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# SMSC March 2022 Newsletter

## NASA News This Month



**Interagency Sea Level Rise Scenario Tool** - NASA, NOAA, USGS, and other U.S. government agencies project that the rise in ocean height in the next 30 years could equal the total rise seen over the past 100 years.

The Team has developed an [online mapping tool](#) to visualize the report's state-of-the-art sea level rise projections on a localized level across the U.S.

*Credits: B137 (CC-BY) - read more here:*

<https://www.nasa.gov/feature/jpl/sea-level-to-rise-up-to-a-foot-by-2050-interagency-report-finds>

## Local Events

**Apr. 6th - [1pm] - LIVESTREAM tour of Chandra's Operations Control Center**

We'll tour the Chandra spacecraft through virtual reality, and take a (virtual) quick trip to some exploding stars in our own galaxy.

**Apr. 8th**

**[1:57pm] - Artemis Watch party @ SCC (this will also be livestreamed)**

**[7:30pm] - Star Party @ WCU Apodaca Building Roof with Artemis activities!**

**Apr. 29th [12-4pm] - Drive in PD at SCC for public school teachers. Register HERE:**

<https://forms.gle/VtscQK8Dh3LfFto9A>

## Challenges, Opportunities & Resources



### NASA Space Place Art Challenge!

In this new activity, we'd like to challenge young explorers to think about and draw a space-related situation each month. And after the month is over, we'll select a few imaginative drawings to be featured on the NASA Space Place website! See details here: <https://spaceplace.nasa.gov/art-challenge/en/>

Thu, March 3, 2022 [8:30 PM] - [Amateur Radio on the International Space Station](#)

- Amateur Radio on the International Space Station is a program that lets students experience the excitement of Amateur

Radio by talking directly with crew members of the International Space Station. People and organizations interested in an opportunity to host an ARISS radio contact with the International Space Station are invited to a webinar where they can ask questions about submitting a proposal. Register Here: <https://www.eventbrite.com/e/ariss-proposal-webinar-for-spring-2022-proposal-window-registration-263115735247>



**ARISS**  
Amateur Radio on the International Space Station



### NASA Spotlight Challenge: Cloud Detectives

As NASA Cloud Detectives, you are challenged to gather and share evidence to confront misconceptions about clouds.

Details and Registration **HERE:**

<https://nasaclips.arc.nasa.gov/resources/sdchallenge/4>

## Career Connections

**March 1st [5-6pm] PATHWAYS TO CAREERS IN NASA SCIENCE** - Ever wonder how you might find a path to a career working with NASA science or working at a NASA Center? Join us for this webinar event where scientists Jordyn-Marie Dudley, S. J. Ralston, and Joanna Clark will share the different paths they took that led them to their current careers working at the NASA Johnson Space Center in Houston, Texas. *Target Audience:* Individual High School, Community College and/or Undergraduate students  
**Register HERE:** <https://forms.gle/Hv3xVjXqLva5MiKF7>

**NASA Aeronautics Career Day** - This is a recorded session on the emerging field of advanced air mobility. [LINK: <https://youtu.be/XE0kksOc36g>] Careers in public affairs, communications, project management and specific tracks such as flight operations, project support, research and engineering are highlighted. Additional information can be found HERE:  
<https://nari.arc.nasa.gov/aamstem#eventsupcoming>

**Sound Bites: Insights to Inspire** - Dr. Yajaira Sierra-Sastre doesn't back down from challenges. From living on top of a volcano for months, to leading the design and build of new tires for Mars rovers, her curiosity for space and science are motivation to transform obstacles into opportunities. We're celebrating [#HispanicHeritageMonth](#) by kicking off our new Sound Bites video series. Hear from members of our workforce—their diverse experience, insights, and talents are what make NASA missions possible. Watch here: <https://youtu.be/Bf4zgBJk2bA>

## K-12 Educators

**Thursday, March 3rd [8pm] - 3D Thursdays for Rural Educators** - Are you on the hunt for ways to engage your students with real-world connections to standards-based learning? Join hosts Rachael Arens, Associate Researcher at NAU PLANETS & Michael Guarraia, Albert Einstein Distinguished Educator Fellow at NASA on as they dig into NASA eClips videos and resources that build STEM literacy through the lens of NASA. Register here:  
<https://docs.google.com/forms/d/e/1FAIpQLSdeqUQl3xEFAyz9PqsTO0Durf5Ga7WeTqJ2id36tv78uHX3Pw/viewform>



### Summer Internship With My NASA Data

**Audience:** Middle School and High School Earth Science Teachers

**Application Deadline:** March 4

**Contact:** [larc-mynasadata@mail.nasa.gov](mailto:larc-mynasadata@mail.nasa.gov)

Apply to be a virtual intern with My NASA Data this summer and assist with the development of Earth science education resources.

### **Celebrate Pi Day with NASA - ONLINE**

Educators and students can participate in honoring this mathematical marvel by taking part in the [NASA Pi Day Challenge](#)! Explore the current set of 32 illustrated math problems featuring real NASA missions and science. Then, check back **on March 10, when the 2022 challenge goes live with four new problems. The answers will be announced**



on **Tuesday, March 15**. Explore previous challenges and even more pi-related resources for educators and students HERE: <https://www.jpl.nasa.gov/edu/events/2022/2/2/celebrate-pi-day-with-nasa/>

### We Asked a NASA Expert

Is Mars habitable? Do aliens exist? Will an asteroid ever hit Earth? NASA scientists and engineers answer all these burning questions and more. Have a question you'd like answered? Send it our way using #askNASA and you might just hear straight from a NASA expert. Find the ANSWERS HERE: <https://www.nasa.gov/we-asked-a-nasa-expert>



The **2022 LiftOff Summer Institute** is a weeklong training event at NASA's Johnson Space Center in Houston, sponsored by NASA's Texas Space Grant Consortium. This year's theme is "The Artemis Generation." Attendees will explore NASA's plans to land the first woman and first person of color on the Moon. Participants will attend presentations by NASA scientists and engineers, tour NASA facilities, and receive hands-on, inquiry-based classroom activities aligned to education standards. Applicants must be U.S. citizens currently employed as classroom teachers of grades 5-12 with at least one year of teaching experience prior to the event.

If you apply and are chosen - we will work with you to cover travel costs. More info & the application can be found here: <http://www.tsgc.utexas.edu/liftoff/>

**STEMonstrations: Centripetal Force [for grades 9-12]** - In this activity, students learn about the variables that affect centripetal force through a hands-on demonstration and laboratory investigation. See the video and activity here: <https://www.nasa.gov/stemonstrations-centripetal-force.html>



### NASA Kahoots!

Want to learn more about the engineering, science, and technology responsible for talking to astronauts and retrieving data from the Moon and beyond? Explore the challenges faced by communications engineers from NASA's Goddard Space Flight Center in Greenbelt, Maryland, with this [quick, fun quiz](#) for students ages 13 and older.

**Nominate a Student with Perseverance** - Teachers, educators, and community leaders are encouraged to nominate middle school students who've shown that nothing will deter them from their educational journey. The next opportunity **opens Mar.**

**24th.** More details HERE:

<https://mars.nasa.gov/mars2020/participate/got-perseverance/#Opportunity-3>





**GLOBE Educator One-Week Pacing Guides** - Are you interested in doing GLOBE but not sure where to start? Check out these guides which provide a five-day sequence of activities that address a guiding question. More information and webinars can be found here:

<https://www.globe.gov/web/nasa-langley-research-center/home/resources>

- [Air Quality \(Aerosols\)](#) - Grades 6-12
- [Cloud Types Featuring NASA GLOBE CLOUD GAZE](#) - Grades 3-8
- [Clouds and Energy Budget](#) - Grades 6-12
- [Mosquito Habitat](#) - Grades 4-8
- [Plant Phenology](#) - Grades 4-8
- [Trees and the Carbon Cycle](#) - Grades 6-12
- [Urban Heat Islands](#) - Grades 6-12

### **CS4ALL NSF Supported Program at Appalachian State University**

**Summer 2022 Dates: (June 19 - July 15)** The objective is to train high school teachers to teach AP CS Principles in their schools. During this four-week summer program, participants will gain skills that they can utilize to establish an AP CS Principle course and create instructional and support material for their course. In addition, participants will have hands-on experience with some CS modules that they can use in their courses. **Full-time high school or early college teachers are eligible.** We are seeking energetic and motivated participants who can entice students about computer science and its application in different fields.

More information here: <https://cs.appstate.edu/cs4all/index.php>

### **REPOSITORY ALIGNED TO NC STATE STANDARDS** *(currently under revision)*

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

## **Books, Videos & Interactives**

**REACH A Space Podcast for Kids** - a weekly, family friendly exploration of our galaxy (and beyond!). REACH educates with entertaining segments, fun at-home experiments, and interviews with subject matter experts. Recommended for ages 8+. Find episodes HERE:

<https://podcasts.apple.com/us/podcast/reach-a-space-podcast-for-kids/id1513671470>

**Think Scientifically - Elementary School Science Literacy Program** - a three-book series for elementary school teachers that integrates math, science and reading instruction. It can be downloaded from HERE: <https://sdo.gsfc.nasa.gov/epo/educators/thinkscientifically.php>

**Space Nutrition for Kids** - [https://www.nasa.gov/sites/default/files/space\\_nutrition\\_book.pdf](https://www.nasa.gov/sites/default/files/space_nutrition_book.pdf)

**Astrobiology** - a graphic novel series that explores the many facets of astrobiology: the study of the origin, evolution, and distribution of life in the Universe.

<https://astrobiology.nasa.gov/resources/graphic-histories/>

**NOTE: *If you would like us to supply hard copies of these downloadable books, just ask!***

**Interactive Webb 360 virtual tour** of the science behind the James Webb Space Telescope Mission


<https://p.tourit.etx.asu.edu/tl2jve4u/619dlwfm3kbme19/index.html>

**Astromaterials 3D** - A virtual library for exploration and research of NASA's space rock collections. You can watch a demo of how to use this resource with this video: [https://youtu.be/k-aYsYq\\_vUk](https://youtu.be/k-aYsYq_vUk) [start at 30 minutes to how to use this resource or watch the whole thing and explore a virtual tour of the meteorite lab]!

## Professional Development

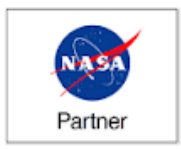


Join the **NASA STEM Engagement & Educator Professional Development** Collaborative at Texas State University for FREE 60-minute webinars. **Earn 1-hour of professional development** credit by attending. See the titles, dates, and registration links for each event HERE: <https://www.txstate-epdc.net/event-post/>









### MONTHLY WORKSHOP SERIES: "Physics in an Astronomy Context"

- Virtual gatherings of 25-50 teachers on one Saturday of each month
- Each session consists of the following:
  - Astrophysics mini-lecture
  - Small group engagement with the core activity
  - Exploration and whole group discussion time
- Sign up for individual sessions and learn more at [shorturl.at/jprZ2](https://shorturl.at/jprZ2)

**Meet the team:**  
**Ramon E. Lopez**, University of Texas-Arlington  
**Brad Ambrose**, Grand Valley State University  
**Janelle M Bailey**, Temple University  
**Ximena Cid**, California State University-Dominguez Hills  
**Darcia Donelan**, Gustavus Adolphus College  
**Rebecca Vieyra**, University of Maryland-College Park  
**Shannon Willoughby**, Montana State University

February 12 1-2:30 PM ET	March 12 1-2:30 PM ET	April 9 1-2:30 PM ET	May 21 1-2:30 PM ET
 <p><b>CME Science</b></p>	 <p><b>Eclipse Science</b></p>	 <p><b>Solar Sails Science</b></p>	 <p><b>Exploring Physics and Space Science with AAPT Digikits</b></p>
<p><b>Physics:</b> Kinematics, Graphing</p> <p><b>Astronomy:</b> Coronal Mass Ejections</p>	<p><b>Physics:</b> Light/Shadows</p> <p><b>Astronomy:</b> Eclipses</p>	<p><b>Physics:</b> Speed, Rates, Proportions</p> <p><b>Astronomy:</b> Opportunities and Risks of Space Travel</p>	<p>Learn about various introductory physics topics through AAPT's curated collections of astronomy-themed resources.</p>

<https://docs.google.com/forms/d/e/1FAIpQLSc6AhZ4WXtaetIASDNWUsqDYer2Nz2O11dnGdj0jx176lhSw/viewform>

## Opportunities For All



### **Celebrating Earth's Oceans, Protecting Our Future -**

During the summer of 2022, libraries across the country will celebrate earth science in their summer learning programs.

The slogan “**Oceans of Possibilities**” was chosen by CSLP and many library professionals to help inspire children of all

ages to dream big and think about all the ways that they can make our World a better place to live for all of humanity and to put their ideas into ACTION. **Find resources for your library HERE:**

<http://www.starnetlibraries.org/our-planet-earth/>

### **Virtual Field Trip with NASA's Chandra X-ray Observatory** [March 8, 2pm; March 14, noon; March 24, 3pm; April 1, 2pm; April 6, 1pm] -

As NASA's premier X-ray telescope, Chandra gives us a powerful tool to investigate hot regions of the Universe, from black holes, to exploding stars, colliding galaxies and more. Get a backstage pass to Chandra's Operations Control Center, tour the Chandra spacecraft through virtual reality, and take a (virtual) quick trip to some exploding stars in our own galaxy. This virtual field trip is part of the Code.org CS Journeys. Choose a session and submit your group's registration HERE: <https://chandra.harvard.edu/fieldtrip/registration.html> **OR join us in-person or online April 6th for a livestream of this event.**

**Monthly Astronomy presentations** - The Boise State Physics department holds a monthly astronomy event on the first Friday of every month, during which they virtually host space science-related experts to talk about their work and research and answer astronomy questions. See the schedule HERE: <https://science.nasa.gov/learners/nuggets/central-id-dark-sky>



### **NASA's Eyes on the Earth Puts the World at Your Fingertips -**

NASA's real-time 3D visualization tool [Eyes on the Earth](#) got a recent upgrade to include more datasets, putting the world at your fingertips. Using the tool, you can track the planet's vital signs – everything from carbon dioxide and carbon monoxide to sea level and soil moisture levels – as well as follow the fleet of Earth satellites providing those measurements.

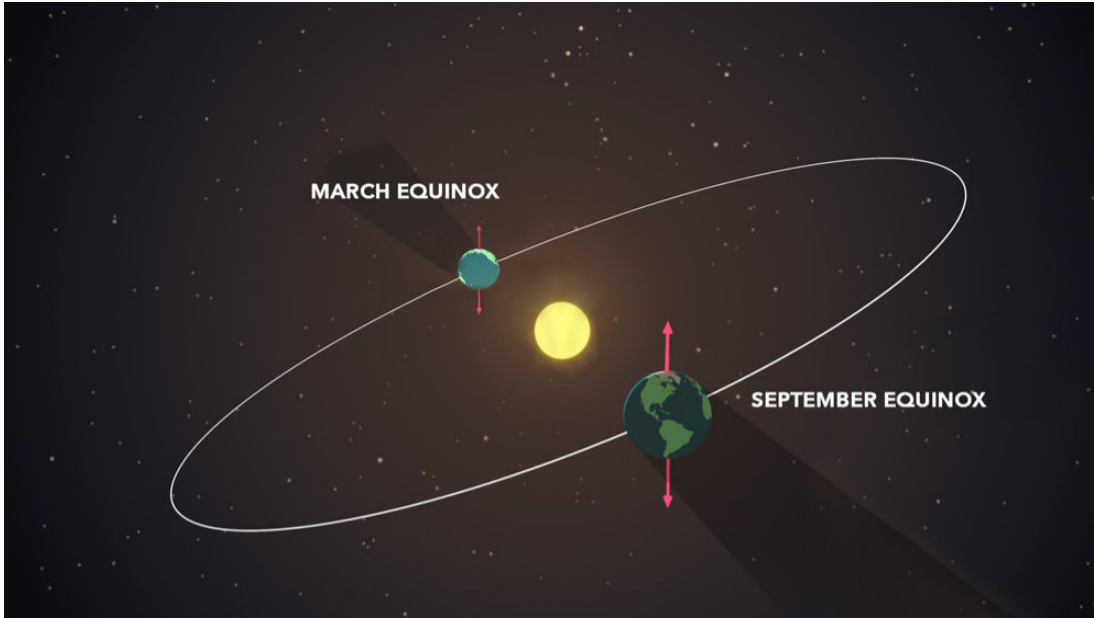
<https://www.jpl.nasa.gov/news/nasas-eyes-on-the-earth-puts-the-world-at-your-fingertips>

In addition, there are also Eyes on the Solar System, Asteroids, Exoplanets & Mars! Find them all here:

<https://eyes.nasa.gov/>

## March skies

The day of an equinox, observers at the equator will see the Sun directly overhead at noon. After the March equinox, observers anywhere on Earth will see the Sun's path in the sky continue its movement further north every day until the June solstice, after which it begins traveling south.



*Credit: NASA/GSFC/Genna Duberstein - read more here:*  
[https://nightsky.jpl.nasa.gov/news-display.cfm?News\\_ID=995](https://nightsky.jpl.nasa.gov/news-display.cfm?News_ID=995)

We are available for in-person/in-class activities on Fridays. You can use [this spreadsheet](#) to check availability and make plans. Days other than Fridays may be available - just ask by emailing [r\\_neff@southwesterncc.edu](mailto:r_neff@southwesterncc.edu)!