girl scouts of hawai`i

Changing the World with Science, Technology, Engineering and Math

STEM Center of Excellence at Camp Paumalu

We're raising the bar for leadership opportunities in the 21st century. The Girl Scouts of Hawaii STEM Center for Excellence at Paumalu is a 135 acre living laboratory where girls of all ages can explore and develop their competence and confidence in science, technology, engineering and math all while cultivating essential skills such as confidence, resilience, leadership, risk taking, grit and problem solving.

Our efforts are to provide girls with positive STEM experiences from an early age, so that they are more likely to aspire to STEM careers and develop the self-efficacy and confidence needed to persist when faced with challenges in doing so.

INNOVATORS AND LEADERS OF THE FUTURE

Girl Scouts is a national expert in girls' development. We couple our expertise with others as part of an ecosystem to make STEM experiences possible for more girls. By providing girl-led, hands-on and collaborative programming designed uniquely around the way girls learn and lead, Girl Scouts fosters a supportive environment for girls to safely take risks and explore skill-sets outside of their current comfort zone.

K-12 Education + University Partners + Corporations + Program Partners + STEM Experts

Girls who participate in girl-focused STEM programs:

Become better problem-solvers, critical thinkers, and inspirational leaders

Get better grades, earn scholarships, and follow more lucrative career paths

See STEM as the foundation for a meaningful and successful future

Whether she wants to build a robot, create an app, invent a medical device, develop a video game, design a car, protect the world's wildlife, send a spacecraft to a far galaxy, cure a disease, keep the ocean clean, study the stars... just about every career in her future will require science, technology, engineering or math!

OUR PROGRAMS DEVELOP:

STEM Interest
Girls are excited about STEM subjects and want to learn more about them.

STEM Confidence
Girls have confidence in their STEM skills and abilities.

STEM Competence
Girls think scientifically to solve problems.

STEM Value
Girls learn the importance and relevance of STEM to people and society.

OUR APPROACH

OUR IMPACT

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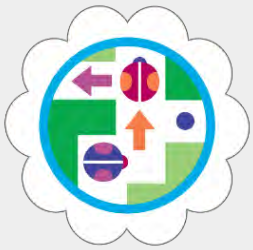
STEM Programming

Our evidence-informed curriculum for grades K-12 introduces STEM concepts to girls in creative, age-appropriate ways that complement academic studies at all grade levels in alignment with the Hawaii Common Core State Standards. Our aim is to increase girls' interest in STEM, grow girls' confidence in their STEM-related abilities, educate girls about STEM careers, and connect girls to female STEM professional role models.

Daisy K-1

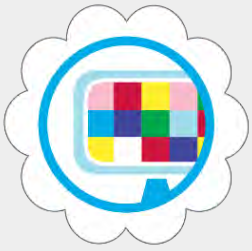


Coding for Good 1: Coding Basics

Find out how computers can be used to help others.

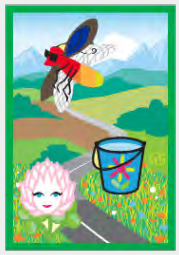
Coding for Good 2: Digital Game Design

Explore how video games can make a difference.



Coding for Good 3: App Development

Find out how programmers tackle big problems and make great apps.



Journey: Between Earth and Sky

Explore nature and learn how to keep the Earth healthyto celebrate nature.

Cybersecurity 1: Basics

Find out about computer parts and how computers are connected, just like you!

Cybersecurity 2: Safeguards

Find out how to stay safe when you go online.

Cybersecurity 3: Investigator

Find out how computers gather information and solve problems.

Space Science Explorer

Explore and observe the sky like a real space scientist.

Journey: Think Like a Citizen Scientist

Find out how scientists use the scientific method to investigate the world and make discoveries.

Journey: Think Like a Programmer

Find out how programmers use computational thinking to solve problems.

Journey: Think Like an Engineer

Find out how engineers use design thinking to solve problems.

Daisy K-1

Mechanical Engineering: Board Game

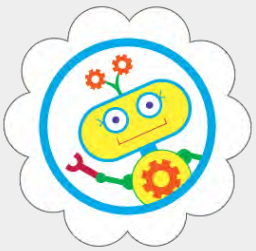
Create board games and engineer your own game spinner.

Mechanical Engineering: Model Car

Build a model car and test the friction to prepare for a Troop Car Chase!

Mechanical Engineering: Roller Coaster

Engineer your own roller coaster and see how its design affects its speed.

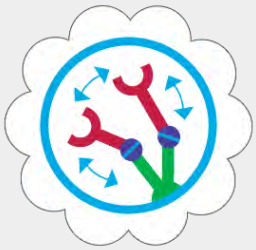


Robotics 1: What Robots Do

Rork in teams, like engineers, to design a robot that solves an everyday problem.

Robotics 2: How Robots Move

See if you can follow your programmer's algorithm ¯¡ïcreate algorithms for robots and friends.



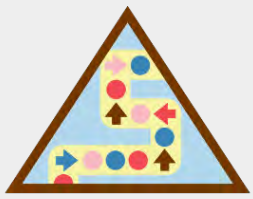
Robotics 3: Design a Robot

Design your own! Plan and build a prototype of your robot that solves an everyday problem.

Brownie 2-3

Bugs

Explore the world of bugs and learn more about these little creatures that do so much.



Coding for Good 1: Coding Basics

Find out how computer scientists write programs for computers to solve problems.

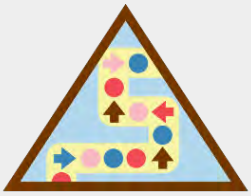
Coding for Good 2: Digital Game Design

Explore how video games can help people to learn new skills and experience new things.

Coding for Good 3: App Development

Design your own idea for an app that solves a problem for someone else.

Brownie 2-3



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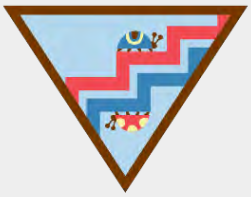

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Coding for Good 3: App Development

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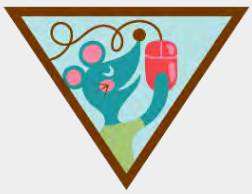


Computer Expert

Find out what computers can help you do and learn to be a safe, secure computer expert.

Cybersecurity 1: Basics

Find out how you use technology and how you can keep your technology safe.

Cybersecurity 2: Safeguards

Find out how to be safe when you go online.

Cybersecurity 3: Investigator

Put on your detective hat and solve cyber crimes.

Home Scientist

Find out where science has been hiding in your home.

Journey: Think Like a Citizen Scientist

Find out how citizen scientists make observations, collect data, and receive feedback on research.

Journey: Think Like a Programmer

Find out how programmers use computational thinking to solve problems.

Journey: Think Like an Engineer

Find out how engineers use design thinking to solve problems.

Space Science Adventurer

Investigate the complexities of the sky as you learn to see things in a new way.

Inventor

Find out how inventors make stuff-and become an inventor yourself!

Brownie 2-3

Journey: WOW! Wonders of Water

Explore the wonders of water by find out more about its importance and how it's used worldwide

Making Games

Use your imagination to make up new games.

Mechanical Engineering: Fling Flyer

Create a Fling Flyer, and explore what keeps it and other things, in the air.

Mechanical Engineering: Leap Bot

Design, build, and test things as you create your own Leap Bot.

Mechanical Engineering: Race

Design, build and test your own race car to explore how to make it go faster!

Robotics 1: Programming Robots

Learn about the robot brain by engineering a machine that helps a robot to land

Robotics 2: Designing Robots

Team up with your fellow Brownies to design a robot. Plan, build, and share your robot prototype.

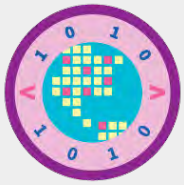
Robotics 3: Showcasing Robots

After engineers build their robots, they show them to others and enter them into challenges and competitions.

Junior 4-5

Animal Habitats

Find out more about where animals live, how they play, and how humans can help them.



Coding for Good 1: Coding Basics

Find out how programmers write computer programs for computers to solve problems.

Coding for Good 2: Digital Game Design

Find out how programmers create a video game that is fun and helps solve a problem.

Coding for Good 3: App Development

Design your own idea for an app that solves a problem.

Junior 4-5

Cybersecurity 1: Basics

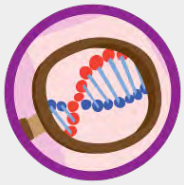
Find out how computers talk to each other.

Cybersecurity 2: Safeguards

Find out how to keep your online identity safe.

Cybersecurity 3: Investigator

Become a cybersecurity investigator and learn how to spot threats online.



Detective

Try out the skills that make great detectives.

Digital Photographer

Find out how to capture a winning photo with your digital device, whether you're using a phone, tablet, laptop, or digital camera.

Entertainment Technology

Explore the ins and outs of entertainment technology.

Journey: GET MOVING!

Explore energy and how to use it wisely interviewing power-use experts and conducting an energy audits of a building.

Journey: Think Like a Citizen Scientist

Find out how to make observations, collect data, and work with scientists to receive feedback on research.

Journey: Think Like a Programmer

Find out how programmers use computational thinking to solve problems.

Journey: Think Like an Engineer

Find out how engineers use design thinking to solve problems

Mechanical Engineering: Balloon Car

Learn about air power and create an alternative fuel car.

Mechanical Engineering: Crane

Learn about simple machines and how they work together as you build your own heavy-lifting crane.

Junior 4-5

Mechanical Engineering: Paddle Boat

Explore how paddle boats work and engineer your own paddle boat.

Robotics 1: Programming Robots

Engineer a simple machine that helps a robot land, learn about the robot brain, and create programs for your friends.

Robotics 2: Designing Robots

Plan and build a prototype of a robot that solves a global problem.

Robotics 3: Showcasing Robots

Create a presentation and share your robot design with others. Then, find out about robot teams and competitions.

Space Science Investigator

Venture through the Solar System and beyond, and see that space is even bigger than you may have imagined.

Cadette 6-8

Coding for Good 1: Coding Basics

Find out how to write a computer program and create a meme with a positive message.

Coding for Good 2: Digital Game Design

Explore how programmers design video games that make positive changes in the world.

Coding for Good 3: App Development

Collect and visualize personal data to design a protype for an app that will help to build a healthy habit.

Space Science Researcher

Understand more about the amazing properties of light and how you use it to make discoveries about the Universe.

Cadette 6-8

Cybersecurity 1: Basics

Explore different hacking techniques and how to protect yourself with basic cybersecurity precautions.

Cybersecurity 2: Safeguards

Find out why it's important to keep your personal information private online and how you can keep your data secure.

Cybersecurity 3: Investigator

Solve a series of fictional cyber crimes using what you know about cybersecurity.

Digital Movie Maker

Try your hand at movie making.

Journey: Breathe

Find out about the air we breathe by visiting a wind farm, talking to an an environmental scientist, or doing experiments using wind.

Journey: Think Like a Citizen Scientist

Find out how to make observations, collect data, and help scientists conduct scientific research.

Journey: Think Like a Programmer

Find out how programmers use computational thinking to solve problems

Journey: Think Like an Engineer

Find out how engineers use design thinking to solve problems.

Netiquette

This badge is all about knowing how to make positive choices in the online world.

Robotics 1: Programming Robots

You'll understand how robots work and how to control them.

Robotics 2: Designing Robots

You'll know how to design a robot and build a prototype.

Robotics 3: Showcasing Robots

Now that you've built your robot, share your design with others and explore a future in robotics.

Cadette 6-8

Woodworker

Know how to use some basic tools to make simple woodworking projects.

Science of Happiness

Use the science of happiness to make your world the happiest place it can be.

Special Agent

Know secrets from the worlds of forensic science and criminal psychology.

Senior 9-10

Coding for Good 1: Coding Basics

Learn how to code images and how computers make decisions.

Coding for Good 2: Digital Game Design

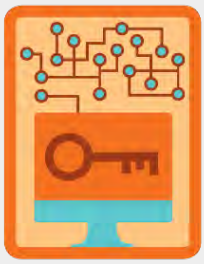
Learn how video games use a story, how players make decisions, and how to make a positive difference in the world.

Coding for Good 3: App Development

Understand JavaScript syntax, how to use arrays with social data, how to store data, and how to display it.

Game Visionary

Design and organize games that will bring people together for creative and thoughtful fun.

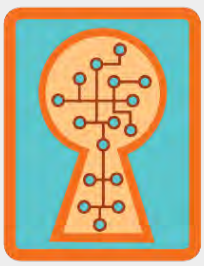


Cybersecurity 1: Basics

Know the major principles of cybersecurity and understand how they work in real-life and in the cyber world.

Cybersecurity 2: Safeguards

Protect your travel documents, Wi-Fi, digital conversations, electronics, and environment.



Cybersecurity 3: Investigator

Know about insider threats and other security vulnerabilities for companies and organizations.

Journey: Sow What?

Take Action to help your community. Use your leadership skills to earn your Gold Award,

Senior 9-10

Journey: Think Like a Citizen Scientist

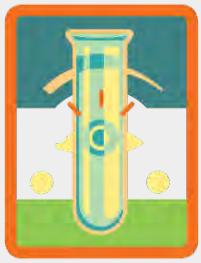
Earn your Take Action Award to help your community. Then use your leadership skills to earn your Gold

Journey: Think Like a Programmer

Learn about encoding info, develop an algorithm for building a simple block arrangement, and test whether an app will work

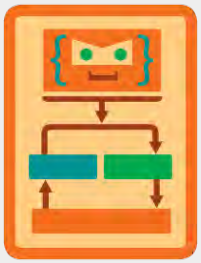
Journey: Think Like an Engineer

Design and build a can holder that isn't harmful to animals, a kinetic sculpture, and an aid device for the elderly.



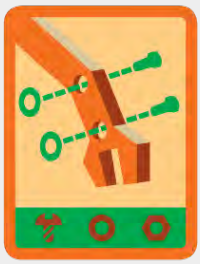
Science of Style

When you've earned this badge, youI'll know the science behind makeup, perfume, fashion fabrics, and skin care products.



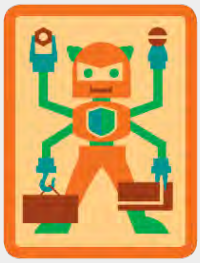
Robotics 1: Programming Robots

Explore what makes up a robot, and then learn about different ways to control a robot, including computer programming.



Robotics 2: Designing Robots

Build a prototype that helps or replaces people who work in difficult or dangerous situations.



Robotics 3: Showcasing Robots

Showcase your robots, to share your design with others.

Sky

When I've earned this badge, I'll understand the sky -- from science to stars to stories.

Social Innovator

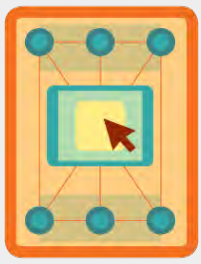
When you've earned this badge, you'll know how to think like a social innovator.

Space Science Expert

Understand more about the Universe-your place in it and how light is used to make discoveries about it.

Truth Seeker

Gain the skills you need to separate fact from fiction and judge sources on credibility, accuracy, reasonableness, and support for their claims.



Website Designer

Build yourself a safe space online where you can show your readers what moves you.

Ambasador 11-12

Coding for Good 1: Coding Basics

Explore the power of music and coding to spread a positive message and write code to share your own peformance.

Coding for Good 2: Digital Game Design

Find out about narrative video game design and explore how games can make a positive change in the world.

Coding for Good 3: App Development

Collect and visualize data to design a prototype for an app that helps leaders change the world.

Journey: Think Like an Engineer

Design and build prototypes of an animal enrichment product, a zip line course, and mobility equipment.

Cybersecurity 1: Basics

Explore how hackers operate and how hacking can be used for corporate and national security.

Cybersecurity 2: Safeguards

Find out how to protect your personal data and digital footprint with healthy online

Cybersecurity 3: Investigator

Investigate and respond when a fictional city has been affected by a cyberattack.

Photographer

Hone your artistic skills and find out how to use different types of cameras to present the world through your eyes.

Journey: Justice

Plan aproject to address food and land-use issues, improve food delivery systems, fight hunger, or rediscover healthy eating

Journey: Think Like a Citizen Scientist

Find out how citizen scientists make observations, collect data, and help scientists conduct scientific research.

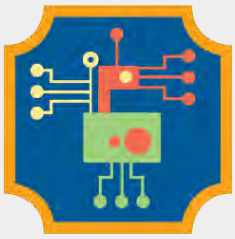
Journey: Think Like a Programmer

Build a message-sending device, develop an algorithm, and design an app to explore user-centered design.

Space Science Master

Explore, observe, design, and communicate your space science discoveries-just like scientists and engineers.

Ambasador 11-12



Robotics 1: Programming Robots

Understand how robots work and how to control them.

Robotics 2: Designing Robots

Build a model of a social robot. Brainstorm solutions, plan, build a prototype, and test it.

Robotics 3: Showcasing Robots

Share your robot n challenges, competitions, or marketing campaigns to explore your future with robotics.

Water

Find out more about water and reflect on the role water plays in your life and our world.

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www.gshawaii.org/STEMCenter

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