National Aeronautics and Space Administration

NASA's Commercial Crew Program Virtual Reality 360 Tour

Train Like an Astronaut

Video link: https://youtu.be/gk0ijHIP3hw

Description

In Part 4 of NASA's Commercial Crew Program (CCP) Virtual Reality (VR) 360 Tour, a NASA STEM engagement specialist provides an overview of the astronaut training required for living and working on the International Space Station. Take an immersive VR tour of the facilities inside Johnson Space Center, including the Neutral Buoyancy Lab where astronauts prepare for upcoming missions to the space station.

Next Gen STEM and the Commercial Crew Program

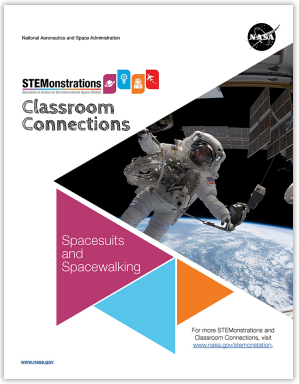
The CCP (https://nasa.gov/exploration/commercial/crew/index.html) plays an integral role in NASA's deep space exploration goals as it works with commercial partners to launch astronauts to the International Space Station from U.S. soil on American-built rockets and spacecraft.

NASA's Next Gen STEM CCP project is introducing immersive technology into classrooms. The 360° videos and VR field trips take students along on a journey into the heart of the CCP without leaving the classroom. The virtual field trips to NASA centers and the Boeing and SpaceX facilities showcase where next-generation, human-rated spacecraft and rockets are being developed and tested.

Follow this link to access NASA's CCP virtual field trips:
https://youtube.com/playlist?list=PLStC43yAV6zQvFdRe4ch2I8ihBuqTylJf

1. Spacesuits and Spacewalking

When astronauts execute an extravehicular activity (spacewalk), they must be protected from the harsh environment of space and carry everything they need to survive for several hours. When they pass through the airlock and venture outside, they are protected by the Extravehicular Mobility Unit (EMU), commonly known as a spacesuit. This spacesuit includes a life-support system and protection against high-speed micrometeoroid impacts.



https://nasa.gov/sites/default/files/atoms/files/stemonstrations_spacewalking.pdf

Activity 1

Spacesuits and Spacewalking

Grades

K to 4, 5 to 8, 9 to 12

Duration

120 minutes

Subjects

- Matter and Its Interactions
- Energy
- Engineering Design

Standards

Next Generation STEM Science Standards (NGSS)

MS-PS1-3
MS-PS1-4
MS-PS2-1
MS-PS3-1
MS-ETS1-1
MS-ETS1-3
MS-ETS1-4

NASA STEM Engagement

https://nasa.gov/stem/nextgenstem/index.html

NASA's Commercial Crew Program Virtual Reality 360 Tour

Train Like an Astronaut (Continued)

2. Train Like an Astronaut Series

Join NASA in a variety of exciting physical and hands-on activities to encourage students to "Train Like an Astronaut."

NASA's Mission X: Train Like an Astronaut program involved participants from many countries around the world. This site is an archive of the program and includes 26 different physical activities that are appropriate for groups of all ages.

https://nasa.gov/tla/activities/english

Safety

Important! Students should have proper medical clearance on record before participating in any kind of physical activity program.

3. Expeditionary Skills for Life

Expeditions are journeys made by people who share a definite purpose and specific experiences. To make their expeditions successful, NASA works with astronaut crews on skills that prepare them to live and work together during space missions. Some of these same skills are useful in everyday life here on Earth.

4–H is a positive youth development program that prepares youth for life and work. Together, NASA and 4–H created the Expeditionary Skills for Life series of activities designed to take students through various educational expeditions that will help them learn and practice skills that can be applied in almost every aspect of life.

https://nasa.gov/audience/foreducators/stem-on-station/expeditionary-skills-for-life.html

Activity 2

Train Like an Astronaut

Grades

K-4, 5-8, 9-12

Duration

Various

Subjects

- Life Science
- Biology
- Engineering

Standards

In alignment with National Physical and Health Education Standards

Activity 3

Expeditionary Skills for Life

Grades

K-4, 5-8, 9-12

Duration

Various

Subjects

- Biology
- Life Science
- Teamwork

Standards

In alignment with 21st Century Skills for Learning

NASA STEM Engagement

https://nasa.gov/stem/nextgenstem/index.html

NP-2021-07-2970-HQ