

Field Trip Guide

Explore, Create, Innovate!

girl scouts
of north east ohio



Explore STEM and nature at the Vivian von Gruening, MD, STEM Center of Excellence, located on the Daley Family Campus for STEM Innovation at Camp Ledgewood in Cuyahoga Valley National Park and the Jane Norton Girl Scout DreamLab in Sheffield Village.

With a theme of "Making the world a better place through nature inspired design" visitors to the STEM Center will be immersed in exciting learning spaces inside and out. Nestled in the scenic Cuyahoga Valley National Park, the 8,000-square-foot STEM Center of Excellence boasts a wet lab, woodshop, tech lab, maker space, and various outdoor learning spaces. Troops and service units can dive into exciting activities, including robotics, ecology, woodworking, and engineering challenges amid nature.

The Jane Norton Girl Scout DreamLab is an exciting and inspirational place where students can explore possibilities and dream up a future full of wonder! Students who visit the DreamLab will engage with technology as they explore their dreams and deepen their social-emotional intelligence as they challenge themselves and have fun!



[Ready to book your field trip?](#)
[Scan the QR code.](#)
[Or Click Here!](#)



Discover more at gsneo.org/stemcenter or contact Customer Care at customer care@gsneo.org or 800-852-4474.

Programs as Unique as Your Students!

Students who visit the STEM Center will engage with nature, core content, and technology as they explore a theme through different projects and activities. They'll challenge themselves to work together, think creatively, build new skills, and create something awesome!

Students who visit the Jane Norton Girl Scout DreamLab will receive a rich, hands-on learning experience that integrates core academic content and social-emotional learning. Students will collaborate, create, and problem-solve together, explore exciting, future-focused STEM careers and reflect on their personal growth, passions, and dreams.



The STEM Center can accommodate up to 128 students at a time. The DreamLab can accommodate up to 32 students per trip.

School Field trips include 4-5 hours of customized programming.

STEM Center Field Trip

\$750 per class
(up to 32 students)

DreamLab Field Trip

\$450 per class
(up to 32 students)

Enhance your experience with optional add-ons like outdoor adventures, archery, dissections, take-home projects, snacks, and more!



Scholarship Discounts

Percentage of Students at school who qualify for Free/Reduced Lunch	Price Discount*
20-39	20%
40-59	30%
60-79	40%
80-100	50%

*subject to funding
**additional funding may be available for transportation If interested, please indicate in your inquiry form.



Home School Groups

Home school programs includes 2.5 hours of STEM activities and a take-home project.

STEM Center Field Trip

\$35 per student

DreamLab Field Trip

\$25 per student

*Minimum of 8 participating students, Maximum of 24

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Field Trips Base Programs

Our flexible field trip programming offers a variety of activities and customizable options, with full-day trips including up to four engaging hour-long sessions.

No two field trips are the same! The GSNEO STEM team will partner with each school to create one-a-kind experience tailored to your students' needs and learning goals.

Let us design an unforgettable STEM adventure for you and your students! We will start with a base program from the list on the following pages. Then we will customize it by tailoring each activity to your students' grade level and abilities, the content you're covering in your classes, and your personal interests and preferences. All programs include a grade level vocabulary list, reading suggestions, pre and post trip activities, and standards alignment.



BIOMIMICRY

POLLINATION POWERS K-5

Engage with pollination in many ways: learn a waggle dance, study different types of pollinators, program a buzzy bug robot, and create some yummy granola with honey!

FLY LIKE A BIRD K-12

Explore how birds inspire flight as you investigate aerodynamics through hands-on activities as you create your own glider or rocket!

DRAGONFLY DRONES * 3-8

Learn how dragonflies hover, dart, and glide—and then experiment with building and testing their own mini flying machines. Next, you will pilot and code drones inspired by nature's aerial experts.

ROBOT BUGS* 3-8

Explore how real insects and crustaceans have inspired robotic designs. Discuss bug behavior and experiment with building and programming bio-inspired robots!

SPEED RACER* 3-8

Learn how sharks, geckos, and cheetahs inspire speed. Then design and test your own race car while exploring the science of force, motion, speed, and friction.

SPIDER AND LIZARD MATERIAL SCIENCE 3-8

Investigate the strength of spider webs, the grip of geckos, and how these natural features inspire real-world inventions—from climbing robots to super-strong fabrics.

WIND LIKE A WHALE 3-12

Explore how whales and nature inspire turbine design to harness energy from the air. Build and test your own wind turbine design!

ENGINEERING

TOWERS AND BRIDGES K-12

Put your engineering skills to the test! Design and build towers and bridges using a variety of materials, learning key concepts like balance, load, and structure. Then, shake things up with our earthquake simulator and weight table to test your designs.

ROBOT MISSION* 3-8

Dive into the world of robotics and coding! From color-sensing cars to programmable robotic arms, explore how machines work and think.



BUILD A BIRDHOUSE 3-12

Use hand tools, power tools, and a laser cutter to design and construct your own custom birdhouse. Along the way, learn about local Ohio birds and how to create a safe, welcoming home for your feathered neighbors.

DISASTER DEFENDERS 3-12

Learn how real-world engineers protect communities from natural disasters! Design and test earthquake-proof towers, tsunami-resistant wave breakers, and storm shelters!

ELECTRIC ENGINEERS 3-12

Learn how circuits work by building with a variety of materials—from copper tape and batteries to soldering components. Design and engineer circuits that light up, buzz, or move with hands-on problem solving.

For full program descriptions, visit gsneo.org/stemprograms

* Indicates programs available at the STEM Center and the DreamLab.



NATURE

NATURE EXPLORERS K-5

Hike the trails, complete a scavenger hunt, and learn about Cuyahoga Valley National Park's forests and wildlife. Use your discoveries to craft a magical nature wand!



FARM TO TABLE K-8

Discover where your food really comes from! Design and 3D print your own indoor herb garden, help tend our STEM garden, and enjoy making fresh, tasty dishes using local ingredients—all while exploring the journey from soil to plate.

NATURE DETECTIVES 3-8

Uncover the hidden stories of the natural world. You'll dissect owl pellets, investigate animal tracks, explore sediment layers to reveal Earth's past, and complete a nature scavenger hunt.



ASTRONOMY

SOLAR SYSTEM EXPLORATION K-5

Step inside our inflatable StarLab planetarium to journey through the solar system, then use robots to model planetary movement. Finish the adventure by creating a space-themed project to take home!

THE MOON 3-8

Explore the moon's surface, phases, and eclipses in the StarLab. Then experiment with gravity by designing and testing your own lunar lander in this hands-on space science adventure!



MISSION TO MARS 3-12

Roam the red planet in our StarLab before using the engineering design process to solve problems that astronauts will face on Mars!

STORIES IN THE STARS 6-12

Explore constellations in the StarLab, build glowing star maps with LEDs, then report live from space in our green screen galaxy news studio

LIFE SCIENCE



SENSATIONAL SENSES K-8

Explore the science of our five senses with sound waves, light, textures, scents, and flavors through hands-on STEM experiments and sensory investigations.

BACTERIA AND BEYOND 3-12

Explore microbes under the microscope! Swab, grow, and track bacteria—then design a public health poster to keep your community germ-smart!

DNA DETECTIVES 6-12

Lean the process of extracting DNA, explore genetic trains and test synthetic blood samples. Discover how DNA makes us unique and how scientists use it to solve real world problems.

GROSS ANATOMY 6-12

Dive into the basics of anatomy and physiology through real dissections—from grasshoppers, cow eyes, and pig hearts to frogs, squids, and sharks. Gain a hands-on understanding of how living things work inside and out.

there may be an extra cost depending on what items are chosen for dissections

PHYSICAL SCIENCE

LITTLE LABS K-5

Safely explore chemical reactions, examine bugs up close with magnifiers, and test water samples for pH and chemical levels. Through hands-on discovery, you'll learn about nature and science basics in a fun, safe environment.

CRYSTAL EXPLORATION K-5

Break open real rocks, examine minerals under microscopes, and grow your own crystals. Discover how some crystals have been used for healing and wellness throughout history in this sparkling, hands-on adventure.

RAINBOW LAB K-5

Explore the science behind color through exciting chemistry experiments. Layer liquids to make density rainbows, create colorful flames, and mix up fizzy, scented bath bombs to take home—all while learning how our eyes process color!

WATER LAB 3-12

Gather water samples and test chemical levels, examine pond water for tiny living creatures, and build your own water filters—all while learning how to protect and understand this vital natural resource through hands-on science.

ELEMENTS IN ACTION 6-8

Dive into exciting chemistry experiments featuring fizzing reactions, colorful flames, and more—sparking curiosity as you explore the magic behind everyday elements in a fun, hands-on way.

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SPECIAL PROJECTS

STEM SAMPLER

K-12

Get a taste of everything STEM has to offer! Rotate through hands-on activities in our Makerspace, WetLab, Workshop, TechLab, and outdoor learning areas. From robots and chemistry to power tools and bugs—there's something exciting for everyone to discover!



STEAM STUDIO*

K-12

Where art meets innovation! Create beautiful projects that blend creativity with STEM tools—like painting with robots, crafting laser-cut collages, or designing with natural materials.

BREAKERSPACE*

K-12

Take apart gadgets like phones and controllers to uncover their inner workings! Analyze the parts, repurpose them into new creations, and explore big ideas like tech waste, planned obsolescence, and sustainability!

ALEBRIJE ADVENTURE*

K-8

Dive into the vibrant world of Alebrijes—fantastical Mexican folk art creatures! Design and craft their your own unique Alebrije, give it a name, and classify it by imagining its habitat and traits!



GLOW UP *

K-12

From magical fireflies to cool black lights, explore how things glow naturally and with technology! Create your own glowing project to take home and light up your world with science and creativity.

I HAVE A DREAM*

3-8

From MLK to Rosa Parks and Michelle Obama, you will explore your hopes for the future, and design a custom print featuring you and your dreams!

MINDFUL MAKERS *

3-8

Relax as you create calming tools—like breathing lights, stress sensors, or mindfulness apps—using basic circuitry or block coding. You'll also make a custom silhouette project using your profile and technology!



PUZZLE PIECES OF ME *

3-8

Design and laser-cut wooden or acrylic puzzle pieces, each symbolizing your values, dreams, or strengths. When assembled, the pieces make a whole you!

VOICES OF THE FUTURE*

3-8

Learn about inspirational voices of the past and write an inspirational script and record mini-podcasts sharing a personal dream or empowerment phrase.



GAME DESIGN*

3-8

Play and deconstruct simple games to understand their rules, mechanics, and goals. Then, brainstorm improvements to existing games before diving into the design process to create and prototype your very own original game!

NATIVE AMERICAN ART AND ARCHITECTURE

3-8

Discover Native American creativity by exploring totem poles, pottery, and traditional designs. Learn about indigenous engineering through wigwams, tipis, and pueblos—then design and build your own structures inspired by these ancient techniques!

3D PRINTING 101*

3-8

Jump into the world of 3D printing! Learn the basics, design your own mini project, experiment with a 3D doodle pen, and bring your creations to life in this hands-on maker adventure.



MAZE MAKERS*

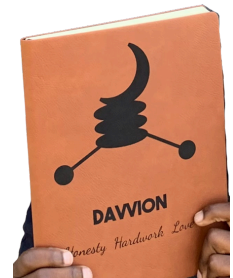
3-8

Use your brain and robots to solve tricky mazes, then design and build your own for your classmates to conquer.

SYMBOLS OF SELF*

3-12

Explore the power of symbology and language as you discover the meanings behind Adinkra symbols. Next you will use the design process to create and fabricate your own item with a personalized symbol!



LIGHT UP LANTERNS

3-12

Design and build your own wooden lantern, then wire it with simple electronic components to make it glow. Learn about color theory and symbolism to make a lantern just for you.



CREATIVE CARTOGRAPHY

6-12

Dive into the art and science of mapmaking! Explore how to read maps, understand topography and scale, and discover the secrets of the globe. Then, design your very own map—real or imaginary—and chart a world of your own creation!



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IMPORTANT INFORMATION

CANCELLATION

To avoid a cancellation fee, all cancellations must be made at least two full calendar weeks prior to the scheduled program. A cancellation fee will not be charged if the class is canceled due to weather.

WHAT TO WEAR

All visitors should dress for their day. Some visits include a nature hike or power tools, while others do not. All students should wear closed-toed shoes, no loose clothing, and all long hair should be tied back.

CHAPERONES

The STEM Center of Excellence requires 1 adult chaperone for every 15 students. Teachers and chaperones are admitted without charge up to 1 adult for every 5 students.

LUNCH/FOOD

There are no kitchen or food options available at the STEM Center. All participants must bring their own lunches, snacks, and beverages unless other arrangements have been made. There is a water fountain available. Groups will eat outside if the weather allows, if not, eating spaces will be assigned. No eating is allowed in the STEM Center unless scheduled as part of a trip/experience.

PERMISSION SLIPS / WAIVERS

If the field trip experience includes something outside of normal school activities (ie certain chemicals, or tools) or high-risk outdoor activities (i.e. zip lining or high ropes) GSNEO will provide the school with a permission slip that must be signed for all participating students. Adults participating in high-risk activities will be required to complete a waiver.

PHOTO RELEASE

All visitors will be asked to complete a photo release. If a student does not have a photo release it will be the teacher's responsibility to give that student a paper bracelet.

We also offer
Professional Development!
Reach out to
STEMCenter@gsneo.org
for details

Locations and Directions :

Jane Norton Girl Scout DreamLab

5255 Detroit Road Sheffield, OH 44054

Vivian Von Gruenigen STEM Center of Excellence

Camp Ledgewood

6751 Akron Peninsula Rd, Peninsula, OH 44264

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