

Nov 30

1. Classroom-Ready STEM Lessons: Agricultural Engineering, Computer Science Education Week & more Go to:  
<http://campaign.r20.constantcontact.com/render?m=1102261797598&ca=fb1cde04-9a17-4381-836b-68b8a01e45d9>
2. Cubes in Space
3. **SIX STAR SCIENCE ONLINE TEACHER (OT) PROFESSIONAL DEVELOPMENT PROGRAM – \$1,400 STIPENDS PAID**
4. NASA Optimus Prime Spinoff Challenge
5. NASA NEON

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## 2. Opportunity for Students, Ages 11-18, to Launch Experiments into Space!

idoodledu, inc, in partnership with NASA Goddard Space Flight Center's Wallops Flight Facility, the Colorado Space Grant Consortium and Langley Research Center is offering Cubes in Space™, a program providing students 11-18 years of age an opportunity to design and compete to launch an experiment into space at **no cost!**

This Science, Technology, Engineering, Arts and Mathematics (STEAM) based global education program, enables students to learn about space exploration utilizing innovative problem-solving, inquiry-based learning methods. By participating in this program, students and educators are provided with engaging content and activities in preparation for the design and development of an experiment to be integrated into a small cube.

This year, experiments will be launched into space via sounding rocket from NASA Wallops Flight Facility on Wallops Island, Virginia in late June 2017 or on a high altitude balloon launched from the NASA Columbia Scientific Balloon Facility in Fort Sumner, New Mexico in August 2017.

The deadline for program registration is January 6, 2017. For more information, visit <http://www.cubesinspace.com>. Questions about this program may be directed to [info@cubesinspace.com](mailto:info@cubesinspace.com).

### About idoodledu inc.

idoodledu, inc, a charitable non-profit 501(c)(3) organization, is a wholly owned subsidiary of [idoodlelearning, inc.](http://www.idoodlelearning.com), and was created in 2015 as a legal vehicle to bring public private partnerships and publicly funded programs to all learners and educators. idoodlelearning, inc., is an education company based in Ottawa, Canada, London, England and Virginia Beach, USA. For more information, visit <http://www.idoodledu.org> or <http://www.idoodlelearning.com>

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## 3.SIX STAR SCIENCE ONLINE TEACHER (OT) PROFESSIONAL DEVELOPMENT PROGRAM – \$1,400 STIPENDS PAID (for completed work)

This program is a 10-month online pedagogy-based professional development that focuses on the three Dimensions in the Next Generation Science Standards: Scientific Practices; Cross Cutting

Concepts (especially “Cause and Effect” and “Structure and Function”), and Core Ideas (Life Sciences) and on expanding teacher skills in three major areas: 1) Updating Teacher Content and Pedagogy Knowledge; 2) Understanding the Research Process; and 3) Applying Six Star Science in the Classroom. Fellows **receive stipends** for completion of their online work.

**Online Teacher (OT) Fellows** participate in a dynamic and interactive virtual learning community that focuses on exploring effective teaching strategies, understanding the research process, and enhancing classroom materials. **Application deadline: January 31, 2017**

More info on the program can be found at: [www.frontiersinphys.org](http://www.frontiersinphys.org)

### **Kristine Vowels**

Project Assistant, K-12, PST & LifeSciTRC



[Watch a video on the reasons to attend EB.](#)

### **The American Physiological Society**

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### **4. NASA Optimus Prime**

NASA Goddard Space Flight Center and the National Institute of Aerospace invites you to encourage and facilitate student participation in the second year of the *Optimus Prime Spinoff and Research Challenge*, or *OPSPARC!* Spinoffs are like *OPTIMUS PRIME* they come from space to solve problems on Earth. For *OPSPARC*, students learn more about NASA technology and use design and engineering to create spinoffs that will make their world a better place like the TRANSFORMERS! Challenges are tailored for the elementary (3-5), middle (6-8), and high (9-12) school age groups. Students discover

NASA Spinoff Technologies used in everyday life, use the Engineering Design Process (EDP) to create their own innovations, and share their discoveries and creative thinking through a Glogster Digital Design poster.

For each challenge:

- Ten Glogster Digital Design posters will be selected for nationwide voting to determine the public's favorite poster!
- **ONE** winning elementary and middle school Glog will be selected by NASA personnel using rubrics provided at the OPSPARC website.

For the high school challenge:

Twenty teams will be selected for the *InWorld OPSPARC* experience where they will work with a college engineering and/or entrepreneur mentor and interact with NASA scientists in a 3D multi-user virtual world to develop their design!

For full competition details for the 2017 NASA OPSPARC Challenge, please visit:

<https://nasaopsparc.com/>.

For a video overview of key components of the OPSPARC challenge and website, watch this:

<https://www.youtube.com/watch?v=Bx8dBmBBjCU&feature=youtu.be>

***Help us encourage students to BE THE SPARK through OPSPARC!!!***

Dr. Sharon Bowers

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## **5.NEON - NASA Educators Online Network**

### **ANNOUNCEMENTS**

#### **Free STEM Education Webinars From NASA Educator Professional Development**

#### **Audience: In-service, Pre-service, Home School and Informal Educators**

The NASA STEM Educator Professional Development Collaborative (EPDC) at Texas State University is presenting a series of free webinars open to all educators. Join NASA education specialists to learn about activities, lesson plans, educator guides and resources that bring NASA into your classroom. ***Registration is required to participate. To register, simply click on the link provided beneath the webinar description.***

**November 29, 2016, at 6:30 p.m. ET: *NASA Technology in Your Classroom -- BEST GPIM (Grades K-12)*** - Participants will learn about how "Technology Drives Exploration." Using the

Beginning Engineering Science and Technology, or BEST, curriculum, participants will learn how to use the engineering design process to build a satellite and test green propellant. Participants also will learn about current research at NASA's Armstrong Flight Research Center in California. Register online to participate. <https://www.etches.com/205661>

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**November 30, 2016, at 4:00 p.m. ET: *Teachers Connect: LaRC Centennial Badge (Grades 6-8)*** - This webinar will focus for the first half-hour on clouds and their role in Earth's "energy budget" and on implementation ideas using GLOBE for different classroom settings as part of the Earth Right Now: LaRC 100th digital badge. We also will talk about student badge implementations, extension ideas and extra resources. The second half-hour will be very similar but centered on the engineering design process using the Drag Race to Mars Engineering Design Challenge as part of the Journey to Mars: LaRC 100th digital badge. This portion of the webinar will focus on forces and motion and math calculations using paper airplanes and testing different materials as part of the Aeronautics: LaRC 100th digital badge. This webinar meets requirements of teacher discussions within the NASA Langley 100th EPDC digital badges. To learn more about the Langley 100th digital badges, log in to <https://nasatxstate-epdc.net/> and search for LaRC 100th. Register online to participate. <https://www.etches.com/207894>

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**December 1, 2016, at 6:00 p.m. ET: *Don't Count NASA Out of Your Math Classes: Solar System Math (Grades 4-8)*** - Bring out-of-this-world math and science into your classroom with NASA STEM solar system activities and missions. Investigate real data, classification, graphing and scale models to better understand and visualize our sun, planets, asteroids and other objects in our solar system. Register online to participate. <https://www.etches.com/209753>

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**December 5, 2016, at 5:00 p.m. ET: *Don't Count NASA Out of Your Math Classes: Fuel for the Fire (Grades 7-9)*** - Explore ways to engage your students with a game that involves landing the Eagle module at Tranquility Base. Game players learn how the shape of a fuel tank is related to a graph of height vs. time as the tank is filled at a constant rate. Students will use the knowledge gained from that exploration to determine a function for computing the volume of fuel given the height in the cylindrical tanks of the Space Launch System rocket. Finally, students will use that function to launch the SLS on its first mission around the moon. Register online to participate. <https://www.etches.com/212571>

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**December 6, 2016, at 5:00 p.m. ET: *Picking Up STEAM: Using Models and Data to Understand Clouds (Grades 4-10)*** - Practice STEAM through the use of inquiry-based science activities from NASA curriculum guides. The activities and NASA educational websites introduced will provide participants with new curriculum ideas to assist in reaching the Next Generation Science Standards and CORE learning outcomes standards. This STEAM workshop

will guide participants through inquiry-based learning activities related to clouds, phase change, light, water cycle, weather and climate. Participants will use authentic data sets to model STEAM lessons. Register online to participate. <https://www.etches.com/205303>

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**December 6, 2016, at 6:30 p.m. ET: *Don't Count NASA Out of Your Math Classes: SpaceMath - Linking Math and Science (Grades 5-8)*** - Space Mathematics is a two-part series designed to help educators make the critical linkage between mathematics and science in the classroom. In Part 1 -- Linking Math and Science, participants will survey some of the available NASA resources and discuss the use of science as a vehicle for mathematics instruction. Register online to participate. <https://www.etches.com/199140>

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**December 7, 2016, at 6:30 p.m. ET: *Don't Count NASA Out of Your Math Classes: SpaceMath - Active Math (Grades 5-8)*** - Space Mathematics is a two-part series designed to help educators make the critical linkage between mathematics and science in the classroom. In Part 2 -- Active Math, participants will explore the use of inquiry to reinforce mathematics skills while engaging students with hands-on activities. Register online to participate. <https://www.etches.com/199142>

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**December 8, 2016, at 6:30 p.m. ET: *Don't Count NASA Out of Your Math Classes: Mass vs Weight (Grades K-12)*** - Participants will learn about hands-on standards-aligned activities comparing mass and weight. They also will learn about the microgravity environment of the International Space Station. This webinar addresses the Next Generation Science Standards ESS1 and ESS2 and Common Core Math Standards. Register online to participate. <https://www.etches.com/207364>

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For the NASA STEM Educator Professional Development webinar schedule, go to: <http://www.txstate-epdc.net/events/>

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## **SPACE EXPLORATION EDUCATORS CONFERENCE (SEEC)**

**February 9-11, 2017**

**at Space Center Houston**

**1601 NASA Pkwy, Houston, TX 77058**

Experience three days of complete immersion into the out-of-this world adventure of space exploration!

This conference is for grades kindergarten to 12th – and not just for science teachers! Space Center Houston strives to use space to teach across the curriculum. The activities presented can be used for science, language arts, mathematics, history, and more.

Attend sessions hosted by the actual scientists and engineers working on exciting endeavors like the International Space Station and explorations of Mars and the planets beyond. Hear from the astronauts leading the charge in exploration! Come learn about the bold vision to send humans back to the Moon and off to Mars! Attend sessions presented by educators and receive ready to implement classroom ideas and experience minds-on, hands-on fun. Network with fellow educators, take back a multitude of cross-curriculum ideas and activities and earn 24 hours of continuing professional education credit.

***For more information or to register, visit :*** <http://spacecenterSEEC.org> email [seec@spacecenter.org](mailto:seec@spacecenter.org) or call (281) 244-2149.