

Your Ultimate Summer Resource

Discover! Learn! Explore!

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The material contained in this document is based upon work supported by the National Aeronautics and Space Administration (NASA) under award No. NNX16AB91A. Any opinions, findings, conclusions or recommendations expressed in this material are those of the author and do not necessarily reflect the views of NASA.

NASA eCLIPS VIDEOS

Our World (Grades 3-5)

Systems to Grow Plants in Space



Honeybees



What is Soil?

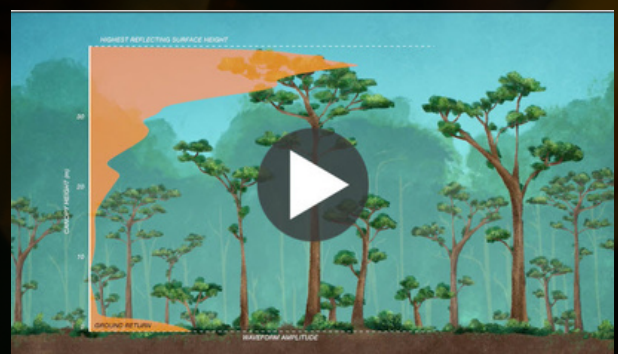


Where Do Crops Grow?



Real World (Grades 5-8)

The Carbon Cycle - Essential for Life on Earth



Food Security - Monitoring Crops from Space



NASA eCLIPS RESOURCE

National Aeronautics and Space Administration

NASA eClips™

Educator Guide

NASA'S REAL WORLD

THE LIGHT PLANTS NEED



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<https://nasaclips.arc.nasa.gov/>
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“The Lights Plants Need” Educator Guide asks students to observe and compare three types of light sources. They then conduct an experiment to determine how different colored light affects plant growth. Students analyze data collected from the experiment by creating a line graph and calculating three measures of central tendency. Finally, students design a plant growth chamber to observe the effects of colored-plastic, filtered light on plant growth. Students have an inside look at an atmospheric chemist’s career.

NASA SPOTLITE DESIGN CHALLENGES



Spotlite Design Challenge:

Land Detectives

Developed in Collaboration with NASA Earth Science Education Collaborative

As NASA Land Detectives, you are challenged to gather and share evidence to confront misconceptions about Earth's land cover. Land cover is what is on Earth's surface, such as trees, grass, pavement, and buildings.



Spotlite Design Challenge:

Cloud Detectives

Developed in Collaboration with NASA Earth Science Education Collaborative

As NASA Cloud Detectives, you are challenged to gather and share evidence to confront misconceptions about clouds.



Spotlite Design Challenge:

Can Plants Dance?

Sponsored by Fairchild Tropical Botanic Garden

As botanists, your challenge is to gather and share evidence to confront the misconception that plants can't move.

SUMMER ACTIVITIES

Help learners STEMify their summer through hands-on and engaging activities curated by the NASA eClips team. You'll find something for everyone - Earth-based and out-of-this world!



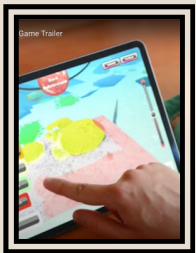
Engaging Activities

Elementary
Grades

Middle School
Grades

High School
Grades

NeMO-Net



In this game, players help NASA classify coral reefs by painting 3D and 2D images of coral. Players can also rate the classifications of other players and level up in the food chain as they explore and classify coral reefs and other shallow marine environments and creatures from locations all over the world!



NASA's Eyes



Experience Earth and our solar system, the universe and the spacecraft exploring them, with immersive apps for Mac, PC and mobile devices.



NASA Space Place Explore Mars



Become a planetary geologist and choose a Martian rock to investigate. Send a sequence of commands to guide a Rover to pick up that rock. And then send information back to scientists on Earth.



More SUMMER ACTIVITIES



Engaging Activities

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Grades

Middle School
Grades

High School
Grades

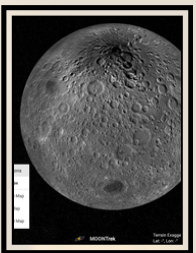
Astromaterials 3D



Astromaterials 3D is a virtual library for the exploration and research of NASA's space rock collections. Everyone can explore NASA's space rock collections using this tool.



Moon Trek



Moon Trek is an application that allows you to view imagery and perform analysis on data from this celestial body.



Visit the [NASA eClips website](#) and explore videos, activities, and lessons to increase STEM literacy through the lens of NASA.

More

SUMMER ACTIVITIES



Engaging Activities

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High School
Grades

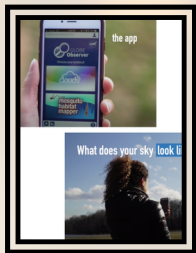
Climate Kids' Climate Time Machines



See into the past and ahead to the future with the Climate Time Machine! The visualization tool allows you to explore images of Earth and track changes over time.



GLOBE Cloud Observer App



Help NASA keep an eye on clouds using the GLOBE Observer App. When your observations are matched to satellite data, you are helping capture a complete view of the complexity of the atmosphere. Help GLOBE reach One Million satellite matches!



Story Time From Space



Astronauts on the International Space Station read stories and conduct science experiments for the children of Earth as the world rotates below. Check to see if your favorite story was read in space?



Paper Cup Planetarium



Using paper drinking cups, our pre-made patterns, and a push-pin, you can make your very own constellations!



More

SUMMER ACTIVITIES



or less

Engaging Activities

Elementary
Grades

Middle School
Grades

High School
Grades

NASA eClips at Home: Simple Machines



Join NASA interns Jacob, Sarah and Lenore, as they explore force, motion, energy, and simple and compound machines. Learn how NASA uses simple and compound machines and how to find (or create!) examples within your own home.



NASA Space Place's Art Challenge



Do you love making art and using your imagination? So do we! Every NASA mission starts with a creative idea about how to explore something in a new way.



Join this art challenge:

Young explorers think about and draw a space-related situation each month. And after the month is over, a few imaginative drawings will be featured on the NASA Space Place website!

Design A Crew Module



Design and build a spacecraft for your crew of mini-astronauts. The Orion spacecraft will carry astronauts to the Moon. You can design and build your version of this crew module. Add astronaut action figures and test the spacecraft to be sure your crew is safe.



More

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or less

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NASA eClips Designing a Shower Clock Challenge



Enjoy making a splash as you design, measure, build, test, and re-design a shower clock to conserve and recycle water.



NASA eClips Designing a Cloud Cover Estimator



Do you love making art and using your imagination? So do we! Every NASA mission starts with a creative idea about how to explore something in a new way.



NASA eClips Balloon Aerodynamics Challenge 1 and 2



Design and build a spacecraft for your crew of mini-astronauts. The Orion spacecraft will carry astronauts to the Moon. You can design and build your version of this crew module. Add astronaut action figures and test the spacecraft to be sure your crew is safe.



First Woman Graphic Novels & Interactive Experiences



First Woman tells the tale of Callie Rodriguez, the first woman to explore the Moon. While Callie is a fictional character, the first female astronaut and person of color will soon set foot on the Moon – a historic milestone and part of upcoming NASA missions.



More

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or less

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NASA Spotlite Video Design Challenge



Join the NASA Spotlite Production team!

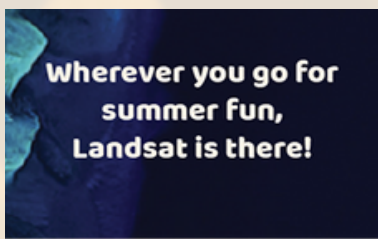
Help increase people's understanding of science by producing a video to correct a science misconception. Demonstrate how to do a hands-on activity to collect evidence.



Camp Landsat



This virtual camp explores a new theme each week about how Landsat satellites help manage, protect, and preserve some of your favorite places on Earth. Your virtual camp counselors have curated an exciting collection of videos, interactives, and downloadable activities you can do at home or with friends of all ages.



Artemis Camp Experience



This set of hands-on activities tells the story of NASA's Artemis Program that will land the first woman and first person of color on the Moon.



PARTNER RESOURCES



Explore the importance of water in helping seeds grow into plants. See what effect moisture has on a bean through this simple activity.



Learn about this interdisciplinary, environmental science competition designed to engage students of diverse interests, abilities, talents and backgrounds to explore the natural world.



Use this app-based tool to help you estimate tree height. Tracking how trees are changing over time can help NASA estimate the number of trees within an area.