NEWSLETTER April 2025

GOOD HEALTH ON EARTH & BEYOND

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NASA eClips VIDEOS

"PHYSICALLY FIT ON EARTH AND BEYOND"





Real World (Grades 6-8)

Staying fit isn't just important for you - it's critical for astronauts gearing up for demanding spaceflights! This Real World video features Corey Twine, a conditioning specialist from NASA's Astronaut Strength, Conditioning, and Rehabilitation (ASCR) group, sharing how he helps astronauts stay strong for life in reduced gravity and their return to Earth's 1G environment.

<u>"ASTRONAUT STRENGTH AND CONDITIONING</u> SPECIALIST - COREY TWINE"



Ask SME: Close-up with a NASA Subject Matter Expert

In this close-up video, Corey Twine, Astronaut Strength and Conditioning Coach at NASA's Johnson Space Center, shares how he helps to keep astronauts physically fit for work on Earth and while working in space. Watch this video to learn what inspires him to do the work he does.

NASA eClips VIDEOS

"THE AIR WE SHARE - THE CONNECTION BETWEEN EARTH'S ATMOSPHERE AND OUR HEALTH"

Real World (Grades 6-8)

How does Earth's atmosphere impact our daily lives and, in particular, our health? Erika Wright, an education specialist from the Center for Astrophysics, helps us learn more about activities that impact Earth's atmosphere, and as a result, impact our lives. She tells us more about NASA's TEMPO, an array of air quality instruments that daily scan North America's atmo-sphere, giving us hourly pictures of Earth's air quality.



"EDUCATION SPECIALIST - ERIKA WRIGHT"



Ask SME: Close-up with a NASA Subject Matter Expert

In this close-up video, Erika Wright, Education Specialist at the Harvard-Smithsonian Center for Astrophysics, shares how she helps make air and pollution data easier for students and the public to understand and use. Erika shares her journey from the science museum world to working with NASA where she continues to inspire learners to ask and answer their own questions.

NASA eClips VIDEOS

"FLUID SHIFT"

Our World (Grades 3-5)

Learn about the circulatory system and how gravity aids blood flow in our bodies here on Earth. Find out how NASA flight surgeons help the astronauts deal with the fluid shift that happens during spaceflight.



"EXERCISE IN SPACE"

Our World (Grades 3-5) Find out why exercise is so important to the astronauts who travel into space. Learn how gravity affects our bodies and what astronauts must do in reduced gravity environments to keep their bodies healthy.



"EXERCISE EQUIPMENT"

Our World (Grades 3-5) Learn about the exercise equipment used by the astronauts in space to

keep astronauts fit and healthy. Compare this equipment to the exercise equipment we use here on Earth.



NASA eClips EDUCATOR GUIDES

"KEEPING THE BEAT"

Our World (Grades 3-5)

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Students measure and record their pulse rate before and after physical activity to learn more about the heart. Students can use a math model to look for patterns in the pulse rate data. Students participate in a Cardiac Relay to deepen their understanding of the circulatory system. Students make observations of gravity's effects on a water balloon to learn more about gravity's effects on water in the body. Thinking and acting like scientists and engineers, students learn more about exercise equipment design to keep astronauts healthy in space. This lesson is developed using a 5E learning model and utilizes NASA eClips video segments.



<u>"BIOMECHANICAL JUMPING MACHINE</u> <u>ENGINEERING DESIGN CHALLENGE"</u>

Being in space for extended periods of time puts extra stress on astronauts' bodies, therefore, they must exercise to maintain their health and strength. By designing and building a Biomechanical Jumping Machine model, learners explore how muscles and bones work together to help people move. Clips Biomechanical Jumping Machine



Lesson Overvie

being physically in its important the response, but its especially important for associations living and traveling in space. Being in space for extended periods of time put extra stress on their bodies. To counteract the stresses of living in space, astronauts must exercise a lot to maintain the health and function of their muscles and bones.

The Biomechanical Jumping Machine challenges learners to explore how muscles and bones work together to help people move. Learners are challenged to design and build a model that simulates a jumping motion. The biomechanical jumping machine must travel vertically a specific distance.

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NASA Spotlite DESIGN CHALLENGE

Choose-Your-Own Spotlite Design Challenge!



What do you wonder about good health on Earth and beyond? Create your own Spotlite video to confront a misconception.

NASA Spotlite INTERACTIVE LESSON



NASA Spotlite Interactive Lesson: Bacteria, Friend or Foe?



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DOWNLOAD

In this lesson, students will learn that some bacteria are beneficial, while others can be harmful. As a result of watching Spotlite videos, learning the vocabulary collaboratively, and exploring how bacteria grow, students will be able to explain where bacteria can be found and describe the positive and negative roles they play in their lives.

NASA eClips EARTH DAY CELEBRATION



The NASA eClips team is hosting a student-produced video marathon to celebrate Earth Day.

- STEAM students are invited to create a short video that solves environmental problems, investigates Earth science misconceptions, or informs others about our planet!
- Join the Video Marathon for 8 hours of educational content, including hands-on activities led by students! (Videos are not required to participate.)

Additional details are available via the Registration link above.

Partner RESOURCES & ACTIVITIES

GLOBE Mosquito Habitat Mapper

- GLOBE Mosquito Habitat Mapper is an app-based tool that can be used to document mosquito habitats and identify mosquito types.
- Mosquitoes are a serious health risk: millions of people die each year from mosquito-borne disease. By reporting possible mosquito habitats through the app, GLOBE Observers are able to augment broad scale satellite-based research with highly targeted local ground-based observations.

NASA Train Like an Astronaut

 The Train Like an Astronaut activities are a physical and inquirybased approach to human health and fitness on Earth and in space.
 Students can participate in physical activities modeled after the real-life physical requirements of humans traveling in space.

