Celebrate Earth Day 2019!

Young Citizen Scientists are the Problem Solvers and Change Makers of the Future

When we come together, the impact can be monumental. - Earth Day Network

Want this poster? Download here!

Every Day is #EarthDay

The Earth Day Network works year round to broaden, educate and activate the environmental movement around the world.

This year's Earth Day campaign is ***Protect Our Species***.

Species are being threatened by climate change. But what causes climate change? And how can we as a society, community or citizen do anything about it?

Your students are the scientists, engineers, researchers and problem solvers of the future. Urge them to get involved now and empower them with the knowledge and skills to make positive and impacting change in our world!

photo credit: NASA

Let's start by inspiring the youth to become #citizenscientists!

NASA eClips™ Resources

We've hand-picked citizen science, endangered species, and Earth systems videos from our catalog just for you...and everyone else!

Real World: Citizen Science

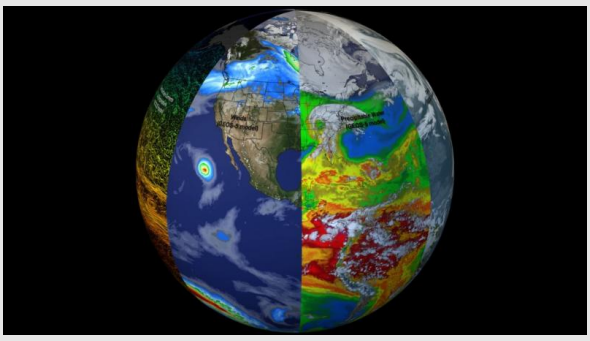
What are citizen scientists? Why is their work so important to NASA? Join Dr. Michelle Thaller as she explains how the general public, using scientific protocols, careful observations and accurate measurements, can help NASA make exciting new discoveries. Find out how you can be a citizen scientist today.

Our World: Honeybees

Join NASA scientists and beekeepers in a citizen science project to collect important data about climate change. Learn how honeybees pollinate over 130 crops in the United States each year and what NASA is doing to help study the decline in bee populations.

Real World: What is Soil Moisture?

What is the connection between water, soil, and carbon cycles? The answer may be in the soil beneath your feet. See how NASA measures soil moisture from space with the Soil Moisture Active Passive Mission, or SMAP. Learn to calculate soil moisture in your own backyard and discover the real world applications for this data.



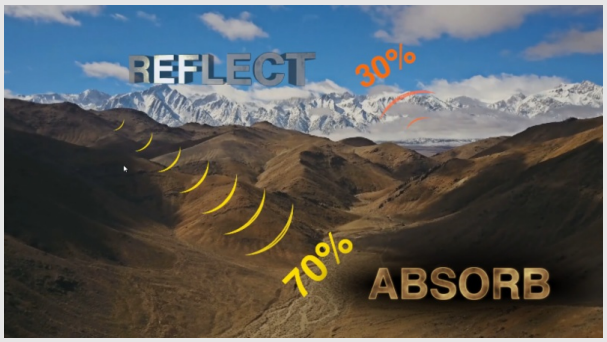
Real World: Earth Systems

Our Earth is a dynamic system with diverse subsystems that interact in complex ways. Jessica Taylor, an atmospheric scientist at NASA Langley Research Center, and Dr. Steven Pawson, an Earth scientist from NASA Goddard Space Flight Center, explore these interactions and demonstrate how mathematical modeling helps scientists in their predictions of climate, weather, and

natural hazards.

Real World: Earth's Energy Balance - Small Changes, Big Impact

Earth's energy balance is very delicate. Small changes may have a big impact. How might changes in Earth's land and atmosphere impact this delicate balance? How might this knowledge be used to help us take better care of Earth?



Real World: Earth's Energy Balance - Energy In and Energy Out

Balancing incoming and outgoing energy to Earth is like balancing an equation. When both are equal, Earth's energy is in balance. Learn more about how changes in this balance may impact Earth.

Citizen Science - a tool for global scientific empowerment, education and action

Do you like **data**? Do you want your students to love **collecting** and **analyzing** data by **observing, measuring, counting** and **documenting** the world around them?
Who doesn't?
Check out the knowledge and skill-building resources below!

Math Connected Citizen Science Activities at SpaceMath@NASA

These are advanced but fun projects that let you rub shoulders with scientists and help them collect valuable data. Some projects will have you make your own measurements and observations and report them to a scientist doing this research. Other projects will have you hunt through images and other scientific data looking for an exciting new discovery of new stars, planets or galaxies!
https://spacemath.gsfc.nasa.gov/SpaceMath.html

GLOBE Observer

The GLOBE Observer app extends the reach of the GLOBE Program by providing a way for you, as a citizen scientist in a GLOBE country, to make observations and contribute to the GLOBE community.
https://observer.globe.gov/

My NASA Data: Planning and Carrying Out Investigations

Help your students develop and refine their observation skills so they can plan and carry out their own investigations.

https://mynasadata.larc.nasa.gov/basic-page/planning-and-carrying-out-investigations-mnd

Earth Challenge 2020
A Citizen Science Initiative

The Earth Day Network is preparing something HUGE. The organization hopes to leverage Citizen Science and emerging technologies to engage one million global citizens in the 50th anniversary “Earth Challenge 2020,” collecting one billion data points to measure air quality, water quality, pollution and human health. This initiative is being developed in association with dozens of major partners in the science and health communities as well as leading technology companies.

It's never to early to start thinking about how you will engage your students next academic year! Check out **Earth Challenge 2020** to learn how your students can contribute to the billion data points collected next spring!

All the videos and resources we've provided you in this newsletter can help to guide your Earth Day 2019 and 2020 preparation. And we know you and your students will be an amazing cadre of citizen scientists!

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STAY CONNECTED