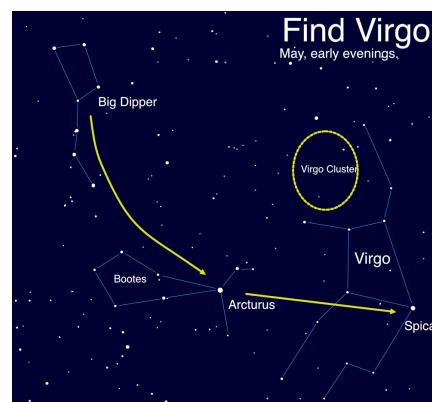


# SMSC May 2021 Newsletter

## May Sky

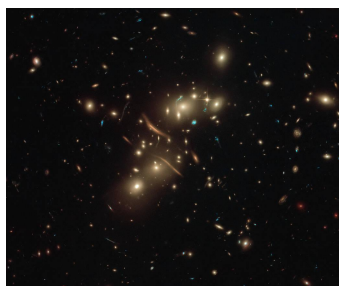
Virgo is prominently featured in the skies of early May, and is host to a plethora of galaxies. Learn a great trick for spotting Spica, dive into the Virgo Cluster of galaxies, and find a fun cosmic distance scale activity, in this edition of [NASA's Night Sky Notes!](#)

We have a slack channel - if you would like to be added to the channel to discuss ways to use NASA resources locally, or if you have questions about how we can help you meet your goals, please send an email to [r\\_neff@southwesterncc.edu](mailto:r_neff@southwesterncc.edu) or you can follow us on [Facebook](#) or [Twitter](#).



## NASA NEWS

NASA made history with the [first helicopter flight on Mars!](#) (Watch the [Ingenuity](#) Mars helicopter's flight unfold in [this video](#), which was recorded by the [Perseverance](#) rover.)



This extraordinary image of the galaxy cluster Abell 2813 snapped by the NASA/ESA Hubble Space Telescope showcases the concept of gravitational lensing. Gravitational lensing occurs when an object's mass causes light to bend. This visual evidence is famously used as proof of Einstein's theory of general relativity. Science is beautiful, isn't it?

*Credit: ESA/Hubble & NASA, D. Coe*

**Career Connections** - <https://nasaclips.arc.nasa.gov/careerconnection>

## Events and Deadlines

**May 25th - Total Eclipse of the Moon** - If you are in Australia, parts of the western US, western South America, or in South-East Asia, you will see a Super Full Moon totally eclipsed for about 14 minutes during this total lunar eclipse. Hawaii is ideally suited to view [this eclipse](#) in its entirety and the Project PANOPTES telescopes will be watching and live-streaming [here](#).

**May 28th - Deep Space Food Challenge Registration Deadline** - [Teams are invited](#) to create novel and game-changing food technologies or systems that require minimal inputs and maximize safe, nutritious, and palatable food outputs for long-duration space missions, and which have potential to benefit people on Earth.



**June 4th - Pledge of the Artemis Generation to Explore deadline**

Educators are [invited to record a video pledge](#) to use [Artemis](#) focused resources to give today's youth the same excitement about putting a woman on the Moon as so many adults recall from the Apollo missions. Incentives include a certificate and thank you letter from NASA and a future opportunity to share how taking the pledge impacted the local Artemis Generation.



**June 12th - GLOBE in the Park** - We will be holding a **live in-person event** at the Oconaluftee River Park from 11am to 3pm. Drop by to get some training on GLOBE water quality protocols and collect some local data.

## K-12 Curriculum Materials

[Scientifically-Interesting Story of COVID-19 and Air Quality](#) - Are you looking for resources to help students explore the connection of the COVID-19 pandemic to the Earth System? This resource provides a set of "tools" that teachers may use to address the science practice of **Data Analysis and Interpretation** all within the context of understanding the interactions of COVID-19 with the Earth System. These resources are flexible and adaptable and may be used in a variety of ways depending upon your classroom and instructional needs.

*NASA LESSON REPOSITORY ALIGNED TO NC STATE STANDARDS*

<https://www.southwesterncc.edu/stem-repository>

*MATERIALS AVAILABLE FOR CLASSROOMS*

(send an email to [r\\_neff@southwesterncc.edu](mailto:r_neff@southwesterncc.edu) to claim these for your classroom)

- The GLOBE Program information guide & activity connections to NGSS
- Astrobiology Curriculum guide and graphic story books
- Far Out Math Activities for grades 9-12
- Far Out Math Activities for grades 5-12
- Class set (20) TI-84 graphing calculators

## ONLINE

Learn basic coding using data from [NASA's Chandra X-ray Observatory](#) and other satellites on exploded stars, star-forming regions, and black holes.

**Virtual Missions from the Challenger Center** - 1-hour engaging, collaborative experiences; No handouts or supplies needed; Program requires devices with internet connection along with audio and video (optional) capability [not iPad compatible]

- [Destination Mars](#) (5th-6th grade)
- [Destination Moon](#) (7th-8th grade)

**May 11 (Noon and 3pm) - Digital Earth Academy: Oceans.** Dive beneath the oceans, the least well-known part of our planet. Examine the geology of the ocean floors, and learn how they shape our world via plate tectonics. We'll see the largest reefs and the smallest atolls, and discover the impacts of climate change on ocean life. Join Museum experts on a tour of the mysterious deep, guided by your questions and observations.

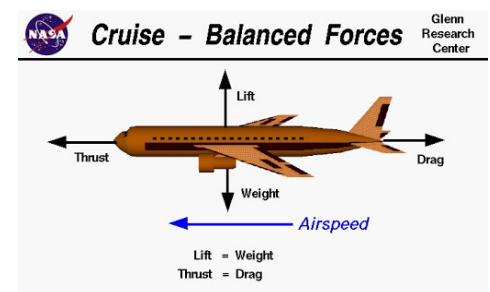
## Professional Development

<https://www.wgbh.org/foundation/qbh-education-research>

**May 4 (2-3pm) [Online Workshop](#): Engaging audiences in the launch of the James Webb Space Telescope** The James Webb Space Telescope (Webb) is NASA's ambitious scientific endeavor to reveal the hidden universe to our eyes using infrared technology: stars shrouded in clouds of dust, water in the atmospheres of other worlds, and light from the first galaxies ever formed.

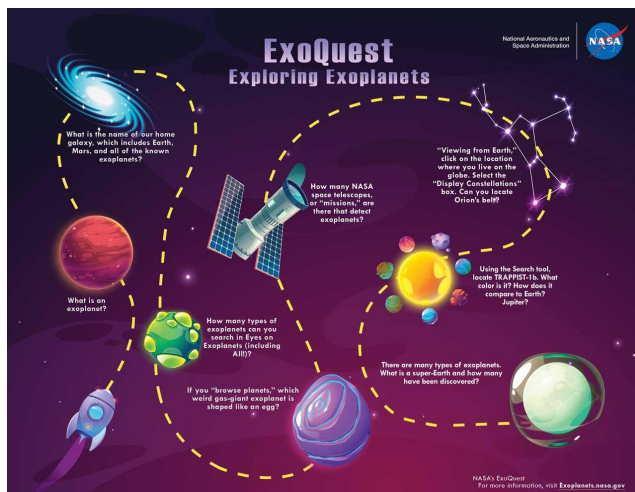
**May 5 (1pm) [Explore Flight](#): Bernoulli's Principles** with this online presentation and see what other topics will be covered this month [here](#).

**May 12 (6-7pm) [online webinar](#) - Teaching Space With NASA Live Stream – The Search for Exoplanets** As we



learn more and more about our solar system from NASA's robotic and human explorers, we can't help but also seek to understand what lies beyond.

Our solar system exists in a sea of countless solar systems across billions of galaxies. While we can't yet visit these distant worlds with robotic or human-led missions, we are beginning to get a better picture of them [thanks to powerful telescopes and remote-sensing techniques](#) that allow us to analyze their chemical signatures and more.



## Opportunities

**May 13th (1pm) Air & Space Live Chat: Careers** - There is so much more to air and space than pilots and engineers! Explore different career fields and get your questions answered in this panel discussion.

**Mission to Mars Student Challenge for Summer Camps** - A 7-week [series of hands-on activities](#) take youth from learning about Mars, planning a mission, launch and landing, and exploring the surface – all while following the Perseverance Rover's current exploration of Mars! Participate in a series of one-hour trainings to learn how to guide activities from each phase of the challenge.

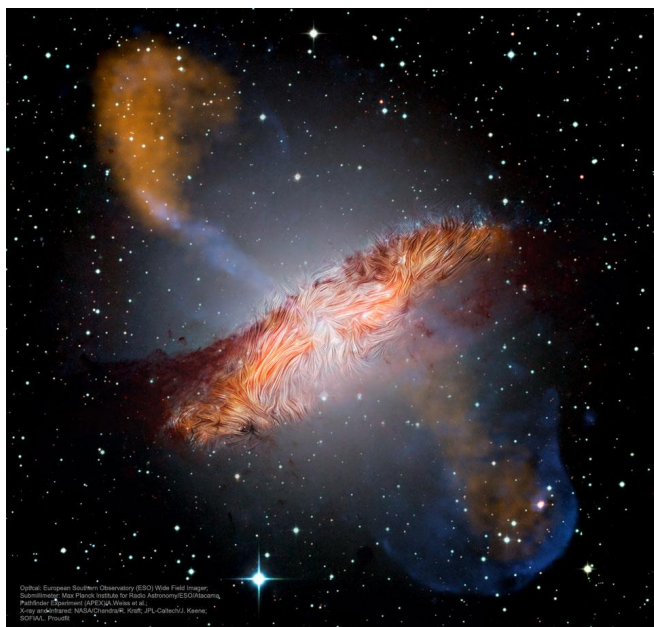
- May 13 - Plan Your Mission
- May 27 - Design Your Spacecraft

## For Libraries & Community Groups

**[Astronomy Storytime](#)** - Each Live Storytime book is listed below with a link to the video recording, if available, as well as any links to activities or materials that go with the reading.

**[Call for Proposals](#)** for 2021 NASA Teams Engaging Affiliated Museums and Informal Institutions

- pre-proposal webinar (optional overview): May 4, 2021
- Full proposals are due: June 17, 2021
- Individual award range: \$20K – \$25K
- Period of Performance: 1 – 2 years



## [Astronomy Picture of the Day](#)

When galaxies collide -- what happens to their [magnetic fields](#)?

To help find out, NASA pointed [SOFIA](#), its flying 747, at galactic neighbor [Centaurus A](#) to observe the emission of polarized dust -- which traces magnetic fields. Cen A's unusual shape results from the clash of two galaxies with [jets](#) powered by gas accreting onto a [central supermassive black hole](#).