



**Raven Hill Discovery Center & NASA Glenn Research Center
Present Two Unique Days**

of

Free Educator Workshops for Grades 4-12

Wednesday, November 14, 2018

NGSS Engineering Design with NASA

<https://www.eiseverywhere.com/354901>

and

Thursday, November 15, 2018

Beginning Robotics and Coding for NGSS STEM Educators

<https://www.eiseverywhere.com/363480>

Times: 8:30 am to 3:00 pm each day

Location: Raven Hill Discovery Center, East Jordan, MI – Lunch provided

Presented by: Susan Kohler

EPDC Education Specialist -NASA Glenn Research Center

To register or if you have questions, please call 231.536.3369 or email info@miravenhill.org

Or use Registration Link: <https://www.txstate-epdc.net/events/>

These are one-of-a-kind NASA workshops you will not want to miss! Each day of the workshop will cover different STEM (Science Technology Engineering Mathematics) activities

Registration ends Friday, November 9, 2018 .

SPACE IS LIMITED, SO REGISTER TODAY for one or both workshops!

Raven Hill Discovery Center—where science, history & art connect
4737 Fuller Road, East Jordan, MI 49727

Raven Hill Discovery Center's programs & operations are supported in part by the Michigan Council for Arts and Cultural Affairs and the National Endowment for the Arts through an Operational Grant Award.



Wednesday, November 14

Objective: To provide awareness of N.A.S.A. educational resources and how to access them online to participating educators. This STEM workshop will guide participants through hands-on and inquiry based learning activities related to Expeditionary Skills, Problem Solving and Engineering Design.

Goal: Participating educators will be able to use what they have learned at this workshop to ignite and motivate their students in science through the use of inquiry based science activities from the unique NASA resources. The activities and N.A.S.A. educational websites introduced will provide the teachers with new curriculum ideas to assist in reaching the NGSS and project based learning goals for the STEM areas.

Agenda

8:30-9:00	Registration!
9:00-9:30	Welcome--Let's get Organized (Team structure)
9:30- 10:30	Culturally Relevant Teaching (Let's Shake)
10:30-11:30	Communications and Problem Solving (Pipeline Challenge)
11:30-12:00	Constraints and Criteria: Building a Lunar Hotel
12:00-12:30	Lunch
12:30-2:30	Engineering Design Challenge: The Mother Ship (Designing a vehicle to move from Water to Land to Space)
2:30-3:00	NASA Resources and Q&A

Thursday, November 15

Objective: To provide awareness of NASA educational resources and how to access them online to participating educators. This STEM workshop will guide participants through hands-on and inquiry based learning activities related to robotics and the engineering curriculum. Participants will be prepared to bring engineering and the adventure of space exploration to their students in the classroom.

Goal: Participating educators will be able to use what they have learned at this workshop to ignite and motivate their students in science through the use of inquiry based science activities relating to Robotics. The activities and NASA educational websites introduced will provide the educators new curriculum ideas to assist in reaching the NGSS and Common CORE learning outcomes standards.

Agenda

8:30-9:00	Registration!
9:00-9:30	Welcome--Let's get Organized
9:30- 10:30	Making and Using an ISS End Effector
10:30-11:30	Designing a Robotic Arm: I Want to Hold Your Hand
11:30-12:00	Moving in formation (Writing a Simple code for a Kinesthetic Activity)
12:00-12:30	Lunch
12:30-2:30	Spheros (problem based learning using Sphero robots)
2:30-3:00	NASA Robotics Resources

Presenter: NASA Glenn Research Center EPDC Education Specialist, Susan Kohler

Susan has more than 27 years of progressively responsible K-12 educational leadership experience. She has served as Asst. Principal, Principal, Curriculum Director, Math/Science Consultant and Asst. Superintendent. Susan taught science for 13 years at the high school level. Her expertise in STEM and professional development is combined with her knowledge of new technology trends and innovative instructional strategies. Susan holds a Master's in Education Administration from Bowling Green State College as well as a Bachelors degree of Science in Biology and Neuroscience from Ramapo College in New Jersey. She currently works for NASA as the Education Professional Development Specialist for Glenn Research Center in Cleveland Ohio.