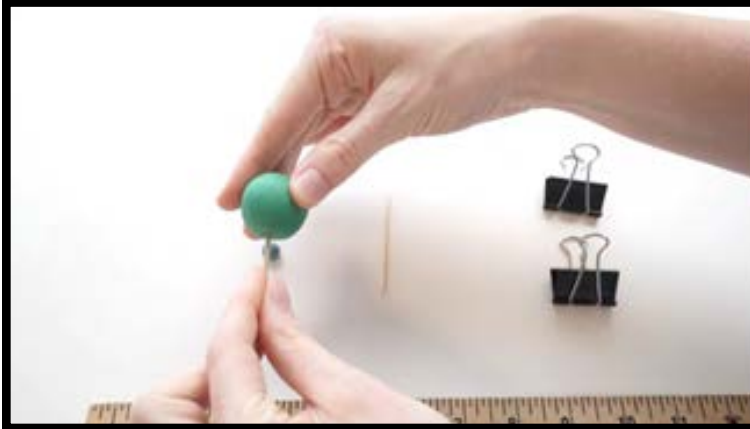


By: National Air and Space Museum



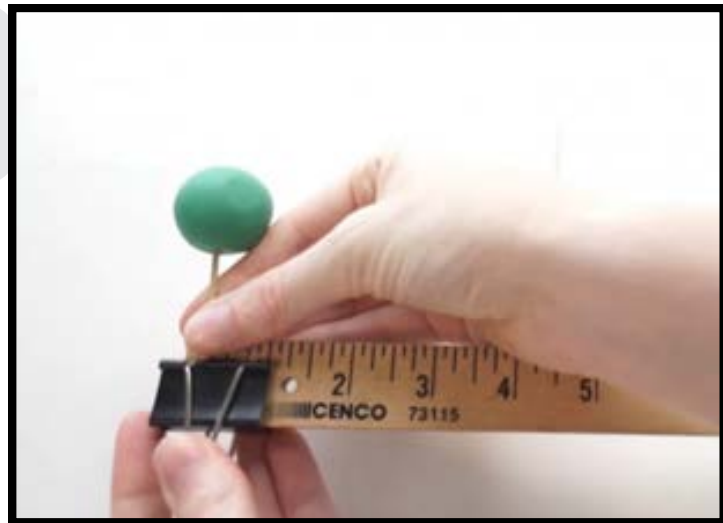
STEP 1

Make a clay ball 1 inch wide to be the Earth and a ball 1/4 inch wide to be the moon. Gently stick a toothpick into each ball.



STEP 2

Take your yardstick or dowel, and attach the Earth model to one end with a binder clip.



STEP 3

Measure 30 inches away from the Earth ball using your yardstick or measuring tape, and attach the moon ball there with the other binder clip. Your model now represents the average distance between the Earth and moon if they were this size.



STEP 4

Take your model outside on a sunny day, or have someone shine a flashlight toward you. Face away from the sun or light and hold the model so the stick points toward the light source, with the moon ball closer to the light, and try to line up the Earth ball so that the moon's tiny shadow lands on it.

Don't worry if it takes time to do this. It's difficult!



You can watch a video of this activity here:

<https://airandspace.si.edu/multimedia-gallery/how-make-your-own-eclipse>

THINK ABOUT IT!

EVEN THOUGH THE REAL EARTH AND MOON FEEL PRETTY BIG TO US, THEY ARE MUCH SMALLER THAN THE SPACE BETWEEN THEM, AND THEY VERY RARELY LINE UP WITH THE SUN EXACTLY. THAT'S WHY WE ONLY SEE ECLIPSES A FEW TIMES PER YEAR.

Usage Guidelines

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GROVER THE ROVER

Lunar Roving Vehicles (LRVs) allowed astronauts to cover greater distances, travel further from the Lunar Module, carry more gear and instruments, and retrieve more rock samples.

Grover is the Lunar Roving Vehicle (LRV) that all the Apollo 15, 16, and 17 astronauts trained with in Flagstaff before they went to the Moon. Grover, now a museum piece, is displayed in the lobby of [Astrogeology Science Center](#), Shoemaker Building, on the USGS Flagstaff Science Campus in Flagstaff, Arizona.



Learn more about Grover here:

usgs.gov/media/images/grover-geologic-rover-usgs-astrogeology-science-center

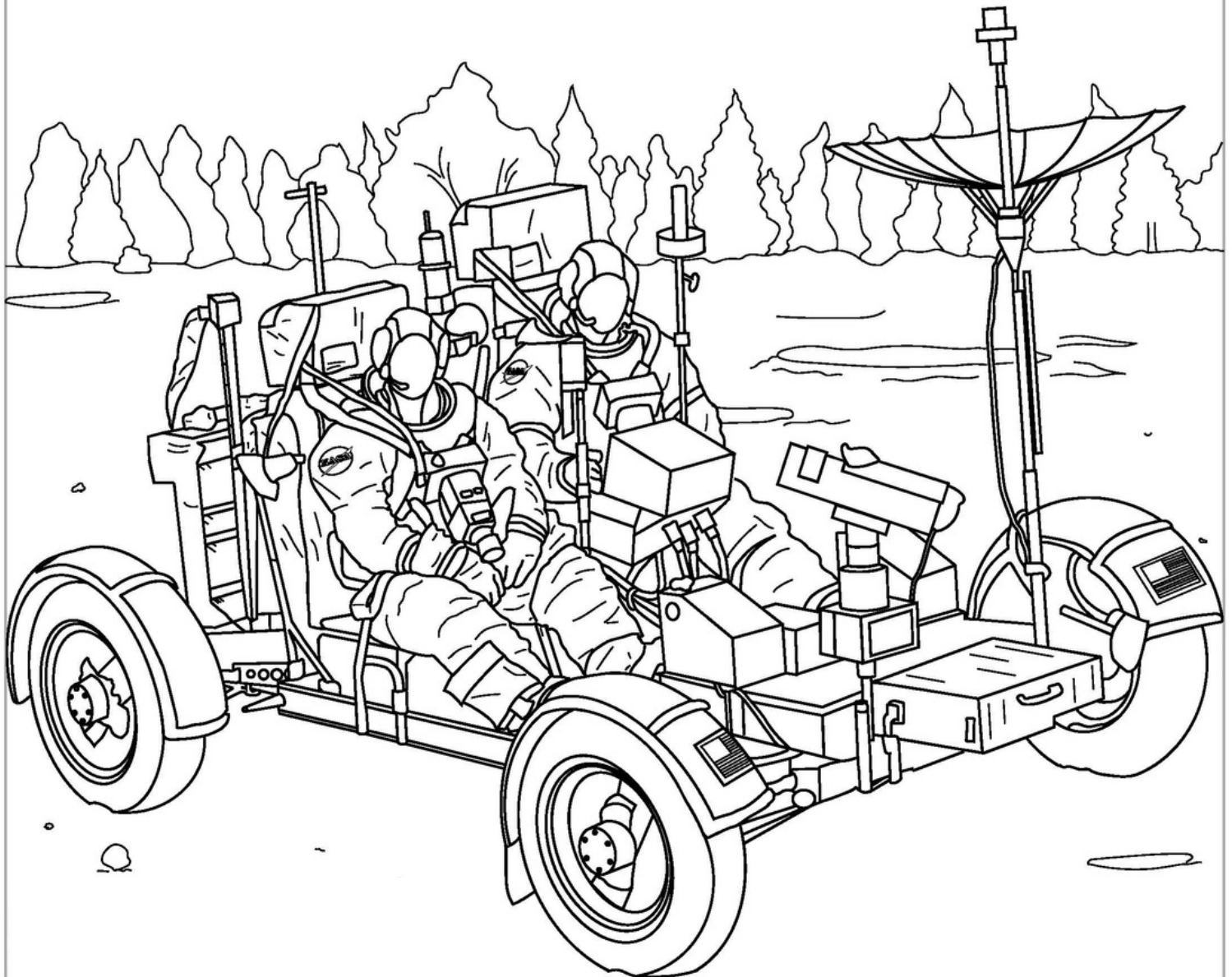
Grover the Geologic Rover

Training rover for Apollo Astronauts Cinder Lakes Crater Field



Apollo astronauts trained in many ways and would use features on Earth to help learn how to use their space suits, tools, and equipment before getting to use them on the Moon. The Lunar Roving Vehicle was to be used on the Moon to cover large distances, carry gear, and retrieve more rock samples. Grover the Geologic Rover was built so the Apollo astronauts could learn how to operate the Lunar Roving Vehicle before they got to the Moon, and practice using the switches, steering, and equipment.

Astronauts would also wear spacesuits to feel what it would be like using the Rover with boots, helmets, and big, thick gloves. Grover was built using spare car parts, airplane parts, and off-the-shelf components engineers could find. Grover was driven around the Cinder Lake Crater Fields (pictured here) and other sites in Arizona and Utah for driving practice. Astrogeology recreated a portion of the Moon's surface to scale with explosives in the Cinder Lakes volcanic fields, part of the Coconino National Forest.



Color in Grover the Geologic Rover
Add faces to the two roving astronauts!

AMAZING WAYS WORK IN SPACE IS HELPING US ON EARTH RIGHT NOW



TINY PLANKTON, AND OTHER TINY STUFF, MAY PROVIDE ANSWERS TO BIG QUESTIONS

In February, NASA launched the Plankton, Aerosol, Cloud, ocean Ecosystem (PACE) satellite. From hundreds of miles above Earth, the PACE mission will study the impact of tiny, often invisible things: microscopic life in water and microscopic particles in the air. How can this research help us understand our home planet and its changing climate?

[Read more.](#)



LEARNING TO FIGHT FIRES IN SPACE CAN HELP US STAY SAFER ON EARTH

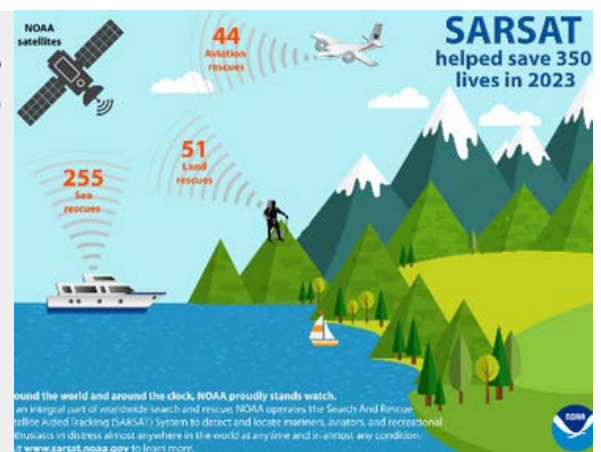
On board the International Space Station, research into how fires behave in microgravity not only will help protect astronauts on future missions, but the science can be used to develop new Earth-bound firefighting and prevention technologies.

[Read more.](#)

PEOPLE LOST OR IN TROUBLE CAN THANKS SATELLITES FOR BEING SAVED

Satellites operated by the National Oceanic and Atmospheric Administration (NOAA) are part of a network that can receive emergency distress signals from people in trouble on land or the sea (lost hikers, boats in distress). How does the system work that saved 350 people just last year.

[Read more.](#)



**SPACE
ACTIVITIES
BENEFIT ALL
OF US WHO
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