

STEMazing Summer Challenge

Summer is the perfect time of year to explore STEM (science, tech, engineering, math) and try new things!

Fulfill at least the minimum number for your grade level between August 1 and September 15, 2019. Once you hit your minimum, you can call any GSNYPENN shop to place your [patch preorder](#) by September 30, 2019. The patches will arrive in late October.

- Create art using crayons and the sun
- Try a new transportation mode: boat, plane, train, bus...
- Cross 3 different kinds of bridges: suspension, lift, truss, arch...
- Compare 3 different habitats at a zoo
- Ask an architect or builder to show you how to read blueprints
- Be an engineer and build a play fort
- Write an algorithm for making a sandwich
- Watch fireworks and call out the elements that make up the colors: **green=barium**, **blue=copper**, **yellow=sodium**, **red=strontium**, **orange=calcium**
- Try a family Citizen Scientist activity with the SciStarter app
- Make a musical instrument with a rubber band to explore sound vibrations
- Find out what the SPF on your sunscreen means
- Watch for a rainbow after a storm.
- How does the light break into colors?
- Create a board game using math concepts and recycled materials
- Talk to someone who is a programmer
- Take a ride to watch wind towers creating clean energy
- Browse a fabric store and find materials that are soft, rough, thick, thin, waterproof, and sparkly
- Cook something using foil wrap, a box, and the sun
- Visit a dam or hydroelectric plant
- With an adult, use a GPS unit or smartphone to locate a geocache
- Invent an outdoor game that uses 2 different senses
- Make up a secret code and send notes to a friend
- Find symmetry in nature and take a photo or draw a picture of it
- Draw a design for something that makes life easier for those with disabilities
- Make a cardboard and rubber band car that goes
- Design and draw a picture of a future mode of transportation
- Explore space science by tracking the phases of the moon for several weeks
- Find a local stream and determine what larger body of water it will flow into
- Propagate a plant in your flower garden
- Go on a fossil hunt
- Explore space science by identifying a planet or constellation
- Ask older folks for a story about something that was invented in their lifetime
- Collect seashells and use a guidebook to find their scientific names
- Experiment with paper airplanes to make them go faster, farther, and straighter
- Learn a formula to determine distance from a lightning strike
- Investigate 3 different health/medical careers
- Solve a problem with a piece of duct tape
- Make fingerprints on paper using a washable marker; add arms, legs and eyes for fun!
- Make a beauty product using common items from a kitchen
- Double a favorite recipe or cut it in half
- Build a sandcastle

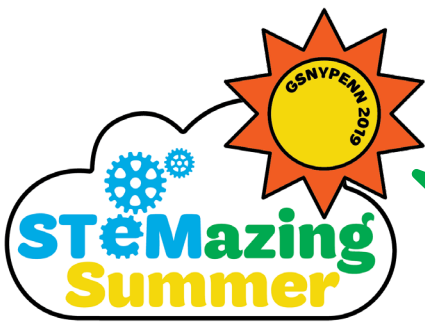
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- Create a safe cleaning product using common ingredients from a kitchen
- Make something using wire cutters and pliers
- Learn about energy conductors/insulators and keeping safe in an electrical storm
- Explore static electricity with a blown-up balloon
- Pick out a paint color and watch it get mixed at the paint store
- Build a shelter for a fairy from found objects that will give protection from wind and rain
- Investigate 3 different programmer careers
- Look at something up close: use a magnifying glass and/or binoculars
- Upcycle a tin can into something fun or useful
- Use yeast to bake bread that rises
- Investigate 3 different engineering careers
- Visit a car dealer and ask about safety features on cars
- Hunt through a hardware store and find wire, rope, screws, and tape
- Visit a science museum
- Make an article of clothing using a new tool or method
- Identify 3 species and common names of plants that you never knew before
- Use a tool you've never tried before to fix or make something useful
- Sew something using a sewing machine
- Write an algorithm to help you walk or ride to a playground
- Find directions to a favorite place by using both a paper map and a smart phone map
- Upcycle old newspaper or magazines into a piece of jewelry
- Pick a home appliance and compare model features in a store
- Talk to someone who is an engineer
- Try a fruit or vegetable that you never tasted before
- Investigate 3 different Space Science careers
- Throw a ball and use your feet to estimate how far you threw it
- Use a cup and ruler to measure rainfall
- Send GSNYPENN pictures/videos of your STEM adventures to marketing@gsnypenn.org to be featured on social media

NUMBER OF ACTIVITIES REQUIRED PER GRADE LEVEL					
DAISY	BROWNIE	JUNIOR	CADETTE	SENIOR	AMBASSADOR
20	25	30	35	40	45

Questions? Email program@gsnypenn.org

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There are **68** activities on this list!

The minimum number of **STEM**azing activities I need to fulfill is:

The number of **STEM**azing activities I want to complete is:

My **STEM**azing grand total as of September 15, 2019 is: