

AWARD/BADGE

DESCRIPTION



Animal Observer

Daisy (Grades K-1) STEM Find out how to learn about animals by watching them.

- 1. Be an animal observer
- 2. Play an animal observation game
- 3. Focus on one animal

When you've earned this badge, you'll know more about observing animals.

GET THIS BADGE



Automotive 1: Design

Daisy (Grades K-1) STEM Buckle up and explore how automotive designers imagine and make plans for a new vehicle, like a car or truck. Then, design your own!

- 1. Choose special features for your vehicle
- 2. Sketch your vehicle
- 3. Sculpt and share your vehicle

When you've earned this badge, you'll know how people design cars.

GET THIS BADGE



Automotive 2: Engineering

Daisy (Grades K-1) STEM Discover how automotive engineers turn ideas into real cars! Then, build, test, and improve a model of a vehicle.

- 1. Create your automotive engineering plan
- 2. Build a vehicle prototype
- 3. Test your vehicle prototype

When you've earned this badge, you'll know how automotive engineers work together to build cars and other vehicles.



AWARD/BADGE

DESCRIPTION



Automotive 3: Manufacturing

Daisy (Grades K-1) STEM Fire your engines and find out how automotive manufacturers build and test vehicles to make sure they're ready for the road.

- 1. Explore efficient manufacturing and assembly lines
- 2. Create an assembly line to manufacture vehicles
- 3. Examine and test your vehicles for quality

When you've earned this badge, you'll know how manufacturers assemble high-quality vehicles.

GET THIS BADGE



Coding for Good 1: Coding Basics

Daisy (Grades K-1) STEM Find out how computers can be used to help others.

- 1. Create algorithms for a computer that follow a sequence
- 2. Learn about women in computer science
- 3. Explore sorting algorithms

When you've earned this badge, you'll know how computer scientists code programs for computers to solve problems.

GET THIS BADGE



Coding for Good 2: Digital Game Design

Daisy (Grades K-1) STEM Explore how video games can make a difference.

- 1. Explore tools used to develop digital games
- 2. Plan a maze game
- 3. Build, test, and improve your maze game

When you've earned this badge, you'll know how video games are designed.



AWARD/BADGE

DESCRIPTION



Coding for Good 3: App Development

Daisy (Grades K-1) STEM Find out how programmers tackle big problems and make great apps.

- 1. Decompose your problem into smaller steps
- 2. Design an app that solves the problem
- 3. Share and improve your app

When you've earned this badge, you'll know how computer scientists develop apps.

GET THIS BADGE



Cybersecurity 1: Basics

Daisy (Grades K-1) STEM Find out about computer parts and how computers are connected, just like you!

- 1. Find out how computers work
- 2. Find out what safety and protection means
- 3. Discover how you're connected, just like computers are!

When you've earned this badge, you'll know how how computers work and how to stay safe online.

GET THIS BADGE



Cybersecurity 2: Safeguards

Daisy (Grades K-1) STEM Find out how to stay safe when you go online.

- 1. Discover what makes you different from others
- 2. Find out what information is private
- 3. Discover who is in your trust circle

When you've earned this badge, you will know what privacy is and how to protect my identity.



AWARD/BADGE

DESCRIPTION



Cybersecurity 3: Investigator

Daisy (Grades K-1) STEM Find out how computers gather information and solve problems.

- 1. Find out how to search for an answer
- 2. Use clues to figure out who someone is
- 3. Test your powers of observation

When you've earned this badge, you'll know how to use your powers of observation to investigate questions and find solutions.

GET THIS BADGE



Daisy Craft and Tinker

Daisy (Grades K-1) STEM Find out how to make objects and then tinker to make them better.

- 1. Learn the basics
- 2. Craft with purpose
- 3. Tinker with your craft

When you've earned this badge, you'll know how to craft and tinker to make useful objects.

GET THIS BADGE



Daisy STEM Career Exploration

Daisy (Grades K-1) STEM Find out how the things you love can become a part of your future.

- 1. Discover STEM
- 2. Explore your future
- 3. Learn about a STEM career

When you've earned this badge, you'll know what STEM is. You'll also know how you can use STEM to help other people, animals, and the planet.

Get This Badge



AWARD/BADGE

DESCRIPTION



Digital Leadership

Daisy (Grades K-1) STEM Explore digital and real world communities, learn which personal information is safe to share online

and use technology to support a cause you care about.

- 1. Discover your communities
- 2. Explore a world of information
- 3. Use technology for good

When you've earned this badge, you will know about digital communities.

You'll know what information is safe to share online.

You'll know how technology can make the world a better place.

GET THIS BADGE



Journey: Between Earth and Sky

Daisy (Grades K-1) STEM Journey In this Journey, you will:

- 1. Explore nature and learn how to keep the Earth healthy-visit a park or farm, talk to a scientist, or make origami butterflies to celebrate nature.
- 2. Plan a Take Action project, such as planting a tree, creating a garden for a children's hospital, or putting on a play about protecting the Earth.
- 3. Earn 3 leadership awards: Blue Bucket Award, Firefly Award, and Clover Award. If you're a Girl Scout volunteer, go to Volunteer Toolkit for complete meeting plans and activity instructions.

Learn more about how to earn your Take Action Award - and help your community - with the Girl Scout Take Action Guide.

Get This Journey



Journey: Think Like a Citizen Scientist

Daisy (Grades K-1) STEM Journey In this Journey, you will:

- Find out how scientists use the scientific method to investigate the world and make discoveries.
- 2. Do hands-on activities to learn how to make observations and collect data.
- 3. Plan a Take Action project that helps others. If you're a Girl Scout volunteer, go to Volunteer Toolkit for complete meeting plans and activity instructions.

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Get This Journey



AWARD/BADGE

DESCRIPTION



Journey: Think Like a Programmer

Daisy (Grades K-1) STEM Journey In this Journey, you will:

- 1. Find out how programmers use computational thinking to solve problems.
- 2. Do 3 computational thinking activities: Building a Foundation, Happy Maps, and Plant a Seed
- 3. Plan a Take Action project that helps others. If you're a Girl Scout volunteer, go to Volunteer Toolkit for complete meeting plans and activity instructions.

Learn more about how to earn your Take Action Award - and help your community - with the **Girl Scout Take Action Guide**.

Get This Journey



Journey: Think Like an Engineer

Daisy (Grades K-1) STEM Journey In this Journey, you will:

- 1. Find out how engineers use design thinking to solve problems.
- 2. Do 3 hands-on design challenges: design and build a fairy house, a car powered by air, and a way to get across a canyon.
- 3. Plan a Take Action project that helps others. If you're a Girl Scout volunteer, go to Volunteer Toolkit for complete meeting plans and activity instructions.

Learn more about how to earn your Take Action Award - and help your community - with the **Girl Scout Take Action Guide**.

Get This Journey



Math in Nature 1: Shapes in Nature

Daisy (Grades K-1) STEM Identify shapes and patterns in natural objects, like rainbows, flowers, and leaves.

- 1. Search for shapes in nature
- 2. Find and make patterns
- 3. Create art inspired by nature

When you've earned this badge, you will know how to identify shapes and patterns in nature. You'll also know how to create your own.



AWARD/BADGE

DESCRIPTION



Math in Nature 2: Numbers in Nature

Daisy (Grades K-1) STEM Explore how to measure the size and amount of objects in nature. Create your own unit of measure for nature, too!

- 1. Search for shadows
- 2. Sort natural objects
- 3. Make your own unit of measure

When you've earned this badge, you will know about shadows, measurement, sorting, and estimating.

GET THIS BADGE



Math in Nature 3: Design with Nature

Daisy (Grades K-1) STEM Observe and use what you know about the outdoors to make and do things in nature.

- 1. Count with birds
- 2. Identify parts of nature
- 3. Make a map

When you've earned this badge, you will know how to use math to identify and sort things in nature. You'll also know how to create a map.

GET THIS BADGE



Mechanical Engineering: Board Game

Daisy (Grades K-1) STEM Create board games and engineer your own game spinner.

- 1. Come up with an idea for your board game
- 2. Design a spinner for your game
- 3. Test your game and make it better

When you've earned this badge, you'll have created your own board game and learned what inventors and engineers do.



AWARD/BADGE

DESCRIPTION



Mechanical Engineering: Model Car

Daisy (Grades K-1) STEM Build a model car and test the friction of your car on different surfaces to prepare for a Troop Car Chase!

- 1. Design and build model cars
- 2. Use model cars to test the friction of different surfaces
- 3. Race your cars!

When you've earned this badge, you'll have learned about friction by building and testing model cars. You will know how to design and test new things that you invent.

GET THIS BADGE



Mechanical Engineering: Roller Coaster

Daisy (Grades K-1) STEM Engineer your own roller coaster and see how its design affects its speed.

- 1. Make a simple roller coaster car
- 2. Build a model of a roller coaster
- 3. Test your roller coaster

When you've earned this badge, you'll have learned about engineering and motion by building and testing a roller coaster.

GET THIS BADGE



Robotics 1: What Robots Do

Daisy (Grades K-1) STEM Learn about the many things robots do. Then, work in teams, like engineers, to design a robot that solves an everyday problem.

- 1. Learn about robots
- 2. Find out what robots can do
- 3. Team up to design your own robots

When you've earned this badge, you'll know about the many things robots can be designed to do.



AWARD/BADGE

DESCRIPTION



Robotics 2: How Robots Move

Daisy (Grades K-1) STEM Think you might be a good robot? See if you can follow your programmer's algorithm. Then become a programmer and create algorithms for robots and friends.

- 1. Learn about the parts of a robot
- 2. Find out how robots move
- 3. Make a robot move

When you've earned this badge, you'll know how to create a program that could be run by a robot.

GET THIS BADGE



Robotics 3: Design a Robot

Daisy (Grades K-1) STEM Now that you know what robots can do and how they do it, it's time to design your own! Plan and build a prototype of your robot that solves an everyday problem.

- 1. Plan your robot
- 2. Create a prototype
- 3. Get feedback on your robot

When you've earned this badge, you'll know how to design a robot that solves an everyday problem.

GET THIS BADGE



Space Science Explorer

Daisy (Grades K-1) STEM Explore and observe the sky like a real space scientist.

- 1. Explore the Sun
- 2. Observe the Moon
- 3. Meet the Stars

When you've earned this badge, you'll have explored and observed the Sun, Moon, and



AWARD/BADGE

DESCRIPTION



Automotive 1: Design

Brownie (Grades 2-3) STEM Find out how automotive designers come up with ideas for new vehicles. Then, take the wheel and design your own!

- 1. Explore how people move from place to place
- 2. Discover design criteria
- 3. Choose your vehicle's design criteria
- 4. Sketch a vehicle to meet your criteria
- 5. Sculpt and share your vehicle

When you've earned this badge, you'll know how to design, sketch, and sculpt a vehicle.

GET THIS BADGE



Automotive 2: Engineering

Brownie (Grades 2-3) STEM Get in gear and explore how automotive engineers build vehicles. Then, engineer your own model of a vehicle to help people during an emergency!

- 1. Learn about simple machines in vehicles
- 2. Engineer a vehicle for safety based on criteria
- 3. Build a vehicle prototype
- 4. Test and revise your vehicle prototype
- 5. Share your vehicle prototype and testing results

When you've earned this badge, you'll know how automotive engineers plan, build, test, and improve vehicles.

GET THIS BADGE



Automotive 3: Manufacturing

Brownie (Grades 2-3) STEM Experience the importance of having a plan and discover how manufacturers build lots of vehicles that are safe and well made!

- 1. Experience the manufacturing process
- 2. Learn about the automotive manufacturing process
- 3. Plan your own automotive manufacturing process
- 4. Manufacture a set of vehicles
- 5. Share your automotive manufacturing process

When you've earned this badge, you'll know how vehicles are manufactured in a factory. You'll also know how to make and test products for people to buy.



AWARD/BADGE

DESCRIPTION



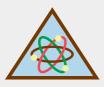
Brownie Craft and Tinker

Brownie (Grades 2-3) STEM Life Skills Discover how to be a problem solver by making or crafting solutions.

- 1. Explore making
- 2. Learn the basics
- 3. .Figure out the function
- 4. Discover form and fit
- 5. Tinker with your craft

When you've earned this badge, you'll know how to craft and tinker to solve a problem.

GET THIS BADGE



Brownie STEM Career Exploration

Brownie (Grades 2-3) STEM Find out how all the things you love-like camping, baking, and walking your dog-can become a job that changes the world.

Then, create a plan to turn your dreams into a reality!

- 1. Explore your interests
- 2. Discover the possibilities
- 3. Learn about the day-to-day
- 4. Brainstorm your next steps
- 5. Share your goals

When you've earned this badge, you'll know how to use STEM to help others.

GET THIS BADGE



Bugs

Brownie (Grades 2-3)
Outdoors
STEM

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

- 1. Draw a bug poster
- 2. Try a bug craft
- 3. See bugs in action
- 4. Explore bug homes
- 5. Take a bug field trip

When you've earned this badge, you'll know all about bugs.



AWARD/BADGE

DESCRIPTION



Coding for Good 1: Coding Basics

Brownie (Grades 2-3) STEM Find out how computer scientists write programs for computers to solve problems.

- 1. Create algorithms for a computer that follow a sequence
- 2. Use loops to improve your algorithm
- 3. Use events to make things happen
- 4. Learn about women in computer science
- 5. Create your own set of commands that use events

When you've earned this badge, you'll know how programmers write programs that make computers work and how people can use computers to help others.

GET THIS BADGE



Coding for Good 2: Digital Game Design

Brownie (Grades 2-3) STEM Explore how video games can help people to learn new skills and experience new things.

- 1. Discover how game design can be used "for good"
- 2. Explore tools used to develop digital games
- 3. Plan a maze game
- 4. Build, test, and improve your maze game using iteration
- 5. Share your game with others

When you've earned this badge, you'll know how to think like a game maker and use iteration to plan, build, and test a game.

GET THIS BADGE



Coding for Good 3: App Development

Brownie (Grades 2-3) STEM Design your own idea for an app that solves a problem for someone else.

- 1. Discover how apps can be used for good
- 2. Decompose the needs of your app user
- 3. Design your app screens
- 4. Create algorithms for your app that include events
- 5. Share and improve your app with user feedback

When you've earned this badge, you'll know about user-centered design and how computer scientists develop apps.



AWARD/BADGE

DESCRIPTION



Computer Expert

Brownie (Grades 2-3) Life Skills STEM Find out what computers can help you do and learn to be a safe, secure computer expert.

- 1. Paint or draw with an art program
- 2. Find some cool facts
- 3. Take a trip online
- 4. Make a connection
- 5. Have some computer fun

When you've earned this badge, you'll know how to do many useful things on a computer.

This badge comes in a packet that includes the Computer Expert, My Best Self, Dancer, Home Scientist, and My Family Story badges.

GET THIS BADGE



Cybersecurity 1: Basics

Brownie (Grades 2-3) STFM Find out how you use technology and how you can keep your technology safe.

- 1. Find out how you use technology
- 2. Discover what your technology can do
- 3. Find out how to create layers of security
- 4. Find out how to use real-life safety rules when you go online
- 5. Find out how messages travel on the internet

When you've earned this badge, you'll know cybersecurity basics and understand the role technology plays in your life.

GET THIS BADGE



Cybersecurity 2: Safeguards

Brownie (Grades 2-3) STEM Find out how to be safe when you go online.

- 1. Create your identity
- 2. Find out what information to keep private when you go online
- 3. Find out how to share information safely online
- 4. Find out why you have to be careful about who you trust online
- 5. Test your knowledge of online safety rules

When you've earned this badge, you'll know what information is private and how to share information safely.



AWARD/BADGE

DESCRIPTION



Cybersecurity 3: Investigator

Brownie (Grades 2-3) STEM Put on your detective hat and solve cyber crimes.

- 1. Crack a code to solve a problem
- 2. Investigate what's real and fake in photos
- 3. Find out about digital footprints
- 4. Investigate how a computer virus can spread
- 5. Explore a cyber attack

When you've earned this badge, you'll know how to use investigative skills to spot problems in the cyber world.

GET THIS BADGE



Digital Leadership

Brownie (Grades 2-3) STEM Find out how technology can help you to be a leader who teaches, inspires, and makes the real and digital worlds a better place.

- 1. Explore your communities
- 2. Discover your digital footprint
- 3. Examine what's true and not
- 4. Design a digital community
- 5. Create content for change

When you've earned this badge, you will know how to lead in the digital world. You'll know how to use technology to make the internet and world a better place.

GET THIS BADGE



Home Scientist

Brownie (Grades 2-3) STEM Find out where science has been hiding in your home.

- 1. Be a kitchen chemist
- 2. Create static electricity
- 3. Dive into density
- 4. Make something bubble up
- 5. Play with science

When you've earned this badge, you'll be able to see the science all around you.

This badge comes in a packet that includes the Computer Expert, My Best Self, Dancer, Home Scientist, and My Family Story badges.



AWARD/BADGE

DESCRIPTION



Journey: Think Like a Citizen Scientist

Brownie (Grades 2-3) STEM Journey In this Journey, you will:

- 1. Find out how citizen scientists make observations, collect data, and work with scientists to receive feedback on research.
- 2. Do 3 citizen science activities: sharpen your observation skills through 2 observation games and a SciStarter project.
- 3. Plan a Take Action project that helps others. If you're a Girl Scout volunteer, go to Volunteer Toolkit for complete meeting plans and activity instructions.

Learn more about how to earn your Take Action Award - and help your community - with the **Girl Scout Take Action Guide**.

Get This Journey



Journey: Think Like a Programmer

Brownie (Grades 2-3) STEM Journey In this Journey, you will:

- 1. Find out how programmers use computational thinking to solve problems.
- 2. Do 3 computational thinking activities: find out about paper programming; create a functional suncatcher to explore algorithms, variables, and functions; and create a personal innovation to discover rapid prototyping.
- 3. Plan a Take Action project that helps others. If you're a Girl Scout volunteer, go to Volunteer Toolkit for complete meeting plans and activity instructions.

Learn more about how to earn your Take Action Award - and help your community - with the **Girl Scout Take Action Guide**.

Get This Journey



Journey: Think Like an Engineer

Brownie (Grades 2-3) STEM Journey In this Journey, you will:

- 1. Find out how engineers use design thinking to solve problems.
- 2. Do 3 design thinking activities: design and build an assistive device, a water collection device, and a device that can launch a ball across a room.
- 3. Plan a Take Action project that helps others. If you're a Girl Scout volunteer, go to Volunteer Toolkit for complete meeting plans and activity instructions.

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Get This Journey



AWARD/BADGE

DESCRIPTION



Journey: WOW!
Wonders of Water

Brownie (Grades 2-3) STEM Journey In this Journey, you will:

- 1. Explore the wonders of water by find out more about its importance and how it's used around the world.
- 2. Plan a Take Action project, such as making informative posters, promoting recycling at school, or planting low-water gardens.
- 3. Earn 4 leadership awards: The LOVE Water Award, the SAVE Water Award, the SHARE Water Award, and the WOW! Award.

If you're a Girl Scout volunteer, go to Volunteer Toolkit for complete meeting plans and activity instructions.

Get This Journey



Making Games

Brownie (Grades 2-3) STEM Entrepreneurship Use your imagination to make up new games.

- 1. Try a scavenger hunt
- 2. Make up a mystery game
- 3. Create a party game
- 4. Change the rules
- 5. Invent a whole new sport

When you've earned this badge, you'll know how to create new games and share them with others.

This badge comes in a packet that includes the Letterboxer, Pets, Making Games, Inventor, and Making Friends badges.

GET THIS BADGE



Math in Nature 1: Shapes in Nature

Brownie (Grades 2-3) STFM Look carefully at nature, track what you see, and create art inspired by natural objects.

- 1. Track natural objects
- 2. Graph natural objects
- 3. Make a spiderweb with symmetry
- 4. Explore tessellations
- 5. Collect data about birds

When you've earned this badge, you will know about counting, graphing, symmetry, and tessellations.

You'll also know about spiders, birds, and other natural objects.



AWARD/BADGE

DESCRIPTION



Math in Nature 2: Numbers in Nature

Brownie (Grades 2-3) STEM Use your senses and other tools to gather information and learn about the natural world.

- 1. Explore temperature
- 2. Measure the length of leaves
- 3. Graph your leaf data
- 4. Find space to grow
- 5. Plot and plant a garden

When you've earned this badge, you will know how to measure temperature and length. You'll also know about square feet, diagrams, and grids. You'll have explored leaves and gardening.

GET THIS BADGE



Math in Nature 3: Design with Nature

Brownie (Grades 2-3) STEM Use math to do things in the natural world, like find the age of natural objects, build a honeycomb, design a bird feeder, and go bird-watching.

- 1. Calculate the age of a natural object
- 2. Explore the shape of beehives
- 3. Measure and build a bird feeder
- 4. Use ratios to make bird food
- 5. Graph data about birds

When you've earned this badge, you will know about natural objects. You'll know how to measure, use scale and ratio, and make a graph.

GET THIS BADGE



Mechanical Engineering: Fling Flyer

Brownie (Grades 2-3) STEM Work like an engineer to create a Fling Flyer, an airplane you'll make, and explore what keeps it and other things, such as birds, planes, and space ships, in the air.

- 1. Learn about forces that affect flight
- 2. Design and build a Fling Flyer
- 3. Test your Fling Flyer
- 4. Analyze and share your results
- 5. Brainstorm ways to improve your design

When you've earned this badge, you'll have learned about the forces that affect flight as you design, build, and test a Fling Flyer. You'll know how to design an investigation-and fine-tune your design after testing it, just like engineers.



AWARD/BADGE

DESCRIPTION



Mechanical Engineering: Leap Bot

Brownie (Grades 2-3) STEM Design, build, and test things like an engineer as you create your own Leap Bot.

- 1. Learn about springs
- 2. Build your Leap Bot
- 3. Create a way to test how well your Leap Bot performs
- 4. Record the results of your test
- 5. Share your results

When you've earned this badge, you'll have learned about engineering, gravity, and force by building and testing a Leap Bot. You will know how to build and test a new product.

GET THIS BADGE



Mechanical Engineering: Race Car

Brownie (Grades 2-3) STEM Design, build, and test your own race car to explore how science can make a faster race car!

- 1. Learn how design can affect speed
- 2. Design and build your race car
- 3. Design your racetrack
- 4. Conduct a fair test and record results
- 5. Share what you learned

When you've earned this badge, you'll have designed a race car and a race track and carried out "fair tests" to learn how design affects speed.

GET THIS BADGE



Robotics 1: Designing Robots

Brownie (Grades 2-3) STEM Team up with your fellow Brownies to design a robot. Plan, build, and share your robot prototype.

- 1. Explore how robots imitate nature
- 2. Learn about the parts of a robot
- 3. Plan your robot
- 4. Create a prototype
- 5. Get feedback on your robot

When you've earned this badge, you'll know how to plan, build, and share feedback like an engineer by creating a prototype of a robot that helps other people or animals.



AWARD/BADGE

DESCRIPTION



Robotics 2: Programming Robots

> Brownie (Grades 2-3) **STEM**

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

- 1. Learn how robots work
- 2. Discover the robot brain
- 3. Learn about programming
- 4. Try simple programming
- 5. Code a robot

When you've earned this badge, you'll know how to create a program that could be run by a robot.

GET THIS BADGE



Robotics 3: Showcasing Robots

> Brownie (Grades 2-3) **STEM**

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

- 1. Create a presentation to share how you designed your robot
- 2. Tell others how you designed your robot
- 3. Learn about robotics competitions
- 4. Learn about robotics teams.
- 5. See robots in action

Note: Unlike the other Robotics badges, these steps include options. You may be able to complete multiple steps, particularly three through five, at once.

When you've earned this badge, you'll know how to share your robot with others.

GET THIS BADGE



Space Science Adventurer

Brownie (Grades 2-3) **STEM**

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

- 1. Meet the neighbors
- 2. See more than before
- 3. Investigate the Moon
- 4. Be a stargazer
- 5. Celebrate and share

When you've earned this badge, you'll know how to investigate the Sun, Moon, planets, and stars.



AWARD/BADGE

DESCRIPTION



Animal Helper

Cadette (Grades 6-8) STEM Discover how animals help people-and discover how you can help animals in return.

- 1. Explore the connection between humans and animals
- 2. Find out how animals keep people safe
- 3. Find out how animals help people emotionally
- 4. Find out how animals perform tasks for people with disabilities
- 5. Find out how you can help animals

When you've earned this badge, you'll know more about the connections between people and animals, how animals help people, and what you can do to help animals.

GET THIS BADGE



Cadette STEM Career Exploration

Cadette (Grades 6-8) STEM Explore careers that make a difference. Then, map out how you'll help others and change the world!

- 1. Explore how you want to make a difference
- 2. Discover your career possibilities
- 3. Learn about the day-to-day
- 4. Brainstorm your next steps
- 5. Map your career path

When you've earned this badge, you'll know about STEM careers and how you can make the world a better place.

GET THIS BADGE



Coding for Good 1: Coding Basics

Cadette (Grades 6-8) STEM Find out how to write a computer program and create a meme with a positive message.

- 1. Learn about functions and arguments
- 2. Explore how memes are created
- 3. Write pseudocode for a meme
- 4. Write shareable code
- 5. Share your meme

When you've earned this badge, you'll know the basics of computer coding and how to create a meme that can have an impact on other people, your community, and the world.



AWARD/BADGE

DESCRIPTION



Coding for Good 2: Digital Game Design

Cadette (Grades 6-8)
STEM

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

- 1. Create an avatar
- 2. Learn how to use arrays to create images
- 3. Write an array to create an icon
- 4. Develop a game scenario
- 5. Play your game

When you've earned this badge, you'll know how video games are developed, how images are stored and displayed on screens, and how to use elements from Javascript to create game characters.

GET THIS BADGE



Coding for Good 3: App Development

Cadette (Grades 6-8) STEM Collect and visualize personal data to design a protype for an app that will help to build a healthy habit.

- 1. Learn about data collection and visualization
- 2. Write an array to store personal data
- 3. Create a personal data collection plan
- 4. Learn how to correlate data
- 5. Develop a prototype for a habit tracking app

When you've earned this badge, you'll know how to use elements from JavaScript to create your own idea for a habit tracking app.

GET THIS BADGE



Cybersecurity 1: Basics

Cadette (Grades 6-8) STEM Explore different hacking techniques and how to protect yourself with basic cybersecurity precautions.

- 1. Crack a code
- 2. Hack a password
- 3. Explore two-factor authentication
- 4. Launch a Man-in-the-Middle attack
- 5. Explore social engineering

When you've earned this badge, you'll know how (and why it's important!) to protect yourself with strong passwords, secure encryption, and caution when clicking on links.



AWARD/BADGE

DESCRIPTION



Cybersecurity 2: Safeguards

Cadette (Grades 6-8)
STEM

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

- 1. Guard your identity
- 2. Create a profile based on your interests
- 3. Learn about metadata
- 4. Shop for apps in a life-sized app store
- 5. Inventory your digital presence

When you've earned this badge, you'll know about your digital footprint and how others can use data from your footprint to target you with both legitimate ads and social engineering scams.

GET THIS BADGE



Cybersecurity 3: Investigator

Cadette (Grades 6-8) STEM Solve a series of fictional cyber crimes using what you know about cybersecurity.

- 1. Find clues in text messages
- 2. Identify phishing emails
- 3. Learn how hackers use social media
- 4. Analyze log files
- 5. Protect your identity from hackers

When you've earned this badge, you'll know about the potential vulnerabilities and risks in personal digital communications (emails, text messages, and social media) and how you can protect your identity.

GET THIS BADGE



Digital Leadership

Cadette (Grades 6-8) STEM Explore the digital world and how you can use technology to inspire and guide others.

- 1. Discover your digital landscape
- 2. Investigate the digital world
- 3. Design a digital community
- 4. Create content for change
- 5. Share your process

When you've earned this badge, you will know how technology can be used to make a difference.

You'll know how to make the internet a better place for yourself and others.



AWARD/BADGE

DESCRIPTION



Digital Movie Maker

Cadette (Grades 6-8)
STEM
Art

Try your hand at movie making.

- 1. Learn digital video basics
- 2. Film. Then film some more...
- 3. Pick the perfect subject
- 4. Action!
- 5. Edit and premiere your movie

When you've earned this badge, you'll know how to create a digital movie.

This badge comes in a packet that includes the Digital Movie Maker, Eating for You, Public Speaker, Science of Happiness, and Screenwriter badges.

GET THIS BADGE



Journey: Breathe

Cadette (Grades 6-8) STEM Journey In this Journey, you will:

- 1. Find out about the air we breathe by visiting a wind farm, talking to an environmental scientist, or doing experiments using wind.
- 2. Plan a Take Action project to fix an air problem in your community. You could plant an indoor garden, campaign against smoking, or push for clean-air initiatives in your community.
- Earn 3 leadership awards: Aware, Alert, and Affirm. If you're a Girl Scout volunteer, go
 to Volunteer Toolkit for complete meeting plans and activity instructions. More
 Details →



Journey: Think Like a Citizen Scientist

Cadette (Grades 6-8) STEM Journey In this Journey, you will:

- 1. Find out how citizen scientists make observations, collect data, and help scientists conduct scientific research.
- 2. Do 3 citizen science activities: make observations about your environment, create a community field guide, and a SciStarter project.
- 3. Plan a Take Action project that helps others. More Details →

If you're a Girl Scout volunteer, go to Volunteer Toolkit for complete meeting plans and activity instructions.



AWARD/BADGE

DESCRIPTION



Journey: Think Like a Programmer

Cadette (Grades 6-8) STEM Journey In this Journey, you will:

- 1. Find out how programmers use computational thinking to solve problems
- 2. Do 3 computational thinking activities: categorize various objects as "Computer" or "Not a Computer" to explore the four tasks that define a computer, create a card-sorting algorithm to learn about processing, and design technology that will best meet a user's needs using user-centered design.
- 3. Plan a Take Action project that helps others. If you're a Girl Scout volunteer, go to Volunteer Toolkit for complete meeting plans and activity instructions. **More Details**

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Journey: Think Like an Engineer

Cadette (Grades 6-8) STEM Journey In this Journey, you will:

- 1. Find out how engineers use design thinking to solve problems.
- 2. Do 3 design thinking activities: design and build prototypes of a life vest for a dog, a model camp cabin inspired by nature, and a prosthetic leg for an elephant.
- 3. Plan a Take Action project that helps others.

Learn more about how to earn your Take Action Award - and help your community - with the **Girl Scout Take Action Guide**. Then use your leadership skills to earn your Silver Award, the highest award for Girl Scout Cadettes!

Get This Journey



Netiquette

Cadette (Grades 6-8) STEM Citizenship Our digital world makes it easy to stay in touch and share friendships, memories, and ideas. But we've all heard embarrassing stories in which people wish they'd never hit the "send" button. Once you've put it out there, it never goes away. But you can use that to your benefit, too. This badge is all about knowing how to make positive choices in the online world.

- 1. Explore "oops!" and "wow!" moments
- 2. Dig into stories of "ouch" -- and repair some hurt if necessary
- 3. Look at e-mail, commenting, or blogging
- 4. Decide what makes a great social media profile
- 5. Spread better practices More Details →



AWARD/BADGE

DESCRIPTION



Robotics 1: Designing Robots

Cadette (Grades 6-8)
STEM

Build a prototype of a new kind of robot that could help someone to overcome a daily obstacle. Decide on a challenge, brainstorm solutions, plan, build a prototype, and test it to see how well it meets the challenge.

- 1. Pick a challenge
- 2. Explore possible solutions
- 3. Plan your prototype
- 4. Build a prototype
- 5. Get feedback on your robot

When you've earned this badge, you'll know how to design a robot and build a prototype.

GET THIS BADGE



Robotics 2: Programming Robots

Cadette (Grades 6-8) STEM To help you understand how robots work, learn about the parts that make up a robot. Get started with electronics by making a simple sensor, something robots use to function without human operators. Then practice coding robots using important programming concepts like functions and loops.

- 1. Learn about robots
- 2. Build a robot part: simple sensors
- 3. Make a box model robot with sensors
- 4. Learn about programming
- 5. Write a program for a robot

When you've earned this badge, you'll understand how robots work and how to control them.

GET THIS BADGE



Robotics 3: Showcasing Robots

Cadette (Grades 6-8) STEM After engineers build a working version of their robots, they release them to the public. They may enter them into challenges and competitions or market them through a website or crowd-funding campaign. Now that you've built your robot, share your design with others and explore a future in robotics.

- 1. Learn about robotics events and organizations
- 2. Create a presentation about your robot
- 3. Present your robot pitch to others for feedback
- 4. Find out about robotics opportunities for teens
- 5. See robot makers and robots in action

When you've earned this badge, you'll know how to share your robot designs with the world.



AWARD/BADGE

DESCRIPTION



Science of Happiness

Cadette (Grades 6-8)

Health

Relationships

STEM

Find out how scientists measure happiness and put their results into action.

- 1. Make yourself happier
- 2. Think differently for happiness
- 3. Get happy through others
- 4. Do a helpful happiness experiment
- 5. Create a happiness action plan

When you've earned this badge, you'll know how to use the science of happiness to make your world the happiest place it can be.

This badge comes in a packet that includes the Digital Movie Maker, Eating for You, Public Speaker, Science of Happiness, and Screenwriter badges

GET THIS BADGE



Space Science Researcher

Cadette (Grades 6-8) STEM Observe and explore light, deepening your understanding of the Sun, stars, and other objects in space.

- 1. What more can you see?
- 2. Explore "invisible" light
- 3. See the stars in a new way
- 4. Expand your vision
- 5. Conserve the night sky

When you've earned this badge, you'll understand more about the amazing properties of light and how you use it to make discoveries about the Universe and space science.

GET THIS BADGE



Special Agent

Cadette (Grades 6-8)
STEM
Life Skills

Use your investigative mind to take on the many roles of a special agent: detective, scientist, psychologist, enforcer of the law.

- 1. Investigate investigation
- 2. Reveal reality
- 3. Try the science
- 4. Key in to body language
- 5. Practice the art of detection

When you've earned this badge, you'll know secrets from the worlds of forensic science and criminal psychology.

This badge comes in a packet that includes the Book Artist, Woodworker, Special Agent, Trailblazing, and Babysitter badges.



AWARD/BADGE

DESCRIPTION



Woodworker

Cadette (Grades 6-8)
STEM
Life Skills
Art

Find out how to use wood to make stylish, useful things for yourself and others.

- 1. Swing a hammer
- 2. Keep it level
- 3. Use a screwdriver
- 4. Saw some wood
- 5. Build something yourself

When you've earned this badge, you'll know how to use some basic tools to make simple woodworking projects.

This badge comes in a packet that includes the Book Artist, Woodworker, Special Agent, Trailblazing, and Babysitter badges.

GET THIS BADGE



Ambassador STEM Career Exploration

Ambassador (Grades 11-12) STEM Find out how a career with STEM will help you shape the world for the better.

- 1. Explore how you want to make a difference
- 2. Discover your career possibilities
- 3. Learn about the day-to-day
- 4. Find your career pathway
- 5. Take the next step

When you've earned this badge, you'll have explored how you want to change the world and understand how a career in STEM can help you make a difference.

GET THIS BADGE



Coding for Good 1: Coding Basics

Ambassador (Grades 11-12) STEM Explore the power of music and coding to spread a positive message and write code to share your own performance routine with others.

- 1. Learn about functions through song lyrics
- 2. Learn about loops through song patterns
- 3. Write an algorithm duet
- 4. Code a performance routine
- 5. Share your coded routine with others

When you've earned this badge, you'll know how to write shareable code to spread a message or build community.



AWARD/BADGE

DESCRIPTION



Coding for Good 2: Digital Game Design

Ambassador (Grades 11-12) STEM Find out about narrative video game design and explore how games can make a positive change in the world.

- 1. Brainstorm "game for good" scenarios
- 2. Create a G.I.R.L. avatar for your game
- 3. Learn about decision trees in game design
- 4. Design your game
- 5. Playtest and iterate your game

When you've earned this badge, you'll know how video games use conditionals to give players choices and how video games can help players understand the world.

GET THIS BADGE



Coding for Good 3: App Development

Ambassador (Grades 11-12) STFM Collect and visualize data to design a prototype for an app that helps leaders change the world.

- 1. Learn to code data objects
- 2. Create a data visualization
- 3. Design a data collection plan
- 4. Analyze your leadership data
- 5. Develop an app based on your data

When you've earned this badge, you'll know how to create data objects and how to develop apps that will help leaders make a positive difference in their communities.

GET THIS BADGE



Cybersecurity 1: Basics

Ambassador (Grades 11-12) STEM Explore how hackers operate and how hacking can be used for the purposes of corporate and national security.

- 1. Learn about different kinds of hackers
- 2. Hide a message in plain sight
- 3. Debate the ethics of hacking
- 4. Learn cyberwarfare strategies
- 5. Explore cyber careers

When you've earned this badge, you'll know about steganography, cyberwarfare, and a variety of different careers in cybersecurity.



AWARD/BADGE

DESCRIPTION



Cybersecurity 2: Safeguards

Ambassador (Grades 11-12) STEM Find out how to protect your personal data and digital footprint with healthy online habits.

- 1. Guard your movements
- 2. Outsmart the online marketers
- 3. Plan your digital future
- 4. Take the rights steps to secure your data
- 5. Make cyber hygiene go viral

When you've earned this badge, you'll know how to cultivate healthy online habits.

GET THIS BADGE



Cybersecurity 3: Investigator

Ambassador (Grades 11-12) STFM Investigate and respond when a fictional city has been affected by a cyberattack.

- 1. Determine how the attack has affected the city
- 2. Identify suspects
- 3. Decide whether to pay the ransom
- 4. Figure out how the attack happened
- 5. Learn how to prevent future attacks

When you've earned this badge, you'll know how to analyze hidden messages and security log files, and make decisions about how to best allocate cybersecurity resources.

GET THIS BADGE



Digital Leadership

Ambassador (Grades 11-12) STEM Explore how you can use technology to build community and lead others.

- 1. Explore your digital landscape
- 2. Examine digital bias
- 3. Advocate for your community
- 4. Create content for change
- 5. Evaluate and expand your impact

When you've earned this badge, you will know how to use technology to lead and inspire. You'll also know how to make the internet and world a better place for yourself and others.



AWARD/BADGE

DESCRIPTION



Journey: Justice

Ambassador (Grades 11-12) STEM Journey In this Journey, you will:

- 1. Identify global environmental issues and create your own vision for change.
- 2. Plan a Take Action project to address food and land-use issues, improve food delivery systems, fight hunger in developing nations, or rediscover healthy eating traditions.
- 3. Earn the Sage Award. If you're a Girl Scout volunteer, go to Volunteer Toolkit for complete meeting plans and activity instructions.

Learn more about how to earn your Take Action Award - and help your community - with the **Girl Scout Take Action Guide**. Then use your leadership skills to earn your Gold Award, the highest award for Girl Scout Seniors and Ambassadors!

Get This Journey



Journey: Think Like a Citizen Scientist

Ambassador (Grades 11-12) STEM Journey In this Journey, you will:

- 1. Find out how citizen scientists make observations, collect data, and help scientists conduct scientific research.
- 2. Do 3 observation sessions of a citizen science project from SciStarter.
- 3. Collect data from you community and plan a Take Action project that helps others.

 More Details →

If you're a Girl Scout volunteer, go to Volunteer Toolkit for complete meeting plans and activity instructions.



Journey: Think Like a Programmer

Ambassador (Grades 11-12) STEM Journey In this Journey, you will:

- 1. Find out how programmers use computational thinking to solve problems.
- 2. Do 3 computational thinking activities: build a message-sending machine out of everyday objects to learn about binary, develop an algorithm to find the smallest playing card in a row of cards, and design an app that solves a problem for others to explore user-centered design. More Details →

Learn more about how to earn your Take Action Award - and help your community - with the **Girl Scout Take Action Guide**. Then use your leadership skills to earn your Gold Award, the highest award for Girl Scout Seniors and Ambassadors!



AWARD/BADGE

DESCRIPTION



Journey: Think Like an Engineer

Ambassador (Grades 11-12) STEM Journey In this Journey, you will:

- 1. Find out how engineers use design thinking to solve problems.
- 2. Do 3 design thinking activities: design and build prototypes of an animal enrichment product, a zip line course, and mobility equipment.
- 3. Plan a Take Action project that helps others. If you're a Girl Scout volunteer, go to Volunteer Toolkit for complete meeting plans and activity instructions.

Learn more about how to earn your Take Action Award - and help your community - with the **Girl Scout Take Action Guide**. Then use your leadership skills to earn your Gold Award, the highest award for Girl Scout Seniors and Ambassadors!

Get This Journey



Photographer

Ambassador (Grades 11-12)
STEM
Art
Life Skills

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

- 1. Explore the power of photography
- 2. Focus on composition--shoot five landscapes
- 3. Focus on light--shoot five portraits or still lifes
- 4. Focus on motion--shoot five action shots
- 5. Tell a story with photography

When you've earned this badge, you'll know how to capture your vision of the world in photographs.

GET THIS BADGE



Robotics 1: Designing Robots

Ambassador (Grades 11-12) STEM Explore the Design Thinking Process as you build a model of a social robot that can make life better for others. Decide on a challenge, brainstorm solutions, plan, build a prototype, and test it to see how well it meets the needs it is designed to address.

- 1. Pick a challenge
- 2. Explore possible solutions
- 3. Plan your prototype
- 4. Build a prototype
- 5. Get feedback on your robot

When you've earned this badge, you'll know how to design a robot and build a prototype.



AWARD/BADGE

DESCRIPTION



Robotics 2: Programming Robots

Ambassador (Grades 11-12) STEM To help you understand how robots work, learn about the parts that make up a robot. Get started by making a simple motorized robot to see how robot parts work together. Then practice coding robots, using important programming concepts, like functions and loops.

- 1. Learn about robots
- 2. Build a robot model: motorized robot
- 3. Explore the way robotics systems work together
- 4. Learn about programming
- 5. Write a program for a robot

When you've earned this badge, you'll understand how robots work and how to control them.

GET THIS BADGE



Robotics 3: Showcasing Robots

Ambassador (Grades 11-12) STEM After engineers build their robots, they share their work with others through challenges, competitions, or marketing campaigns. Now that you've built your robot, share your design with others and explore your future with robotics.

- 1. Learn about robotics events
- 2. Hold a mini robotics event
- 3. Give a presentation about your robotics activities
- 4. Find out about robotics career opportunities
- 5. See robot makers and robots in action

When you've earned this badge, you'll know how to share your robot designs with the world.

GET THIS BADGE



Space Science Master

Ambassador (Grades 11-12) STEM Explore, observe, design, and communicate your space science discoveries-just like scientists and engineers.

- 1. Discover worlds beyond Earth
- 2. Dive into NASA science
- 3. Explore your interests
- 4. Dig deeper
- 5. Share what you've learned

When you've earned this badge, you'll understand more about space science and how you can be a part of NASA now and in the future.



AWARD/BADGE

DESCRIPTION



Water

Ambassador (Grades 11-12) STEM Outdoors Find out more about water and reflect on the role water plays in your life and our world.

- 1. Have fun reflecting on your relationship with water
- 2. Celebrate water art-and create your own
- 3. Find out about water issues
- 4. Explore water solutions
- 5. Educate and inspire

When you've earned this badge, you'll have dived deep into water-from its scientific origins to the joy of splashing around.

GET THIS BADGE



Animal Habitats

Junior (Grades 4-5) STEM Learn about where and how animals live, how they play, and how we can help them.

- 1. Find out about wild animals
- 2. Investigate an animal habitat
- 3. Create an animal shelter
- 4. Explore endangered habitats
- 5. Help protect animal habitats

When you've earned this badge, you'll know more about wild animals and how to protect their homes.

GET THIS BADGE



Automotive 1: Design

Junior (Grades 4-5) STEM Do you want to take a ride in your dream car? Before you can do that, you need to design it! Discover how to create vehicles by sketching and sculpting a model.

- 1. Explore mobility across time
- 2. Conduct automotive market research
- 3. Create your vehicle's design criteria
- 4. Sketch a vehicle to meet your criteria
- 5. Sculpt and share your vehicle

When you've earned this badge, you'll know about innovation and market research. You'll know how to create criteria, sketch, and sculpt a vehicle.



AWARD/BADGE

DESCRIPTION



Automotive 2: Engineering

Junior (Grades 4-5) STEM Find out how automotive engineers fuel the future by building and testing vehicles. Then, create your own model of an alternative fuel vehicle!

- 1. Learn about simple machines in vehicles
- 2. Engineer a vehicle that uses alternative fuel
- 3. Build a vehicle prototype
- 4. Test and revise your vehicle prototype
- 5. Share your vehicle prototype and testing results

When you've earned this badge, you'll know how to use the Design Thinking Process to plan, build, test, and improve prototypes.

GET THIS BADGE



Automotive 3: Manufacturing

Junior (Grades 4-5) STEM Explore how automotive manufacturers build lots of vehicles without wasting time and how they make sure the vehicles are ready for the road!

- 1. Experience the manufacturing process
- 2. Learn about the automotive manufacturing process
- 3. Plan your own automotive manufacturing process
- 4. Manufacture a set of vehicles
- 5. Innovate your automotive manufacturing process

When you've earned this badge, you'll know how high quality vehicles are manufactured.

GET THIS BADGE



Coding for Good 1: Coding Basics

Junior (Grades 4-5) STEM Find out how programmers write computer programs for computers to solve problems.

- 1. Create algorithms for a computer that follow a sequence
- 2. Use loops to improve your algorithm
- 3. Keep your code interesting with conditionals
- 4. Create your own set of commands that use conditionals
- 5. Learn about women in computer science

When you've earned this badge, you'll know how programmers write computer programs and how people can use computers to help others.



AWARD/BADGE

DESCRIPTION



Coding for Good 2: Digital Game Design

Junior (Grades 4-5) STEM Find out how programmers create a video game that is fun and helps solve a problem.

- 1. Discover how game design can be used "for good"
- 2. Explore tools used to develop digital games
- 3. Plan a maze game
- 4. Build, test, and improve your maze game using iteration
- 5. Share your game with others

When you've earned this badge, you'll know how to use iteration to plan, build, and test a game "for good."

GET THIS BADGE



Coding for Good 3: App Development

Junior (Grades 4-5) STEM Design your own idea for an app that solves a problem.

- 1. Discover the needs of others
- 2. Decompose the needs of your app user
- 3. Design your app screens
- 4. Include conditionals in your app design
- 5. Share and improve your app with user feedback

When you've earned this badge, you'll know how to use user-centered design to create an app.

GET THIS BADGE



Cybersecurity 1: Basics

Junior (Grades 4-5) STEM Find out how computers talk to each other.

- 1. Find out how computers read information
- 2. Discover how networks work
- 3. Find out what protocols are and create one
- 4. Explore computer communication protocol
- 5. Find out what malware is

When you've earned this badge, you'll know the basics of cybersecurity and how computers communicate.



AWARD/BADGE

DESCRIPTION



Cybersecurity 2: Safeguards

Junior (Grades 4-5) STEM Find out how to keep your online identity safe.

- 1. Create and protect a username
- 2. Create and protect a password
- 3. Discover how you share information and what to share
- 4. Find out how information online can last forever
- 5. Find out who is trustworthy online

When you've earned this badge, you'll know know how to protect your online identity and stay safe online.

GET THIS BADGE



Cybersecurity 3: Investigator

Junior (Grades 4-5) STEM Become a cybersecurity investigator and learn how to spot threats online.

- 1. Create and crack a shift cipher code
- 2. Find out how updates can help your security
- 3. Explore identity theft
- 4. Find out what to do if your identity is stolen
- 5. Investigate if a message is real or fake

When you've earned this badge, you'll know how computers use codes to communicate and how to spot cyber crime.

GET THIS BADGE



Detective

Junior (Grades 4-5) STEM Try out the skills that make great detectives.

- 1. Practice the power of observation
- 2. Communicate in code
- 3. Fingerprint for fun
- 4. Try out detective science
- 5. Follow the clues to solve a real mystery!

When you've earned this badge, you'll know how to follow clues and discover facts like a real detective.

This badge comes in a packet that includes the Jeweler, Gardener, Detective, Camper, and Independence badges.



AWARD/BADGE

DESCRIPTION



Digital Leadership

Junior (Grades 4-5) STEM Find out how you can use technology to help others and explore how to learn, share, and lead in the digital world.

- 1. Explore how you connect with others
- 2. Discover your digital footprint
- 3. Consider the source
- 4. Design a digital community
- 5. Create content for change

When you've earned this badge, you will know how to protect yourself and others online. You'll know how technology can make the world a better place.

GET THIS BADGE



Digital Photographer

Junior (Grades 4-5)
STEM
Art
Life Skills

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

- 1. Learn about digital cameras from an expert
- 2. Take tons of photographs!
- 3. Edit three photos
- 4. Make a digital photo project
- 5. Share your photos

When you've earned this badge, you'll know how to use a digital camera to create one-of-a-kind photos.

This badge comes in a packet that includes the Digital Photographer, Staying Fit, Musician, Entertainment Technology, and Scribe badges.

GET THIS BADGE



Entertainment Technology

Junior (Grades 4-5) STEM Art Explore the ins and outs of entertainment technology.

- 1. Animate your own artwork
- 2. Dig into video game development
- 3. Try the science of amusement park rides
- 4. Create your own special effects
- 5. Surf a sound wave

When you've earned this badge, you'll know the science behind the world of entertainment.

This badge comes in a packet that includes the Digital Photographer, Staying Fit, Musician, Entertainment Technology, and Scribe badges.



AWARD/BADGE

DESCRIPTION



Journey: GET MOVING!

Junior (Grades 4-5) STEM Journey In this Journey, you will:

- 1. Explore energy and how to use it wisely by interviewing power-use experts and conducting an energy audits of a building in your community.
- 2. Plan a Take Action project to fix an energy problem in your community. Your could launch carpools, work to dim the lights on city buildings, or promote energy savings at your school.
- 3. Earn 3 leadership awards: The Energize Award, the Investigate Award, and the Innovate Award. If you're a Girl Scout volunteer, go to Volunteer Toolkit for complete meeting plans and activity instructions. More Details →



Journey: Think Like a Citizen Scientist

Junior (Grades 4-5) STEM Journey In this Journey, you will:

- 1. Find out how citizen scientists make observations, collect data, and work with scientists to receive feedback on research.
- 2. Do 3 citizen science activities: sharpen your observation skills through 2 observation games and a SciStarter project.
- 3. Plan a Take Action project that helps others. If you're a Girl Scout volunteer, go to Volunteer Toolkit for complete meeting plans and activity instructions.

Learn more about how to earn your Take Action Award - and help your community - with the **Girl Scout Take Action Guide**. Then use your leadership skills to earn your Bronze Award, the highest award for Girl Scout Juniors!

Get This Journey



Journey: Think Like a Programmer

Junior (Grades 4-5) STEM Journey In this Journey, you will:

- 1. Find out how programmers use computational thinking to solve problems.
- 2. Do 3 computational thinking activities: create algorithms to make images with tangrams; create mad libs and craft suncatchers to learn more about algorithms, abstraction, functions, and variables; and create a personal innovation to discover rapid prototyping.
- 3. Plan a Take Action project that helps others. If you're a Girl Scout volunteer, go to Volunteer Toolkit for complete meeting plans and activity instructions.

Learn more about how to earn your Take Action Award - and help your community - with the **Girl Scout Take Action Guide**. Then use your leadership skills to earn your Bronze Award, the highest award for Girl Scout Juniors!

Get This Journey



AWARD/BADGE

DESCRIPTION



Journey: Think Like an Engineer

Junior (Grades 4-5) STEM Journey In this Journey, you will:

- 1. Find out how engineers use design thinking to solve problems
- 2. Do 3 design thinking activities: design and build a paper structure that can support the weight of heavy books, an emergency shelter, and a prototype of a structure that can withstand an earthquake's shaking.
- 3. Plan a Take Action project that helps others. If you're a Girl Scout volunteer, go to Volunteer Toolkit for complete meeting plans and activity instructions.

Learn more about how to earn your Take Action Award - and help your community - with the **Girl Scout Take Action Guide**. Then use your leadership skills to earn your Bronze Award, the highest award for Girl Scout Juniors!

Get This Journey



Junior Craft and Tinker

Junior (Grades 4-5) STEM Life Skills Learn how to make something with care, skill, and imagination and then improve it.

- 1. Explore crafting and tinkering
- 2. Tinker with a craft
- 3. Learn about users
- 4. Craft for form, fit, and function
- 5. Tinker with your project

When you've earned this badge, you'll know how to craft and tinker to solve problems.

GET THIS BADGE



Junior STEM Career Exploration

Junior (Grades 4-5) STEM Explore what you're interested in and what you care about. Then, create a plan for how you'll change the world!

- 1. Explore your interests
- 2. Discover the possibilities
- 3. Learn about the day-to-day
- 4. Brainstorm your next steps
- 5. Share your goals

When you've earned this badge, you'll know about STEM careers that make the world a better place.



AWARD/BADGE

DESCRIPTION



Math in Nature 1: Shapes in Nature

Junior (Grades 4-5) STEM Explore patterns found in nature and use math to create your own.

- 1. Identify symmetry in nature
- 2. Explore bilateral symmetry in nature
- 3. Create nature-inspired art with circular symmetry
- 4. Find fractals in nature
- 5. Search for the Fibonacci sequence

When you've earned this badge, you will know about symmetry, fractals, and the Fibonacci sequence.

You'll have identified and made patterns inspired by nature.

GET THIS BADGE



Math in Nature 2: Numbers in Nature

> Junior (Grades 4-5) STEM

Explore how math can be used to tell us all kinds of information about nature, from how tall or old a tree is to the weather, season, or time.

- 1. Tell time with nature
- 2. Track the weather
- 3. Explore the circumference of trees
- 4. Search for shadows
- 5. Find the area and perimeter of plants

When you've earned this badge, you will know how to use math to tell time, predict the weather, and learn about trees.

You'll know how to measure shadows, perimeter, and area.

GET THIS BADGE



Math in Nature 3: Design with Nature

Junior (Grades 4-5) STEM Use math to plan and organize an outdoor adventure.

Decide where you'll go, how long you'll be gone for, and what you'll bring.

- 1. Find your hiking pace
- 2. Choose a hiking trail
- 3. Find changes in elevation on a map
- 4. Decide how much food to bring
- 5. Pack for your adventure

When you've earned this badge, you will know about different types of maps. You'll know how to calculate distance, pace, elevation changes, and area.



AWARD/BADGE

DESCRIPTION



Mechanical Engineering: Balloon Car

Junior (Grades 4-5) STEM Learn about air power and create an alternative fuel car.

- 1. Learn about potential and kinetic energy
- 2. Design and build a balloon car
- 3. Test your balloon-powered car
- 4. Analyze and share results
- 5. Brainstorm ways to improve your design

When you've earned this badge, you'll know how to engineer a balloon-powered car and understand potential energy, kinetic energy, and jet propulsion.

GET THIS BADGE



Mechanical Engineering: Crane

Junior (Grades 4-5) STEM Learn about simple machines and how they work together as you build your own heavy-lifting crane.

- 1. Explore simple and compound machines
- 2. Design and build a crane
- 3. Test your crane
- 4. Analyze and share your results
- 5. Brainstorm ways to improve your design

When you've earned this badge, you'll know how to build and test a crane and understand simple and compound machines.

GET THIS BADGE



Mechanical Engineering: Paddle Boat

Junior (Grades 4-5) STFM Explore how paddle boats work and engineer your own paddle boat.

- 1. Explore how paddle boats work
- 2. Design and build a rubber band-powered paddle boat
- 3. Test your rubber band-powered paddle boat
- 4. Analyze and share your results
- 5. Brainstorm ways to improve your design

When you've earned this badge, you'll know how to build and test a paddle boat and understand buoyancy, potential energy, and kinetic energy.



AWARD/BADGE

DESCRIPTION



Robotics 1: Designing Robots

Junior (Grades 4-5) STEM Plan and build a prototype of a robot that solves a global problem.

- 1. Discover the future of robots
- 2. Determine your robot's expertise
- 3. Plan your robot
- 4. Create a prototype
- 5. Get feedback on your robot

When you've earned this badge, you'll know how to plan, build, and share feedback like an engineer by creating a prototype of a robot that solves a global problem.

GET THIS BADGE



Robotics 2: Programming Robots

Junior (Grades 4-5) STEM Engineer a simple machine that helps a robot land, learn about the robot brain, and create programs for your friends.

- 1. Learn how robots work
- 2. Discover the robot brain
- 3. Learn about programming
- 4. Try simple programming
- 5. Code a robot

When you've earned this badge, you'll know how robots receive instructions in a way similar to the human brain. You will be able to create simple programs that could be run by a robot.

GET THIS BADGE



Robotics 3: Showcasing Robots

Junior (Grades 4-5) STEM Now that you have your robot prototype, create a presentation and share your design with others. Then, find out about robot teams and competitions.

- 1. Create a presentation to share how you designed your robot
- 2. Tell others how you designed your robot
- 3. Learn about robotics competitions
- 4. Learn about robotics teams
- 5. See robots in action More Details →



AWARD/BADGE

DESCRIPTION



Space Science Investigator

Junior (Grades 4-5) STEM Venture through the Solar System and beyond, and see that space is even bigger than you may have imagined.

- 1. Model the Solar System
- 2. Circle the Sun
- 3. Discover the stars
- 4. Use the tools to explore
- 5. Use tools to explore

When you've earned this badge, you'll understand that the Earth orbits the Sun, and how far away the Sun, Moon, planets, and stars are from our home planet, Earth.

GET THIS BADGE



Coding for Good 1: Coding Basics

Senior (Grades 9-10) STEM Explore how computer programming can make a positive difference in the world and write code you can share with others.

- 1. Use functions to create a self-portrait
- 2. Write code to create a portrait
- 3. Learn about computer logic
- 4. Explore "IF" statements
- 5. Use computer logic to create a quiz show

When you've earned this badge, you'll know how to code images and how computers make decisions.

GET THIS BADGE



Coding for Good 2: Digital Game Design

Senior (Grades 9-10) STEM Explore narrative video game design and how video games can help people understand the world and its issues.

- 1. Brainstorm your "game for good" scenario
- 2. Create a character for your game
- 3. Develop a decision tree for your game
- 4. Design your game
- 5. Playtest and iterate your game

When you've earned this badge, you'll know how video games use a story to move the game along, how players make decisions, and how games can make a positive difference in the world.



AWARD/BADGE

DESCRIPTION



Coding for Good 3: App Development

Senior (Grades 9-10) STEM Collect and visualize data to develop a prototype for an app that supports your community.

- 1. Learn to collect and visualize community data
- 2. Write objects to organize and store data
- 3. Design a community data collection plan
- 4. Analyze your community data
- 5. Develop a prototype for a social app

When you've earned this badge, you'll understand JavaScript syntax, how to use arrays with community and social data, how to store data, and how to display it.

GET THIS BADGE



Cybersecurity 1: Basics

Senior (Grades 9-10) STEM Explore how cybersecurity professionals keep computer networks safe.

- 1. Find out how computers run multiple programs
- 2. Identify functions and privileges
- 3. Learn how computers hide information
- 4. Design a layered security system
- 5. Design a Rube Goldberg machine

When you've earned this badge, you'll know the major principles of cybersecurity and understand how they work in real-life and in the cyber world.

GET THIS BADGE



Cybersecurity 2: Safeguards

Senior (Grades 9-10) STEM Find out how to keep your data and devices safe wherever you go.

- 1. Protect your travel documents
- 2. Protect your Wi-Fi
- 3. Protect your conversations
- 4. Protect your electronics
- 5. Protect your environment

When you've earned this badge, you'll know how to protect your travel documents, Wi-Fi, digital conversations, electronics, and environment.



AWARD/BADGE

DESCRIPTION



Cybersecurity 3: Investigator

Senior (Grades 9-10) STEM Investigate and respond to a fictional cyber crime.

- 1. Look for clues about a fictional hack
- 2. Learn how traceroutes work
- 3. Solve a cybercrime
- 4. Role-play how to handle the crisis
- 5. Play a life-sized version of Minesweeper

When you've earned this badge, you'll know about insider threats and other security vulnerabilities for companies and organizations.

GET THIS BADGE



Digital Leadership

Senior (Grades 9-10) STEM Explore how to use technology safely and effectively, inspiring and motivating others to action.

- 1. Discover your digital landscape
- 2. Examine digital advertising
- 3. Advocate for yourself and others online
- 4. Create content for change
- 5. Expand your reach

When you've earned this badge, you will know how to use technology for positive change.

You'll also know how to make the internet a better place for yourself and others.

GET THIS BADGE



Game Visionary

Senior (Grades 9-10) STEM Entrepreneurship Use your creativity and imagination to invent unforgettable games.

- 1. Break the ice
- 2. Imagine all the world's a board
- 3. Create a physical challenge
- 4. Get puzzled
- 5. Make an ultra scavenger hunt

When you've earned this badge, you'll be able to design and organize games that will bring people together for creative and thoughtful fun.

This badge comes in a packet that includes the Traveler, Voice for Animals, Game Visionary, Social Innovator, and Business Etiquette badges.



AWARD/BADGE

DESCRIPTION



Journey: Sow What?

Senior (Grades 9-10) STEM Journey In this Journey, you will:

- 1. Learn about food: how and where it's grown, harvested, processed, distributed, and consumed, and why it matters.
- 2. Plan a Take Action Project to share your knowledge with others-host a farmers market, inspire others to eat locally, or plan a community vegetable garden.
- 3. Earn the Harvest Award. If you're a Girl Scout volunteer, go to Volunteer Toolkit for complete meeting plans and activity instructions.

Learn more about how to earn your Take Action Award - and help your community - with the Girl Scout Take Action Guide. Then use your leadership skills to earn your Gold Award, the highest award for Girl Scout Seniors and Ambassadors!

Get This Journey





Journey: Think Like a Citizen Scientist

Senior (Grades 9-10) STEM Journey In this Journey, you will:

- 1. Find out how citizen scientists make observations, collect data, and help scientists conduct scientific research.
- 2. Do 3 citizen science activities: make observations about your environment, design a way to test a hypothesis, and a SciStarter project.
- 3. Plan a Take Action project that helps others. More Details →

If you're a Girl Scout volunteer, go to Volunteer Toolkit for complete meeting plans and activity instructions.





Journey: Think Like a Programmer

Senior (Grades 9-10) STEM Journey In this Journey, you will:

- 1. Find out how programmers use computational thinking to solve problems.
- 2. Do 3 computational thinking activities: create rules for how to stack cards to share messages and learn about encoding information, develop an algorithm for building a simple block arrangement, and test whether an app will meet a user's needs to explore user-centered design.
- 3. Plan a Take Action project that helps others. If you're a Girl Scout volunteer, go to Volunteer Toolkit for complete meeting plans and activity instructions. **More Details**

<u>→</u>



AWARD/BADGE

DESCRIPTION



Journey: Think Like an Engineer

Senior (Grades 9-10) STEM Journey In this Journey, you will:

- 1. Find out how engineers use design thinking to solve problems.
- 2. Do 3 design thinking activities: design and build prototypes of a can holder that isn't harmful to animals, a kinetic sculpture, and an assistive device for the elderly.
- 3. Plan a Take Action project that helps others. If you're a Girl Scout volunteer, go to Volunteer Toolkit for complete meeting plans and activity instructions.

Learn more about how to earn your Take Action Award - and help your community - with the **Girl Scout Take Action Guide**. Then use your leadership skills to earn your Gold Award, the highest award for Girl Scout Seniors and Ambassadors!

Get This Journey



Robotics 1: Designing Robots

Senior (Grades 9-10) STEM Build a prototype of a new kind of robot that helps or replaces people who work in difficult or dangerous situations. Decide on a challenge, brainstorm solutions, plan, build a prototype, and test it to see how well it meets the challenge.

- 1. Pick a challenge
- 2. Explore possible solutions
- 3. Plan your prototype
- 4. Build a prototype
- 5. Get feedback on your robot

When you've earned this badge, you'll know how to design a robot and build a prototype.

GET THIS BADGE



Robotics 2: **Programming Robots**

Senior (Grades 9-10) STEM To understand more about how robots work, explore the parts and systems that make up a robot, and then learn about different ways to control a robot, including computer programming.

- 1. Learn about robots
- 2. Build a robot part: robot arm
- 3. Learn how robot systems work together
- 4. Learn about programming
- 5. Write a program for a robot

When you've earned this badge, you'll understand how robots work and how to control them.



AWARD/BADGE

DESCRIPTION



Robotics 3: Showcasing Robots

Senior (Grades 9-10) STEM After engineers build their robots, they show them to others and enter them into challenges and competitions. Now that you've built your robot prototype, it's time to share your design with others.

- 1. Create a presentation about your robot
- 2. Present your robot pitch to others for feedback
- 3. Hold a mini robotics competition
- 4. Explore robotics opportunities in high school, college, and beyond
- 5. See robot makers and robots in action

When you've earned this badge, you'll know how to share your robot designs with the world.

GET THIS BADGE



Science of Style

Senior (Grades 9-10) STEM Art Use the science of style to create and imagine your own products.

- 1. Test skin care and makeup
- 2. Examine the science behind fabrics and accessories
- 3. Explore the science behind hair products and perfume
- 4. Investigate the sociology of style
- 5. Formulate future style

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

GET THIS BADGE



Senior STEM Career Exploration

Senior (Grades 9-10) STEM Explore how you might want to impact the world and how STEM can help you do it. Then, take the next step towards your goal for the future and start to make your mark.

- 1. Explore how you want to make a difference
- 2. Discover your career possibilities
- 3. Learn about the day-to-day
- 4. Find your career pathway
- 5. Take the next step

When you've earned this badge, you'll know how STEM can support your goals for the future and help build a better world.



AWARD/BADGE

DESCRIPTION



Sky

Senior (Grades 9-10)
Outdoors
STEM

The sky is a masterpiece. Every day it graces us with living art, whether through a glorious sunset, shifting cloud formations, or the stunning display of night stars. No wonder we take every opportunity to spend time outdoors. Our world is a stage, and the sky performs with beauty, wonder, and mystery.

- 1. Watch the skies
- 2. Investigate the science of the skies
- 3. Explore the connection between people and flight
- 4. Help clear sky pollution
- 5. Create sky art

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

GET THIS BADGE



Space Science Expert

Senior (Grades 9-10)
STEM
Outdoors

Explore light and discover what it teaches us about the Universe!

- 1. Uncover the stuff you're made of
- 2. Explore the brilliance of the stars
- 3. Discover telescopes as light collectors
- 4. Find the light in the darkness
- 5. Share your knowledge

When you've earned this badge, you'll understand more about the Universe-your place in it and how light is used to make discoveries about it.

GET THIS BADGE



Truth Seeker

Senior (Grades 9-10) STEM Life Skills Gain the skills you need to separate fact from fiction and judge sources on credibility, accuracy, reasonableness, and support for their claims.

- 1. Evaluate your sources
- 2. Investigate what the experts say
- 3. Be a wise consumer
- 4. Find truth in your everyday life
- 5. Become a citizen journalist <u>More Details →</u>

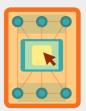
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When you've earned this badge, you'll be able to figure out what is true in the media, online, and what you hear in your daily life.



AWARD/BADGE

DESCRIPTION



Website Designer

Senior (Grades 9-10) STEM Art Build yourself a safe space online where you can show your readers what moves you.

- 1. Find a worthwhile subject for your website or blog
- 2. Be the host with the most
- 3. Build a blueprint
- 4. Create must-see content
- 5. Go live-then drive!

When you've earned this badge, you'll know how to design, build, and promote your own website.

This badge comes in a packet that includes the Website Designer, Women's Health, Troupe Performer, Science of Style, and Novelist badges.