



Science Monthly

District NGSS and Science News

WILDFIRE SEASON

NOVEMBER 2019



Website of the Month:
Story Time From Space

YouTube Channel Of the Month:
nvseismolab

CA Phenomena:
Wildfires

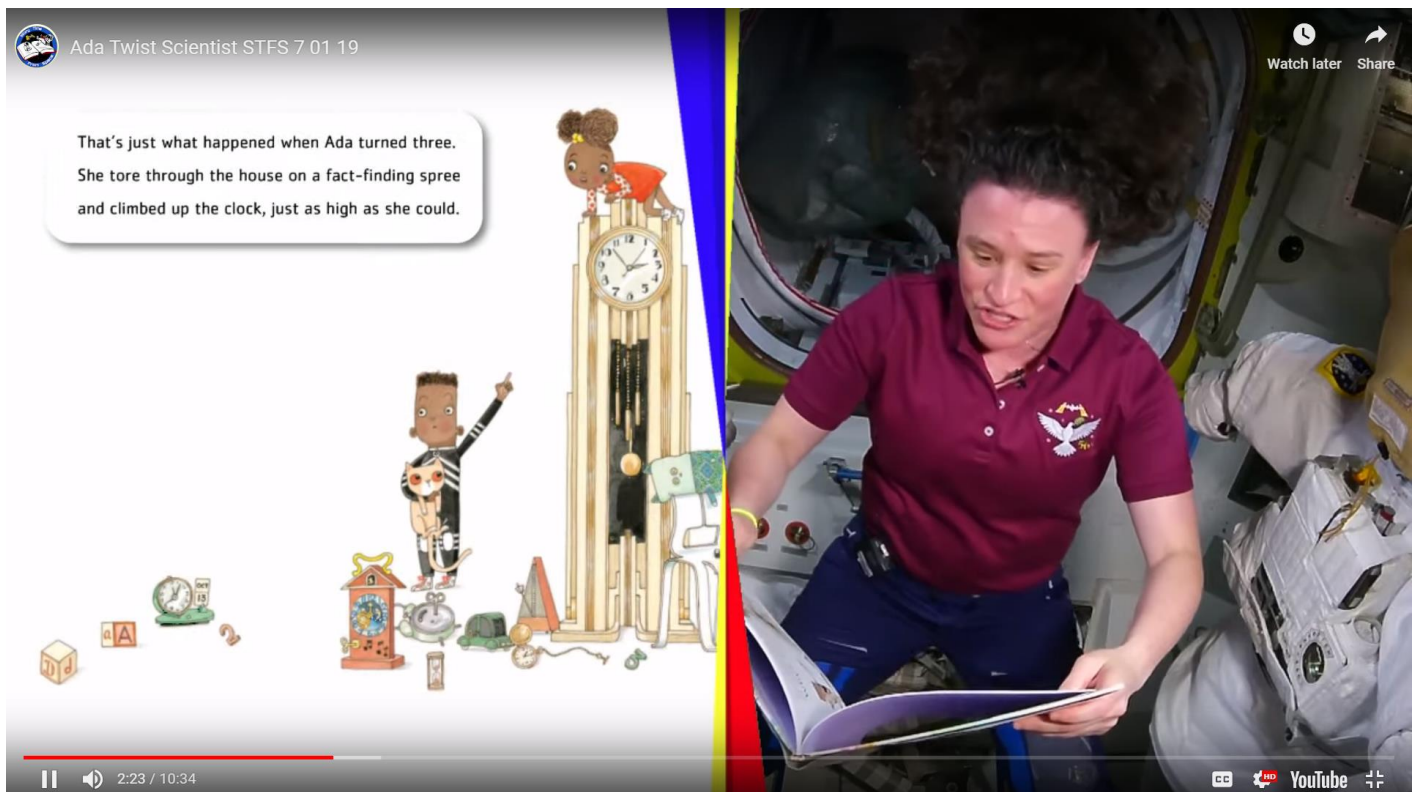
Website of the Month: Story Time From Space

<https://storytimefromspace.com/>

From TK to college and beyond, there is something special about story time. Getting to lose yourself in a good book lets you live another life and, in the cases of our students, they get a chance to imagine the rest of their lives. While fiction and fantasy make our imaginations soar, non-fiction stories may not be a first pick. I would argue however that students need to read more stories based on real life so that we can see that magic in our own world that is ready and waiting to be discovered by our young readers. If you do not have an extensive class library or you think your students may stay more engaged if they listen to a different voice for a while, Story Time From Space is the amazing resource waiting to provide that experience for your students.



Story Time From Space is a resource that brings you just that, astronauts reading stories for your students to follow along with. Consider having some quiet story time after lunch or sharing with students as part of introducing that next science lesson. When you explore the website, also check out the videos of some simple science demonstrations performed aboard the International Space Station!



Ada Twist Scientist STFS 7 01 19

That's just what happened when Ada turned three. She tore through the house on a fact-finding spree and climbed up the clock, just as high as she could.

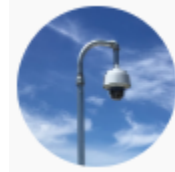
Watch later Share

2:23 / 10:34

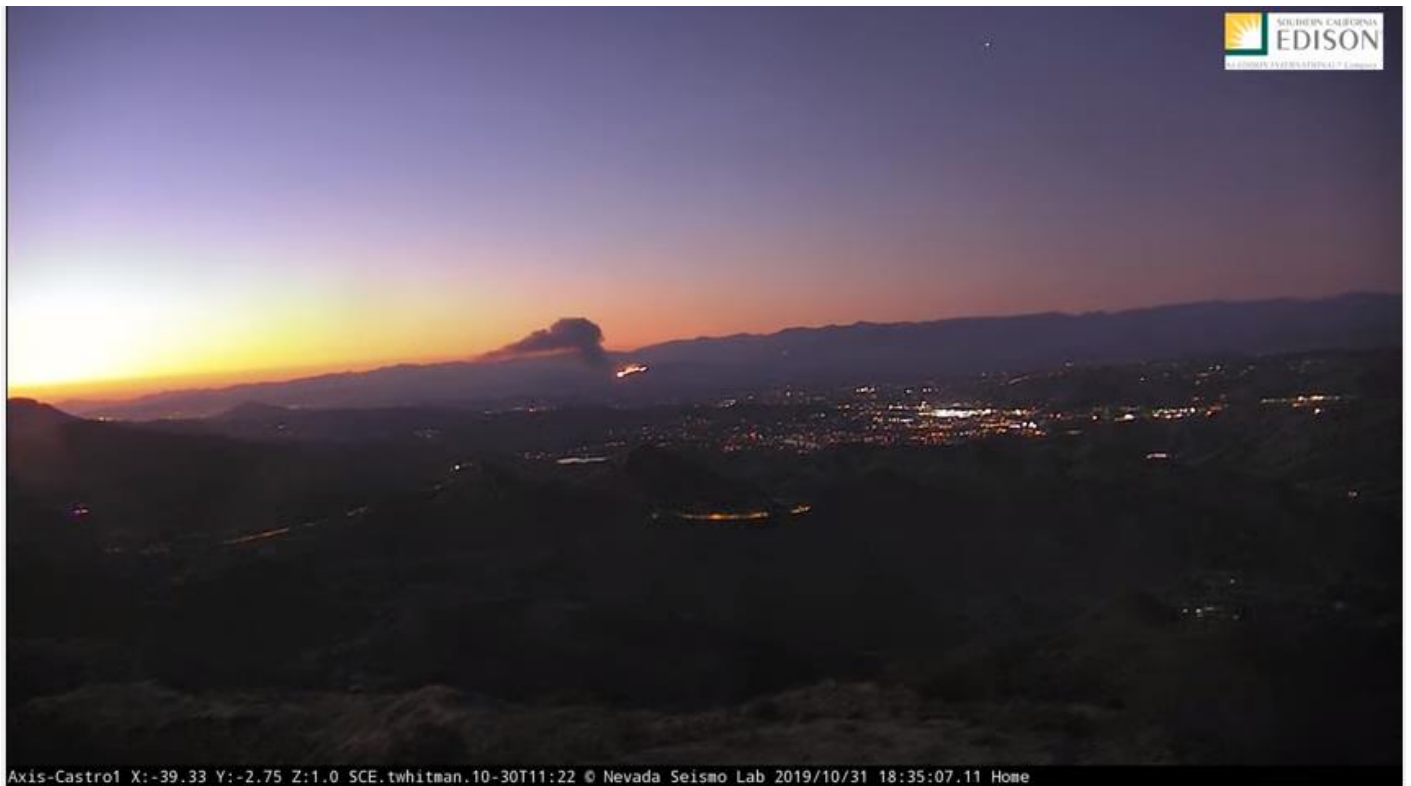
YouTube

YouTube Channel of the Month: nvseismolab <https://www.youtube.com/user/nvseismolab/>

This month's recommended channel comes as a tool for you to discuss wildfires with your students. Surveillance cams like those used by Alert Wildfire have cameras throughout California and Nevada that are always watching the landscape for flare-ups and smoke stacks. This remote camera system allows both humans and AI programs to monitor for fires before the 911 call to firefighters. Government agencies can then tap into those 24/7 video feeds and track the fire progression in remote areas that otherwise would need air surveillance. The Nevada Seismological Laboratory located at the University of Nevada, Reno, hosts this particular YouTube channel.



nvseismolab
1.05K subscribers



Ignition of Maria Fire caught on Castro Fire camera at 6:16 PM



nvseismolab

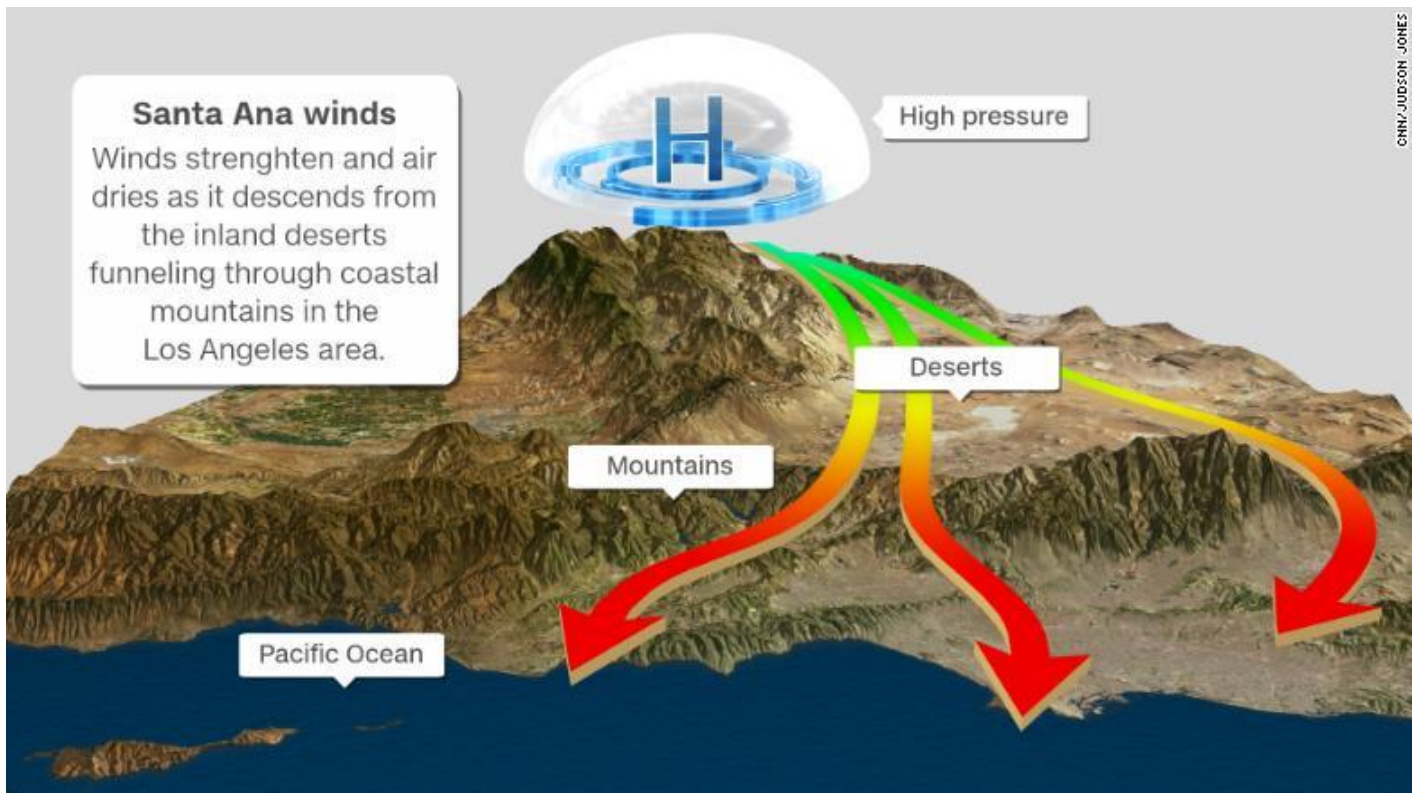
 **Subscribe** 1.05K

8,476 views

 Add to  Share  More

 65  4

While they do not upload all videos from Alert Wildfire, they have posted many time-lapse videos made from these terrain cams along with key moments from fires such as the original ignition if caught on camera. With recent local fires and students realizing that we are living in an area prone to fires, they will have their own questions about how fires start and how they move. Consider utilizing some of the videos as phenomena for class discussion- Show students a map of where a fire took place and ask them to look at the terrain and predict what started the fire and where it moved after it started. Ask questions about where they think the wind moves and even have a discussion on the Santa Ana winds in our region. In the hunt for relevant and high-quality phenomena resources, videos of the very fires affecting our communities act as great conversation starters and points of reference as students learn about our immediate surroundings.



California Phenomena: Wildfires

Using Recent Fire Events to Teach Science and Safety

Around our homes recently have been multiple wildfires and they do not show any signs yet of slowing down for the season. California is currently in a state of emergency and our firefighters are being stretched across counties to catch flare ups before they turn into blazing wildfires that cause millions in damage. With this ever-present threat in the news, science teachers are provided an opportunity to combat panic and the unknown by using these local



This photo shows footage of the Horseshoe Fire in Juniper Flats. (Photo: Cal Fire)

phenomena to teach fire preparedness and safety as well as practice large scale inquiry in real time. With resources like the live cams from ALERT Wildfire, students have access to a wealth of data to track current fires and possibly predict how and where new fires might occur. Instead of shielding our students from alarming news, we have the ability to inform our students to think critically about our changing landscapes and what to be ready for in the future. For any grade level, you can talk about preparing for a fire.

The American Red Cross suggests the following ways to prepare for a wildfire before the evacuation order:

- Talk with your family about wildfires facts: how to keep them from starting and what to do if one occurs.

Discussing ahead of time helps reduce fear, particularly for younger children.

- Post emergency phone numbers by every phone in your house.
- Ensure that every member of your family carries a Safe and Well wallet card. Make sure you have access to NOAA radio broadcasts: - Find an online NOAA radio station
- Keep insurance policies, documents, and other valuables in a safe-deposit box. You may need quick, easy access to these documents. Keep them in a safe place less likely to be damaged if a hurricane causes flooding. Take pictures on a phone and keep copies of important documents and files on a flash drive that you can carry with you on your house or car keys



NASA Astronaut Andrew Morgan

7 hours ago



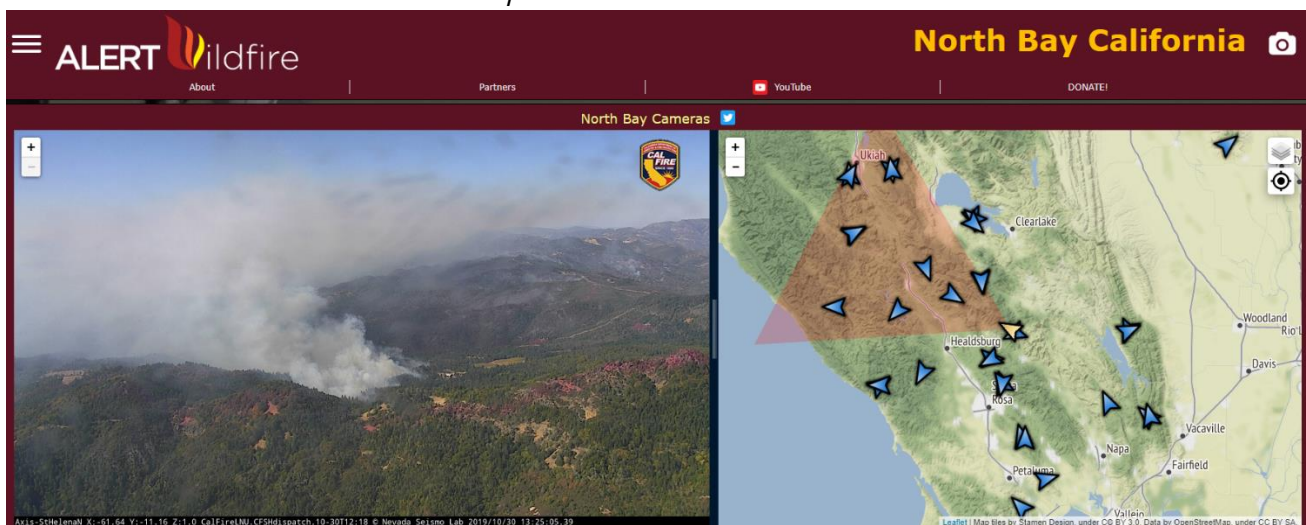
From the International Space Station I was able to catch these pictures of the California wildfires burning north of the Bay Area. Thinking of the people who have lost their homes and the brave first responders on the front lines protecting them.



Resources for Fire Data:

1. **California Fire Tracker San Francisco Chronicle** <https://projects.sfchronicle.com/trackers/california-fire-map/>
2. **Live Incident Feed: Riverside County Fire Department** rvcfire.org
3. **Real-Time Fire Map: University of California Cooperative Extension**
https://ucanr.edu/sites/fire/Wildfire_Health_-_Safety/Current/
4. **Insurance Information Institute Facts + Statistics: Wildfires** <https://www.iii.org/fact-statistic/facts-statistics-wildfires>
5. **FEMA California fire loss/fire department** <https://www.usfa.fema.gov/data/statistics/states/california.html>
6. **WIFIRE Map: National Science Foundation and UC San Diego** <https://firemap.sdsc.edu/>
7. **ALERT Wildfire Live Terrain Cams** <http://www.alertwildfire.org/>

Did you know firefighters fight fire with fire? One technique to slow the progression of wildfires used by firefighters is setting back fires or escape fires. By setting small controlled fires that can easily be put out with available resources, the firefighters can eliminate fuel sources before the wildfire reaches that area, creating a firebreak and stopping the progression of the larger unmanageable fire. Solutions like making escape fires are part of the library of complex strategies that our students may even add to in the future. As we come together to support each other through the fires and reconstruction, it is my sincere hope that as a science teacher you can provide at least a level of understanding that students can think critically about wildfires when they spark. In an emergency, it may be these wildfire lessons that students reflect on so they can make safe choices.



NGSS Instructional Materials Adoption Update Paper-Screening

Our NGSS Adoption Committee members have been hard at work taking deep dives into the sample materials provided by a multitude of different publishers. After our initial viewing of all the samples, the next step was narrowing down the playing field to 4 programs to paper screen. During the paper-screening phase, committee members utilize the rubric that was designed from teacher input at the first meeting. They will vet the materials for the following 8 criteria: 1) Use of Phenomena/Problems, 2) Presence of a Logical Sequence, 3) Students are figuring out ____, 4) 3 Dimensional Learning & Performance, 5) Student Work, Learning Experiences, 6) Teacher Support, 7) Assessment, Monitoring Student Progress, and 8) Diverse Learning Needs. The purpose of the paper screening step in the adoption process is to ultimately select the top 2 programs that will be piloted at the school sites.

Inland Empire Science Olympiad

**Deadline to Register:
12/2/19**

<https://sites.google.com/site/iescioly>

Elementary, middle, and high school teams are invited to register and represent our district at the IE Science Olympiad! See their website and social media pages for more information.




**REGISTRATION DEADLINE
DECEMBER 2, 2019**

THE INLAND EMPIRE SCIENCE OLYMPIAD
 invites you to the

— 2020 —
INLAND EMPIRE
REGIONAL TOURNAMENT

MARCH 14, 2020 ETIWANDA HIGH SCHOOL


Science Olympiad is a national, non-profit organization that provides opportunities for students to develop and explore their interests and excitement in STEM fields by providing them a venue to showcase their new found knowledge in the form of a competition. The tournament consists of 23 events in the area of biology, chemistry, physics, earth science, and engineering.



FOLLOW US TO LEARN MORE!
 Facebook @IEScienceOlympiad Instagram @IE.Science.Olympiad Twitter @IE_SciOlympiad

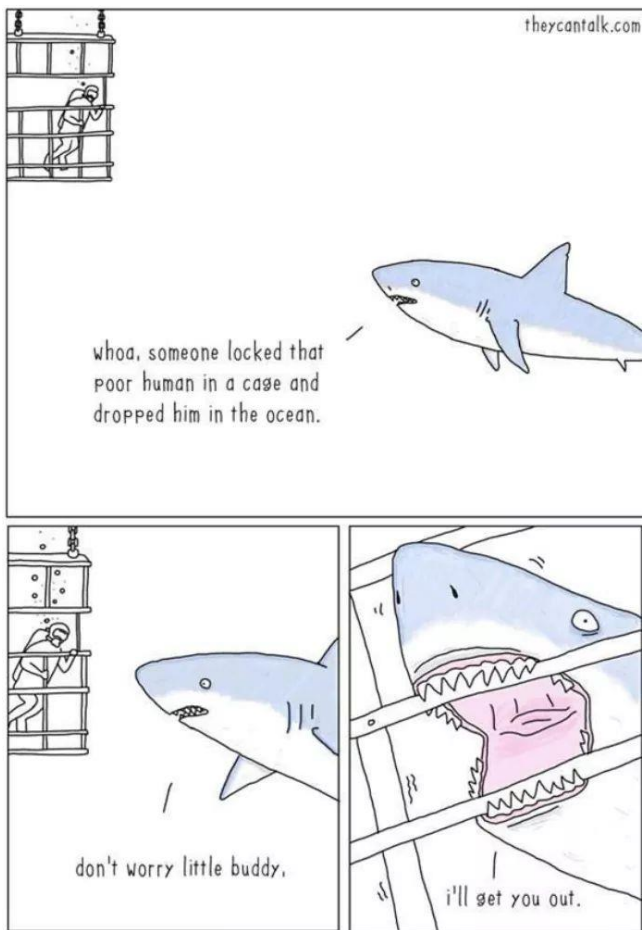
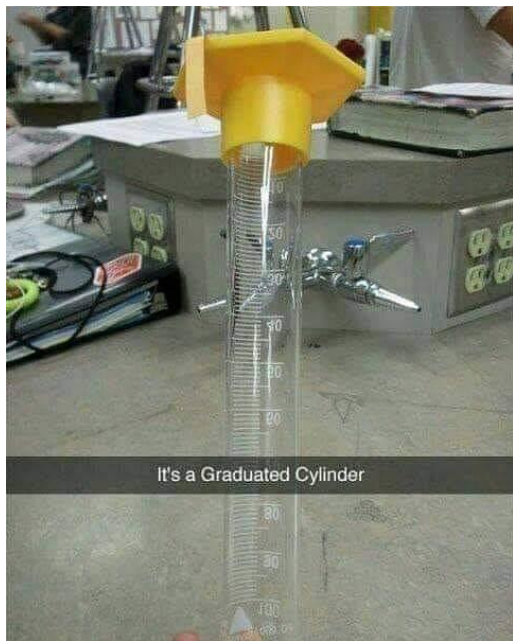
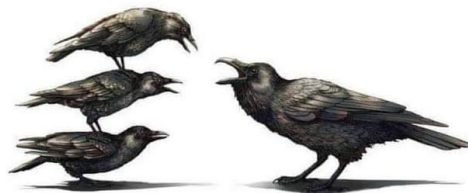
www.iescioly.com

According to Greek Mythology, Chiron was a half horse, half human doctor.

This made him the Centaur for Disease Control.



Scientifically, a raven has 17 primary wing feathers, the big ones at the end of the wing. They are called pinion feathers. A crow has 16. So, the difference between a crow and a raven is only a matter of a pinion.



Contact and Support

Jackie Gardner: SJUSD NGSS TOSA
jgardner@sanjacinto.k12.ca.us Phone: (951) 929 - 7700 ext. 4252
 PowerSchool Site: <http://bit.ly/SJUSDscience>
 Website: <https://thefishnerd.weebly.com>