



## NASA Educator Resource Center Network (ERCN) 2011-2012 Online Workshops for Educators



The **NASA ERCN** offers **free** online **NASA education workshops** for teachers. You only need an internet connection and audio capability to participate. Email your ERC/Coordinator at: [deveaus@erau.edu](mailto:deveaus@erau.edu) to register for workshops. Registered participants will receive login instructions via email prior to each workshop and a certificate of participation following the workshop as well as access to the archived presentation.

### NASA's Space Place

**Saturday September 10, 2011, 8:00 a.m. – 9:30 a.m., AZ (11:00 Eastern)**

Explore a NASA education resource that makes science, technology, and learning about space fun and understandable. Learn about the wealth of hands-on activities, interactive games and puzzles, and animations that help to bring space science alive for students. Presented by: *Lindsey B. Keith-Vincent, Museum Educator - Louisiana Tech SciTEC Center ERC*

### Solve Challenges of Space through a NASA Engineering Design Challenge

**Saturday October 15, 8:00 a.m. – 9:30 a.m., AZ (11:00 Eastern) Grades 7-12**

The *RealWorld-InWorld (RWIW) NASA Engineering Design Challenge* invites students in grades 7 - 12 to work as engineers and scientists to solve NASA-related real-world problems. Students may choose to design solutions related to the James Webb Space Telescope or Robonaut 2. Teams first complete their designs in the *RealWorld*, then team with college engineering students and work *InWorld*, a virtual world setting. *InWorld*, students use 21st-century tools to refine and create 3D visual models of their designs. *RealWorld? InWorld?* Learn how to use ALL worlds to engage and inspire students through this innovative challenge. Presented by: *Sharon Bowers, Project Manager, RWIW NASA Engineering Design Challenge - National Institute of Aerospace Educator-in-Residence*

### Introduction to GPS (Grades 5-9)

**Saturday November 12, 2011, 8:00 a.m. – 9:30 a.m. AZ (10:00 Eastern)**

The Global Positioning System is an engaging educational tool for teaching students science, mathematics, and technology. This session will introduce teachers to the science behind GPS, will contain engaging activities including determining the size of the Earth, and will cover associated NASA resources to aid in teaching GPS to students. Presented by: *Todd Ensign - NASA IV&V ERC*

### Galaxies: 101

**Saturday December 10, 2011, 8:00 a.m. – 9:30 a.m. AZ (10:00 Eastern)**

Our home, the Milky Way Galaxy is but one in a sea of galaxies known as the Universe. Join us as we explore the visible lives of galaxies, their characteristics, naming conventions, components and clustering, as well as how galaxies formed and galactic collisions. Learn too about the *hidden* lives of galaxies, including what we *can't* see, the ever elusive dark matter. Workshop includes classroom activities to engage students in the topic of galaxies. Presented by: *Stacy DeVeau - Arizona ERC.*

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### **Flight and Bernoulli**

**Saturday January 14, 2012 8:00 a.m. – 9:30 a.m. AZ (10:00 Eastern)**

Learn all about using methods of scientific discovery. We'll explore flight, from balloons and birds, to the future of flight and flex wing planes. Using Bernoulli's principle, your students can experiment and learn how and why things fly. Presented by: *Virginia Air & Space Center*

### **Podcasting: 101** (Grades 4-12)

**Saturday January 28, 2012, 8:00 a.m. – 9:30 a.m. AZ (10:00 Eastern)**

Dispel the myths of podcasting and learn to find, manage, and use dozens of brand new NASA podcasts effectively in your classroom. We will demonstrate just how easily your students can create online scientific multimedia productions using NASA resources. Presented by: Todd Ensign - NASA IV&V Facility ERC

### **Glass and Mirrors**

**Saturday February 11, 2012, Time a.m. – 8:30 a.m. - 10:00 a.m. AZ (10:30 EST)**

Telescopes have tremendously expanded both our view and knowledge of the universe using some pretty simple equipment: glass and mirrors. Although telescopes may seem complicated, they aren't. Join us to learn the science of how and why telescopes work and how you can engage students in understanding the science behind them in your very own classroom. Presented by: *Debra Homeier: Seaborg Mathematics and Science Center ERC, Northern Michigan University; Scott Stobbelaar: Seaborg Planetarium Specialist; and Chris Standerford: Shiras Planetarium Director*

### **Life on Earth... and Elsewhere?**

**Saturday March 3, 2012, 8:00 a.m., - 9:30 a.m. AZ (10:00 Eastern)**

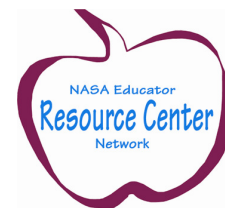
What is life? Where can it exist? Is there life on other planets outside of our own solar system? Learn about how NASA is searching for Earth-like planets orbiting Sun-like stars and what conditions are required to support life elsewhere. Discover ways to engage students with the nature of life and the search for life elsewhere in the universe. Presented by: *Stacy DeVeau - Arizona ERC*

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### **Robotics Exploration (Grades K-8)**

**Saturday March 24, 2012, 8:00 a.m. – 9:30 a.m. AZ (10:00 Eastern)**

Join us to learn ways to introduce robotics in the classroom. Using simple materials you can create ten stations that allow students to explore aspects of robotics and how NASA uses them in a variety of robotic applications. Students will develop their own definition of a robot and refine it as they progress through stations. From building and using three types of end effectors for robotic arms to discovering why certain landing sites were chosen for Mars rovers, students will have fun while learning about robotics. Presented by: *Pam Casto and Amy Phillips - NASA IV&V ERC*

### **Bring Hubble Space Telescope Discoveries to Your Classroom**

**Saturday April 21, 2012, 8:00 a.m. – 9:30 a.m. AZ (11:00 Eastern)**

Bring the wonders of the universe into your classroom. Learn about select Hubble education resources available for instructional use. Staff from STScI will explain how to integrate the latest scientific discoveries from Hubble into instruction using curriculum support tools available on the Amazing Space website. Presented by: *Space Telescope Science Institute, Office of Public Outreach*

### **STARLAB Extravaganza**

**Saturday May 19, 2012, 8:00 a.m. – 9:30 a.m. AZ (11:00 Eastern)**

Excite students by letting them become the teacher inside inflatable planetariums such as STARLAB. This webinar provides information on how to engage students with classroom activities prior to the dome experience, how to share the role of teacher with students inside the dome, and includes follow-up activities that keep students actively engaged. “Pre” “During,” and “Post” activities will be presented for a variety of planetarium themes as well as how this approach can be applied to other topics. Presented by: *Pam Casto, and Amy Phillips - NASA IV&V ERC*

### **Plants in Space**

**Saturday June 2 2012 8:00 a.m. – 9:30 a.m. AZ (11:00 Eastern)**

Discover the need for plants in space. Plants are at the very foundation of the system of life. Learn how to grow plants in space, and the difference between plants grown on Earth and in space. Does gravity affect plants and how does that change in space? Discover the uses of plants and algae in the future of space exploration and how you can engage students with this topic. Presented by: *Virginia Air & Space Center*

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