

# NASA Resources



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**LIVE noon EDT: Astronauts Christina Koch and Jessica Meir Take Media Questions on Friday's All-Woman Spacewalk**



## Astronauts Christina Koch, Jessica Meir To Discuss First All-Woman Spacewalk Today

Astronauts Christina Koch (on the right in this photograph) and Jessica Meir (left), who completed the first all-woman spacewalk on Friday, Oct. 18, will participate in a press conference from orbit at noon EDT on Monday, Oct. 21, which will be streamed on NASA TV. During the 7-hour, 17-minute spacewalk, the pair replaced a failed power controller and completed several other tasks in preparation for future spacewalks.

Video: [First All-Woman Spacewalk In-Space News Conference to Review First All-Woman Spacewalk](#)

First All-Woman Spacewalk: [The Basics](#)

Biography: [Astronaut Christina Koch](#)

Biography: [Astronaut Jessica Meir](#)

Video: [President Trump Congratulates Koch and Meir](#)

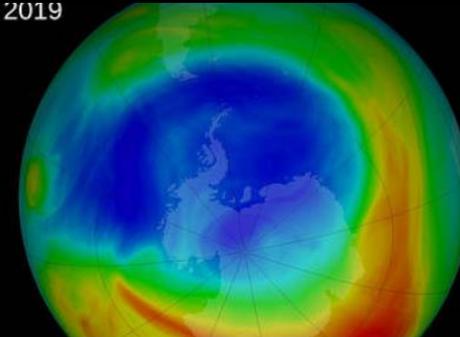
### NASA to Provide Coverage of Key Events at 70th International Astronautical Congress

#### NASA Events

- Mon., Oct. 21, Noon EDT: In-Space Press Conference to Review All-Woman Spacewalk
- Mon. Oct. 21, 1:15 p.m. EDT: Administrator Bridenstine Remarks at International Astronautical Congress
- Mon.-Fri., Oct. 21-25: NASA Events at the International Astronautical Congress
- Wed. Oct. 23, 6:30 p.m. EDT: Space and STEM -- How Do You Fit In?
- Sat., Nov. 2, 9:59 a.m. EDT: Launch of Northrop Grumman Cargo Mission to Space Station

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Sep 08, 2019



Earth

**2019 Ozone Hole is the Smallest on Record Since Its Discovery**





LIVE noon EDT: Astronauts Christina Koch and Jessica Meir Take Media Questions on Friday's All-Woman Spacewalk



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- Video: First All-Woman Spacewalk
- In-Space News Conference to Review First All-Woman Spacewalk
- First All-Woman Spacewalk: The Basics
- Biography: Astronaut Christina Koch
- Biography: Astronaut Jessica Meir
- Video: President Trump Congratulates Koch and Meir

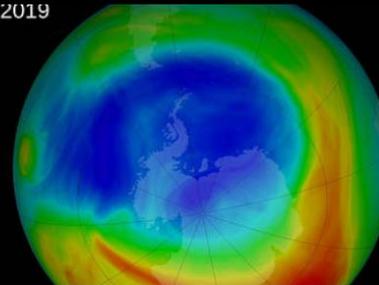


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STEM Engagement

Search STEM Resources and Opportunities

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Explore **NASA STEM**

## Search For STEM Resources and Opportunities

Find resources to support your STEM curriculum, professional development opportunities to expand your knowledge base, contests to engage your students and more!

### NASA Wavelength

A digital collection of earth and space science resources for educators of all levels – from elementary to college, to out-of-school programs.

### NASA STEM YouTube Channel

### A-Z List of Publications

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Humans in Space

Friday's All-Woman Spacewalk: The Basics



Moon to Mars

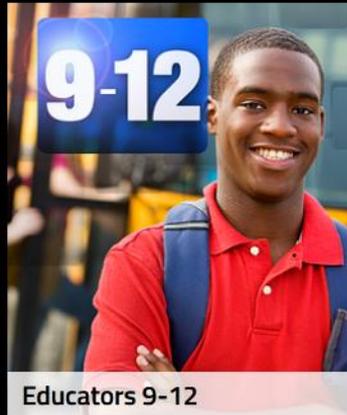
Artemis Generation Spacesuit Event



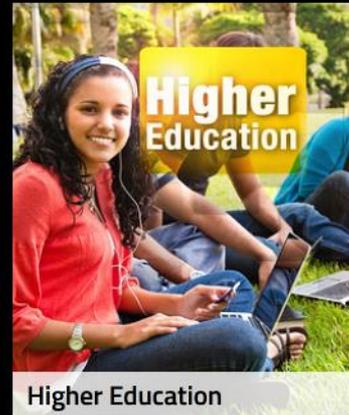
Educators K-4



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Page Last Updated: Oct. 10, 2019

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Page Last Updated: Dec. 7, 2018

Page Editor: Sandra May

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# NASA STEM Engagement



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## Search STEM Resources and Opportunities

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### Living and Working in Space Module

Hands-on science activities help students understand how space travel affects the human body and how robots are used to do tasks in hazardous places.



### Aeronautics Module

Hands-on science activities help students learn the science behind flight.



*A resource designed to provide real-time coverage of Agency activities and missions as well as providing resource video to the news media, and educational programming to teachers, students and the general public.*



**<http://www.nasa.gov/multimedia/nasatv/index.html>**

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Via Satellite AMC 6

Transponde 17 9C

@ 72 ° West Longitude

Vertical Polarization

Frequency of 4040 MHz

Forward Error Correction

Data rate 36.860 MHz

Symbol 26.665 Ms<sup>3</sup>/4

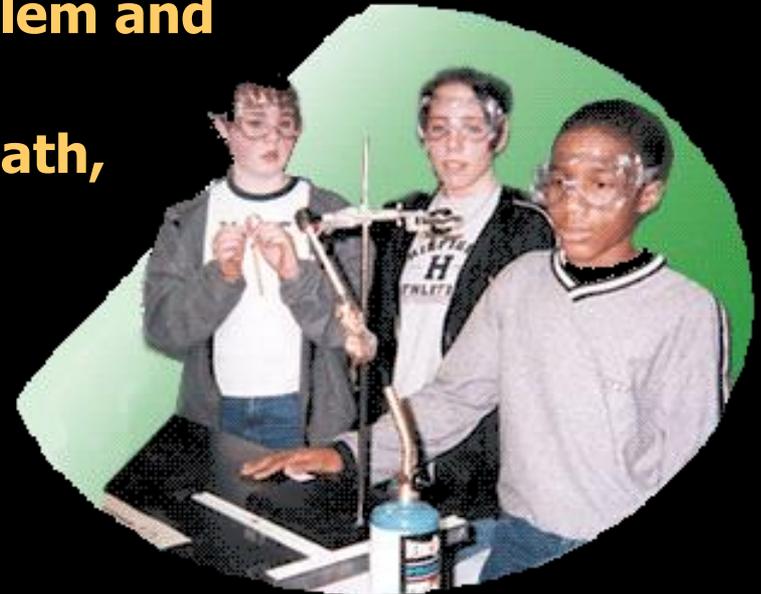
Digital Video Broadcast (DVB)



# Engineering Design Challenges



- **Present Engineering Challenges for Grades 6-9.**
- **Connect students with the work of NASA engineers as they solve problems.**
- **Focus on a engineering problem and the process used to solve it.**
- **Connect National Science, Math, and Technology Standards.**
- **Encourage careers in the Aerospace Industry.**
- **NASA Student Involvement Program**

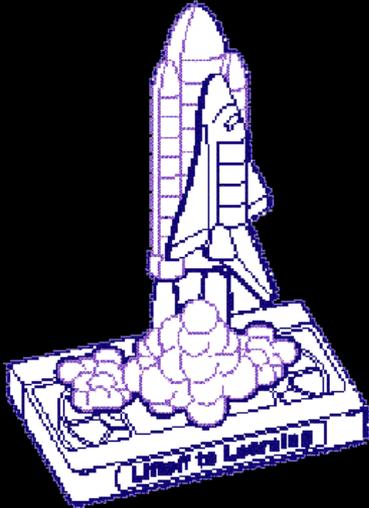


# Challenges

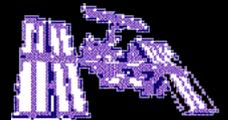
- **Plant Growth Chamber**
  - [https://www.nasa.gov/audience/foreducators/topnav/materials/listbytype/Lunar\\_Plant\\_Growth\\_Chamber.html](https://www.nasa.gov/audience/foreducators/topnav/materials/listbytype/Lunar_Plant_Growth_Chamber.html)
- **Spacecraft Structures**
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- **Thermal Protection Systems**
  - [http://www.nasa.gov/audience/foreducators/topnav/materials/listbytype/EDC\\_TPS.html](http://www.nasa.gov/audience/foreducators/topnav/materials/listbytype/EDC_TPS.html)

# Liftoff To Learning

## Video Tapes and Resource Guides



*All Systems Go!*  
*Assignment Spacelab!*  
*The Atmosphere Below*  
*From Undersea To Outer Space*  
*Geography From Space*  
*Go For EVA!*  
*Let's Talk Robotics*  
*Living In Space*  
*Mathematics of Space*  
*Microgravity*  
*Newton In Space*  
*Plants In Space*  
*Space Basics*  
*Tethered Satellites 1 & 2*  
*Toys In Space II*  
*Voyage Of Endeavour Then And Now*



<http://teacherlink.ed.usu.edu/tlnasa/videos/NASALiftoffToLearning/index.html>

# Educator Professional Development Webinars

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## Events

### UPCOMING EDUCATOR PROFESSIONAL DEVELOPMENT EVENTS

This is a list of our current and future events for educators, administrators, and science enthusiasts across all levels. To sign-up for an event, click the Learn More buttons.

Event Type ▾

Month ▾

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#### Explore Earth: GLOBE Atmosphere & Cloudes

Educators in Grades 4-10

10/21/2019 from 06:00 pm - 07:00 pm CT

Presented by: Sara Torres

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#### Moon to Mars: Mission and Resources Overview

10/22/2019 from 06:00 pm - 07:00 pm ET

Presented by: Deepika Sangam

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#### NASA Commercial Crew Program: Mission and STEM Resources Overview 11

Educators in Grades K-12

10/23/2019 from 06:00 pm - 07:00 pm ET

Presented by: Steve Culivan

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#### Explore Earth: Hurricanes in Your Classroom

Educators in Grades 4-12

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## Microcontents

Mine All



### Year of the Solar System Math (6-12)

The Year of the Solar System (YOSS)- Real World Math educator guide is a collection of 165

Let's go!



### Moon Munchies: Engineering (K-4)

In anticipation of the need for research into plant growth chambers as a means of

Let's go!



### Mission Geography - K-12

This badge is designed to help Kindergarten through Twelfth grade teachers explore the Mission Geography resources. select a

Let's go!



### Practicing Equity in STEM Education

The Practicing Equity in STEM Education badge offers K-12 teachers an opportunity to

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### Earth's Orbit and Distance From the Sun

In this badge, designed to help Middle School teachers make the connection between Data

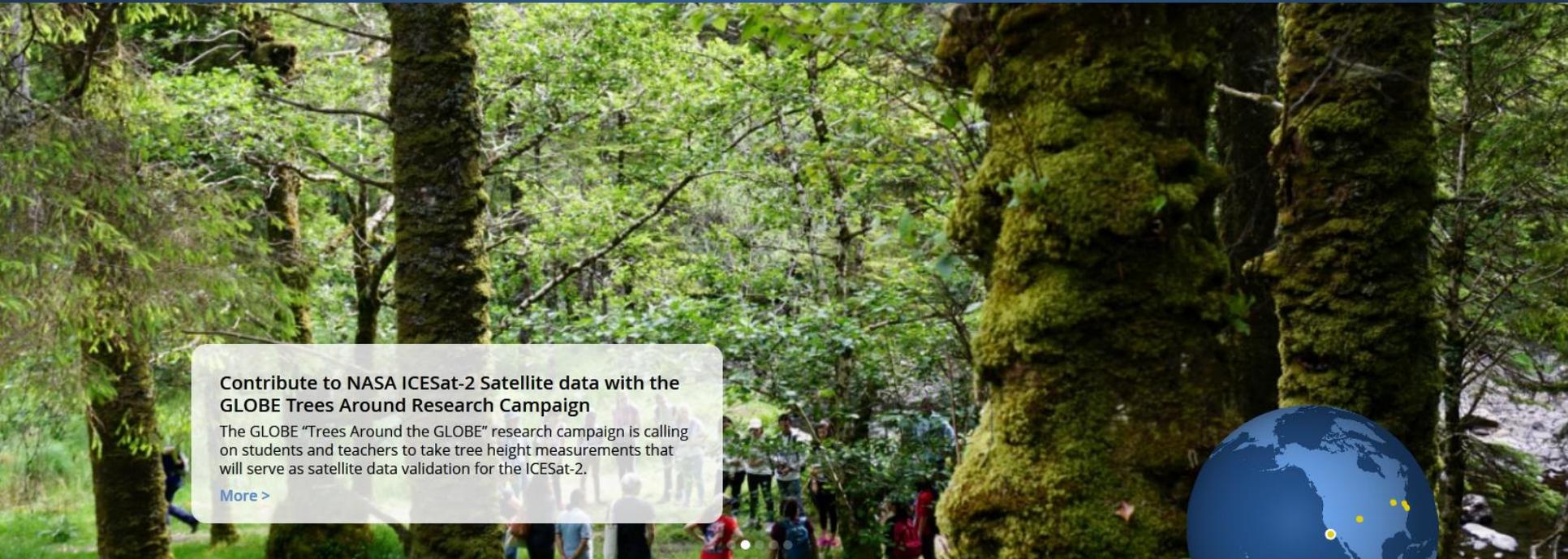
Let's go!



### Curved Space-Time in the Classroom!

Help your students understand Einstein's Gravity with the Gravity Probe-B mission. High School

Let's go!



**Contribute to NASA ICESat-2 Satellite data with the GLOBE Trees Around Research Campaign**

The GLOBE "Trees Around the GLOBE" research campaign is calling on students and teachers to take tree height measurements that will serve as satellite data validation for the ICESat-2.

[More >](#)



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United States of America ▾

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Visualize Data

<http://www.globe.gov>



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## NASA eClips™



**NASA eClips™** are short, relevant educational video segments. These videos inspire and engage students, helping them see real world connections.

Full Site Located: <http://nasaclips.arc.nasa.gov/>

### Playlists

[Grades K-5](#)

The Our World program supplements existing elementary learning objectives not only in science, technology, engineering and mathematics, but also in reading, writing, and visual and performing arts.

[Grades 6-8](#)

Real World video segments connect classroom mathematics to 21st century careers and innovations and are designed for students to develop an appreciation for mathematics through real-world problem-solving.

[Grades 9-12](#)

<http://www.nasa.gov/audience/foreducators/nasaclips/>

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# NASA STEM Engagement



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## What is Next Gen STEM?

NASA's Office of STEM Engagement executed a series of efforts to develop STEM products and opportunities that provide a platform for students to contribute to NASA's endeavors in exploration and discovery. These mission-driven activities include over 20 evidence-based products and opportunities to engage students in authentic STEM experiences. NASA is working to provide mission driven opportunities that enhance STEM literacy and help build a vibrant and diverse next generation STEM workforce.



**Commercial Crew Program**



**Small Steps to Giant Leaps**



**Forward to the Moon**



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# NASA STEM Engagement

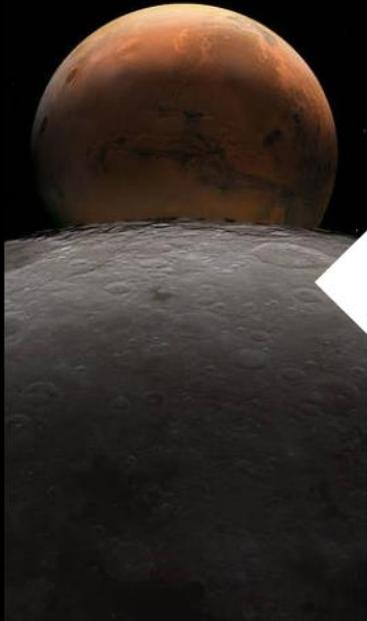


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### Forward to the Moon

Next Gen STEM has activities focused on NASA's Exploration Campaign for **Moon to Mars**. With a focus on NASA's integrated transportation systems and platforms, namely the Orion capsule, the Space Launch System (SLS Rocket) and the Gateway Lunar Outpost, here you will find STEM resources such as engineering design challenges, supporting curriculum modules, digital badges and webinars for the middle and high school grade levels nationwide.



Student Launch Initiative



App Development Challenge

EXPLORE MOON to MARS

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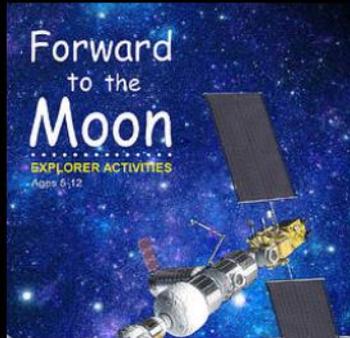
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Artemis Generation Takes on NASA Student Launch: 64 Teams to Compete



Earn Educator Badges



Forward to the Moon Explorer Activities



Students Help NASA Find Solutions to Send Astronauts into Deep Space



NASA People

Langley Intern's Dedication Leads Him to Upcoming Launch



Forward to the Moon Design a Mission Patch Design Challenge Winners

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