

Mineral County STEM Festival - PROGRAM

Saturday, March 13, 2021

Schedule

- 9:00 a.m. WELCOME!**
- 9:05 a.m. CHEMISTRY** – The Science of Slime
- 10:00 a.m. NATURAL SCIENCES**
Flying Friends and Foes
Pollinators and Spotted Lanternfly
- 11:00 a.m. ENGINEERING** – Northrop Grumman
- Paper Rockets
 - Girls in Engineering
- 12:00 p.m. WILDLIFE**
- Snakes Aren't Slimy, They're Cool!
 - Frog Calls – Frogs and Toads of WV
- 1:00 p.m. ASTRONOMY** – Journey to Mars
NASA Mars 2020 Perseverance Rover
- 2:00 p.m. FOSSILS** – Ask Real Paleontologists!
- 3:00 p.m. Closing and Evaluation**
Thank you!



To register for the STEM Festival, go to www.mineralstem.com/register

Sign up for programs of interest to your children and family. Once registered you will receive one Zoom link for the event. Questions? Email m.miltenberger@mail.wvu.edu.

PROGRAM DESCRIPTIONS AND DETAILS

9:05 a.m. **CHEMISTRY**

The Science of Slime – Slime Time!

Instructors: Jennifer Robertson-Honecker and
Suzanne McDonald, WVU Extension Service

Learn the science and chemistry behind your favorite gooey concoction and how, with small changes in the ingredients, you can make an oozing slime or stretchy silly putty.

Supplies Needed – White or clear school glue, water, food coloring, 20 mule team borax (sold in the laundry aisle of Walmart and most grocery stores). Optional – glitter and shaving cream.



10:00 a.m. **NATURAL SCIENCES**

Flying Friends and Foes: Pollinators and the Spotted Lanternfly

Instructors: Susan Parker, WV Dept. of Environmental Protection, Youth Environmental Program
Kristin Wickert, WV Dept. of Agriculture
Kaitlyn Deskins, WV Division of Forestry, AmeriCorps

Bees, Beetles, Butterflies, Birds, and Bats are all amazing pollinators. Learn how pollinators complete their important work of transferring pollen from plant to plant. Pretend to be pollinators and use your fingers to transfer pollen through a fun Cheetos activity.

Supplies Needed – Activity 1 - Cheetos, Cheese puffs/balls, or Doritos (only one handful of each needed), 3 empty bowls



Creating insect friendly habitat is an important part of supporting pollinators. Create bug friendly bug hotels out of recycled materials to happy homes for these insects to thrive.

Supplies Needed – A small box, paper towel rolls, toilet paper rolls, or other cylinder paper roll, cardboard scraps, twine or yarn, Leaves, pinecone, sticks, two pieces of scrap paper, scissors and tape.

The Spotted Lanternfly is a beautiful but harmful pest to important trees and plants of West Virginia. Learn how to identify and report any sightings of these pest to help save the day! Learn the colorful characteristics of the adult Spotted Lanternfly by creating it through Origami.

Supplies Needed – One sheet of plain white paper, ruler, markers or crayons, scissors



11:00 a.m. ENGINEERING – Northrop Grumman
Paper Rockets

Instructor: GB Fertig, Aerospace Design Engineering Manager

Take your first step to becoming a rocket scientist! Listen in as aeronautical engineers from Northrop Grumman gives a 5-10 minute presentation on rocket motor physics followed by a Q&A session. Then participate in a hands-on activity building your own paper rock.

Supplies Needed – Construction Paper, Plastic Straws, Scissors, Tape

Girls in Engineering

Panelists: Cindy Riley, Manager Engineering, Electrical
Meagan Murphy, Electrical Engineer
Leah Jankowski, Electrical Engineer

Join women engineers from Northrop Grumman as they discuss their experiences from high school, college, and as they joined a dynamic aerospace company. Short presentations by recent graduates just joining the work force and those who have progressed within the engineering ranks will be followed by a Q&A period. Learn about the challenges and rewards of pursuing a career in engineering.

12:00 p.m. WILDLIFE
Snakes Aren't Slimy, They're Cool!

Instructor: Jim Fregonara, WV Department of
Natural Resources, Outreach

Moderator: Susan Parker

Back-up: Linda Carnell

Snakes are not to be feared and they are an important part of our environment. Learn to identify common WV venomous and nonvenomous snakes and their natural history. Learn how to “hear” like a snake and imitate the sound a rattle snake makes.

Supplies Needed: metal coat hanger, string, scissors, handful of popcorn kernels and plastic or paper cups.

Frog Calls – Frogs and Toads of WV

Instructor: Sheldon Owen, Wildlife Specialist, WVU
Extension Service

Each frog and toad has a unique call and we can identify them by their call. Learn about the natural history of our frogs and toads and how to identify common West Virginia frogs and toads by their call.



1:00 p.m. ASTRONOMY
Journey to Mars

West Virginia Science Outreach Team (WV SPOT)

Instructors: Sarah Long, Ambassador
Madison Sites, Ambassador
Gabriel Abreu-Vigil, Ambassador
Sophie de Saint Georges, Coordinator



Discover lessons learned and successful missions that paved the way for the recent NASA Mars 2020 Perseverance Rover and Mars' first helicopter, Ingenuity. Find out the unique and critical ways West Virginia scientists and engineers help get these missions off the ground, through the vacuum of space, and safely onto the Martian surface. What are these instruments looking for? What have we discovered so far? Why is Mars red? What extreme sports could we do on Mars? When will humans land on Mars? Find out the answer to these and so much more during this exploration of engineering marvels.

2:00 p.m. FOSSILS
Ask Real Paleontologists!

Facilitator: Nicholas Gardner, WVU
Potomac State College Library

Panelist: Riley Black, Author & Writer
Ashley Hall, Museum of the Rockies
JD Hodnett, Dinosaur Park
Evan Johnson-Ransom, Oklahoma
State University

Nathan Van Vranken, WVU Potomac State College
Dr. Julia McHugh, Museum of Western Colorado
Cameron Muskelly, Paleo Educator



Does your child really dig dinosaurs? Do they have burning questions about dinosaurs and other fossil life? Participants will be able to ask questions from seven expert paleontologists who also dig dinosaurs! Our panel includes writers and authors, museum educators and serious fossil-hunters! Thanks to Zoom you will “meet” paleontologists from all over the country – from Dinosaur Park in Maryland all the way to the Museum of the Rockies in Montana!

Thank you to Mineral County STEM Festival Sponsors!



Mineral County STEM Festival – 2021 Collaborative Planning Committee



PO Box 6031
Morgantown, WV 26506-6031
☎ 304-293-2694 📠 304-293-7163
extension.wvu.edu

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