STEM Career Exploration

Imagine the world in the future. What do new buildings or town centers look like? What capabilities does the new age of smartphones and other devices look like? Will you see people throughout the world unite around issues like global warming, identity-related indignities, or limited resources? What role will you play in this world?

Whatever your future holds, a career with STEM will help you shape the world for the better! You can create alternative fuels to lessen environmental impact. You can enhance communications and entertainment by bringing the experience to life with technology. You can protect wildlife by engineering animal crossings to better integrate their habitats within our world. The role you play is up to you!

Steps

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

Purpose

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

Words to Know

Agriculture: another word for farming.

Career: work in a specific field where you can grow and develop your skills over time.

Computer Science: a field that focuses on the study of computers, the internet, and how they're used. It includes areas such as programming, robotics, and cybersecurity, and careers in computer hardware engineering, robotics, data engineering, cryptography, and digital forensics.

Creative Technology and Design: a field that combines art, design, and computer science to create things that are both useful and fun, from an app or a building to sound effects or a new pair of sneakers. It includes careers in video game or app design, digital sculpting, architecture, visual design, entertainment engineering, industrial engineering, fashion design, and sound production.

Engineering: a field that focuses on designing and building things like bridges, cars, and other products. People who do this are engineers. Engineers have jobs in every kind of field and build solutions big and small. There are four major types of engineering: chemical, mechanical, electrical, and civil. Specialized careers include aerodynamics engineering, agricultural engineering, and automotive engineering.

Food and Agriculture: a field that focuses on growing, cooking, and consuming food. It includes careers in baking, farming, food science, soil and plant science, culinary arts, agricultural engineering, urban farming, and agricultural science.

Health and Wellness: a field that focuses on human health. Medical professionals may specialize in taking care of patients (adults or children), researching diseases (such as cancer or diabetes), or treating parts of the body, such as the heart (cardiology) and the brain (neuroscience). This field includes jobs like doctor, dentist, personal trainer, nurse, and paramedic and can include careers in mental health, emergency medicine, sports conditioning, biomedical engineering, phlebotomy, speech-language pathology, radiology, genetic counseling, and medical science.

Nature and the Environment: a field that focuses on science, nature, space, and the outdoors. It includes jobs like park ranger and geologist and offers careers in marine biology, veterinary medicine, wildlife rehabilitation, zoology, aerospace engineering, hydrology, conservation science, meteorology, climatology, and environmental science.

STEM: an acronym that stands for science, technology, engineering, and math. It's commonly used as shorthand for a wide variety of fields and careers.

Step 1: Explore how you want to make a difference

If you could share any message, what would it be? How would you shape the world around you? Are you drawn to helping people who are without housing, food, or clean water? Do you want to protect the environment and keep nature balanced for future generations? Do you have a passion for helping animals in need of homes or special care?

Your interests and passions today can inspire your ideas for the future. What motivates you can become a career and shape the role you will play. So, what inspires you? What are your passions? What projects have you done in the past that have shaped who you are today? How can your interests continue to shape your future? Explore your ideas for the future by doing one of the activities below.

Choices—do one:

Create art about you. Take what's inside and express it outward. Explore your interests, strengths, and the issues you care about, and express them through art. You can paint a picture, create an avatar, make a collage, design mosaic art, or make anything else to share your passions visually. Then share your art with others. Let them know what inspires you and find ways to make a difference together. How can you come together with others and make an impact on an issue that's important to you? How might STEM be useful?

Survey your community. Each community has its own set of values, issues, and resources. Talk with others to find issues or needs within your community that could benefit from your help. You might interview or survey community members impacted by an issue to hear firsthand accounts of what is happening, post on your community's online forum, read local news sources, or do anything else to learn what's important to your community. Then consider what role you can play to make a difference. Could you work with those most impacted to create a solution? Can you improve something that already exists? As you brainstorm, find ways you can use STEM to make a difference.

Collect histories of STEM. Representation matters in STEM and every sphere of life. Find stories of successful women and other underrepresented groups who have made an impact with STEM. Who are the changemakers from the past and today? What inventions and discoveries have they made? Create a career map of each person's career path. What steps did they take? Did they overcome any obstacles? How have they made a difference? Examine all that you've found and consider how you, too, can make a difference using STEM.

Take on Big Issues with STEM

Improve mental health. Create a sensor that uses breathing, heart rate, physical exercise, sleep, and other factors as indicators for mental health and wellness. Design wellness practices that alter brain activity and develop an app to measure the effects.

Fight climate change. Engineer products with cleaner manufacturing processes to reduce carbon emission outputs. Create products like greeting cards from recycled seed paper to promote planting.

Help end hunger. Reimagine growing techniques to maximize resources and bring fresh food to more people. Engineer a nutrition-packed super seed.

Protect animals and their habitat. Create a device that collects data for measuring habitat health. Design rain gardens to promote biodiversity and reduce run-off pollutants.

Conserve limited resources. Develop alternative fuel solutions for lawn equipment, vehicles, aircraft, and public transportation. Convert oil-dependent manufacturing to solar, wind, and electric-powered options.

Clean water supply. Design a portable filtration system that removes pollutants from contaminated water. Build a sensor that monitors water quality or develop an app that suggests how to treat it.

Help the sick. Engineer artificial blood components that can support their immune system and help them fight disease. Develop new medicines or treatments that can help fight disease when natural immunities are not enough.

Step 2: Discover your career possibilities

Now that you've explored your personal interests, it's time to discover what careers might be a good match. A career is not just a job—it allows you to grow personally and professionally, help others, and make an impact in your field. Ultimately, your career gives you the tools you need to change your world—and those tools include STEM!

When you envision your adult self, what kind of life are you leading? Are you taking on challenges like helping reduce a company's environmental impact? Are you creating digital plans or 3D-printed prototypes of new products? Will you be collecting data to improve network security and data protection? Maybe you'll design digital campaigns or apps to spread awareness and connect people with common interests or goals.

For the rest of the badge, explore careers and examine what your future might look like. Investigate any or all six different fields of STEM below, or choose other STEM fields to explore.

- **Computer Science:** Focuses on the study of computers, the internet, and how they're used. It includes areas such as programming, robotics, and cybersecurity.
- **Creative Technology and Design:** Combines art, design, and computer science to create things that are both useful and fun, from an app or a building to sound effects or a new pair of sneakers.
- **Engineering:** Focuses on designing and building bridges, cars, or other products. Engineers may work in many different areas, designing prosthetics for the medical field, agricultural systems to grow more food, or cleaner energy systems that are less harmful to the environment.
- **Food and Agriculture:** Focuses on growing, cooking, and consuming food.
- **Health and Wellness:** Focuses on human health, including taking care of patients, researching diseases, and treating specific parts of the body.
- **Nature and the Environment:** Focuses on science, nature, space, and the outdoors.

As you explore the fields and discover careers you may be interested in, take note and imagine where a career may take you in the future!

Choices—do one:

Interview your network. Talk to your family and other adults you know to learn about the work they do. Ask about their current jobs, as well as previous work they have done along the way. How do they use STEM? Find STEM in subtle or unexpected ways, like a baker measuring ingredient ratios or an artist using digital software or 3D printers. Make a list of all of the careers you've learned more about and try grouping or organizing them into STEM fields. Then consider what you now know. Which field interests you the most and least? Which career might help solve a problem or an issue you're passionate about? What other careers are related to those you've uncovered? Could any of these open doors or translate into other fields or careers? Is there anything you'd like to explore more?

Find career clues. Play a game to explore all the possibilities of a future in STEM. Choose a few STEM careers to learn more about. Have each player research their career and write down five clues about it. For example, what's one of the main tasks or responsibilities? Where does this job take place? What tools or technology are involved? What skills are needed? What useful thing has this career helped to create? Then play a game with others. Share your clues and let the other players take turns guessing the career. What careers did you learn about that match your interests? Is there a field or career you'd like to learn more about?

Complete STEM challenges. Get yourself into a STEM state of mind with hands-on challenges. Complete the activities in "Explore a World of STEM" on the next page to experience the six STEM fields. After, consider all you explored and experienced. Which activity was most challenging or most interesting? Did a challenge help spark a hidden strength or passion? Which field and career do you think are the best fit for your interests?

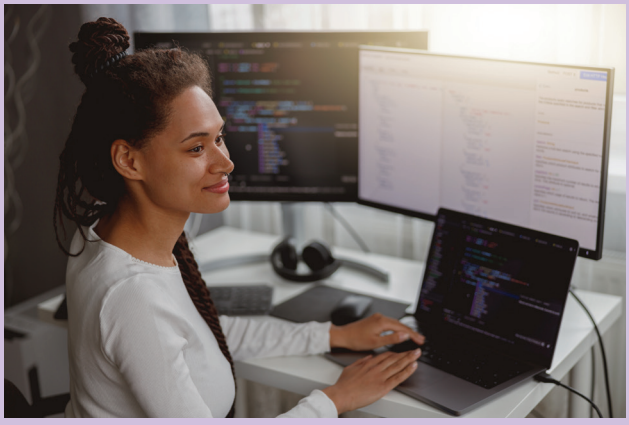
Explore a World of STEM

Computer Science

With a career in computer science, you can...

- **Build devices.** Computer hardware engineers use the newest technologies to design and test parts like circuit boards, sound cards, and memory chips and make sure devices can run the latest apps and other programs.
- **Analyze "big data."** Bioinformatics scientists use computer programs to collect and analyze data, like gene sequences, to help humans, animals, and plants.
- **Keep data and networks safe.** Cybersecurity analysts monitor networks and protect data from hackers.

Challenge: Imagine you're at a coffee shop, park, or other public area and check for available Wi-Fi networks on a phone or other device. Which network do you choose? Which is most secure: *PublicWiFi*, *InternetGuest*, or *Members_SignIn*? What types of apps are safe to use on a public network: email, news and events, search engines, GPS maps, social media, video streaming, school accounts? What advice would you give company employees using a work computer in a public place?



Creative Technology and Design

With a career in creative technology and design, you can...

- **Develop digital designs.** Architects digitally design buildings; entertainment engineers create theme parks and museum exhibits. Medical illustrators work with scientists and animators to bring cells and proteins to life.
- **Create sound effects.** Sound producers use computers and other technology to record, edit, and mix the sounds for movies, TV shows, and video games.
- **Design products.** Creative designers use paper and pencil as well as design software to create special features for vehicles.

Challenge: Imagine being asked to design a new or improved feature for a car or truck that makes the vehicle safer. Sketch your idea in an app or on paper and add a description. What technology is involved in building it? What materials is it made of? How is it tested for safety?

Engineering

With a career in engineering, you can...

- **Invent our world.** Chemical engineers work in chemistry, physics, and biology to design new foods, medicines, and materials. Electrical engineers design machines that use electricity, like personal electronics, electric motors, surveillance systems, and electrical systems for vehicles and aircraft.
- **Build our world.** Civil engineers design infrastructure like bridges, water systems, and roads.
- **Improve our world.** Mechanical engineers solve problems by creating machines like pulleys, batteries, and refrigerators.

Challenge: Think about an activity, like playing a sport or instrument, using technology, or carrying a heavy backpack. Brainstorm a machine to help make the task easier or minimize any negative health impact it may have. Sketch your idea or build a prototype if you have the materials. Share your design with someone else for feedback. How can your model be improved?

Food and Agriculture

With a career in food and agriculture, you can...

- **Grow more food.** Soil and plant scientists research and test different soils and nutrient combinations to provide plants with the most ideal growing conditions.
- **Innovate agriculture.** Agricultural engineers develop automated machinery for efficient seeding, irrigation, and harvesting of crops.
- **Design new recipes.** Research chefs create and test new recipes and menus for places like restaurants and hotels.

Challenge: Experience food in a whole new way! Pair up with a friend who can combine a few ingredients for you to try. Taste a sample with an eye mask on and while also holding your nose. Describe the flavors. Are there hints of sweet, sour, bitter, or savory? Can you figure out what the combination is? Now, try it again, but smell it before tasting. How does the flavor compare? How has the experience changed?

▶ Important note: Be sure to check ingredients for possible allergies!

Health and Wellness

With a career in health and wellness, you can...

- **Practice a specialty.** Medical professionals work in all different fields of medicine. For example, sports conditioning specialists train athletes to be safe on and off the field, radiologists and x-ray technicians are licensed to take x-rays, and oncology professionals provide care for patients with cancer.
- **Innovate health care.** Medical robot designers build robots for everything from patient care to surgery. Robots can help make a hospital more productive, reduce the cost of health care, and, most importantly, help the patient.
- **Become a first responder.** Paramedics and emergency medical technicians (EMTs) are trained in CPR, administering medicines, and more.

Challenge: Design a first aid kit for yourself. List all the materials you will need in the event of each emergency:

- Extreme heat and cold
- Fire
- Allergic reactions to plants or insects
- Broken bones or sprains
- Deep cuts or puncture wounds
- Head trauma

Nature and the Environment

With a career in nature and the environment, you can...

- **Study Earth.** Meteorologists and climatologists use data from satellites, maps, and the atmosphere to predict weather patterns and study climate change.
- **Focus on renewable energy.** Solar photovoltaic installers assemble and maintain solar panel systems. Wind turbine technicians install and maintain wind turbines.
- **Plant, protect, or honor a tree.** Population ecologists study organisms and the environment to help keep ecosystems healthy and balanced.

Challenge: Healthy ecosystems can be measured by tree height, and larger trees also remove and store more CO_2 from the atmosphere, slowing climate change. For this challenge, plant a tree or become a citizen scientist. It's easy!

Step 3: Learn about the day-to-day

Choose a career that excites you and matches your passions, interests, or strengths. Learn about the professional work environment and how you will collaborate with others. What are the daily, weekly, or monthly responsibilities involved? What are some of the skills or tools the job calls for? What experience or training is needed? What support systems are in place that allow for your personal and professional growth?

This is your opportunity to dig in and learn what you can! Do this step with friends who have similar interests or use your career goals to drive your experience on your own. If it's not what you thought or doesn't match your interests, you can always change course and explore another option. That's a part of the process, too.

Check out "Elements of a Job" on the next page for ideas!

Choices—do one:

Connect with someone in STEM. Prepare to pick their brain! Interview someone in a STEM career that you're interested in. It can be someone who works in the exact career or in a closely related profession. Find out what drew them to their career choice. What did they have to do to get there? What do they enjoy most and least about the job? What are some skills or tools that have helped them find success? Which other STEM fields does their work intersect with or impact? After, reflect on what you learned. Do you see yourself in that career?

Get firsthand experience. Experience your dream job. Connect with a professional in a STEM career that you're interested in. Arrange to shadow them for a day or take a tour. Take notes on what you observe and any questions you have. What is the most challenging part of the job and the most rewarding? How does the career match your interests and skills? In what ways does STEM come into play? Follow up after to find out more information and thank them for their time. Make sure to reflect on what you learned. Do you see yourself in that career?

Research your future in STEM. Find out about the ins and outs of a STEM career (or two!) that you're interested in. You can research organizations or associations related to your career, watch videos of professionals in action, or even look at job postings to see what requirements are listed. Then reflect on what you learned. What excites you the most and least about the role? What might be challenging and rewarding? How does STEM fit in? Do you see yourself in that career?

Elements of a Job

Purpose: What's the importance of the job? Why does it exist?

Responsibilities: What tasks are you responsible for? What is the daily work output like?

Education: What level of education is expected for this job? Will you need a high school diploma; associate, bachelor's, or master's degree; or a special course?

Certifications: What type of license or certification is required, if any? What training programs are available? Does it require passing an exam?

Experience: What type of other work, service, or life experience relates to the job? In what ways has your Girl Scouts experience prepared you?

Growth: What careers may become available as you gain experience? Is there room to grow and take on different responsibilities?

Skills: Which skills will help you succeed? Problem solving, teamwork, computer software skills, budgeting, creative thinking, or something else?

Work Environment: Does the work schedule suit your needs? In what type of space will you be working? What are the physical requirements?

Step 4: Choose your career pathway

Some careers have specific requirements such as needing a bachelor's degree to become a biomedical engineer. Other careers like nursing or radiology require you to complete a licensing program. Some career options require fewer years in school, such as starting an apprenticeship after earning an associate degree from a technical school in electrical technology. You can become part of a professional collective and utilize existing talents and strengths or even start your own business to build up your experience and professional network.

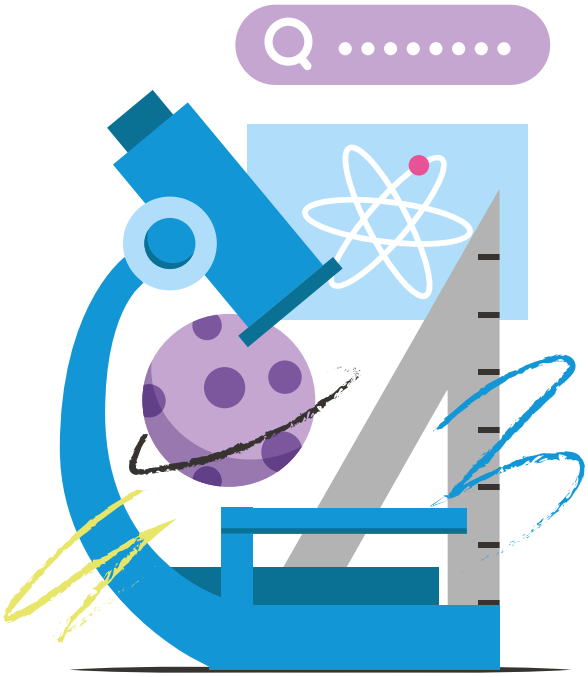
Depending on your career choice, you might consider some big steps:

- **Community colleges** offer two-year, associate degree programs in fields such as computer-assisted design, applied science, engineering technology, nursing, and electronics.
- **Colleges** or **universities** offer four-year bachelor's degree programs and graduate study in fields such as electrical engineering, aerospace studies, statistics, bioengineering, and computer science.
- **Trade**, or **technical**, **schools** offer training for specific jobs or skills such as radiology, carpentry, and home inspection. You can earn a diploma or certificate or prepare for a licensing exam.

The exciting part about finding your career path in STEM is that there are many options for each step along the way. You have flexibility and creativity in how you fulfil the requirements. The important thing is that you reach your goal so that you can make a difference and leave your mark on the world. How you get there is up to you!

Choices—do one:

Take inventory of what you need to do. Think about the experiences you've had with your family, school, Girl Scouts, and community that relate to your goal and how you want to change the world. What clubs or service projects have you been a part of? What skills or experiences will be useful in your future career? Track your related experiences in a visual way. You can add pictures or keepsakes to a box or create a digital suitcase. Then create a checklist of what you still need to do to



achieve your goals. What next steps will you need to take to be successful in your career? Which steps are priorities, and which might be considered secondary, bonus, or optional? Is there an order for what you need to do?

Plan your future. Explore your options after high school. What schools offer the programs you need? What opportunities are available? Find community and state colleges and trade schools. Search for apprenticeships and freelance work if you have the skill set. What does the application process for each option look like? Do you need letters of recommendation? Is there an entrance exam, required essay, or portfolio? Create a space either in a digital or physical folder to organize your options and make a list of what you'll need.

Get feedback and ideas from others. Sharing your ideas for the future with other people is a great chance to find support and new ideas. Together, you can expand your ideas and motivate one another towards your goals. Brainstorm your next steps with someone who has the same or a similar goal. Then share your plan with your family and friends for feedback and more ideas. Which options or steps are you most excited about? How can others work with you or support you to reach your goals? What challenges might you face and how will you overcome them together?

Step 5: Take the next step

Your journey to make a difference in the world starts now! After learning, researching, and planning, you're ready to take your first step and actively pursue your goal. Each step you take brings you closer to your career in STEM and changing the world.

If you're ever nervous or afraid, that's okay—but never let that stop you, because once you get started, you're unstoppable! As you grow from new knowledge and experiences, your plan may change and your path may shift, but that's part of the process, too. Taking steps and continuously learning about yourself and the field you're pursuing will get you to where you're meant to be and ultimately allow you to make the world better.

Now, review all the possibilities in your career pathway from Step 4 and decide what your next step will be. How will what you do today prepare you for your future? Take this next step with confidence knowing that you have already taken so many leading up to this point. Every step you take is one step closer to your goal—so take it with confidence!

Choices—do one:

Learn a new skill. Go into your future loaded with all the right skills. Consider your goals and the kind of work you'll be doing. How can you get a head start on your skills? Is there a club you can join or a class you can enroll in that supports your interests or goals? Can you use video tutorials or make your own to focus in on and strengthen your skills? How will the experience you gain help you in your career? How will it help you change the world with STEM? After, reflect on the experience and how it supported or changed your career path.

Get a start on your future. Start the application process for a college program, volunteer opportunity, or internship that you want to apply for. Will you need your high school transcripts, a resume, or letters of recommendation? Make a list and gather what you need. To prepare for your application, think about what specific skills or traits you have that will make you successful. What else can you include in your application? After you've gathered materials, make your strengths shine through your application, get feedback from an adult, and submit it!

Take any first step to reach your goal. Knowing that every career path is unique, consider your options and take any first step that makes sense for you. Start to build your network of professionals and experts. Connect with a mentor in your field or program. Get involved in your community, grow your network, and leverage it to make a difference! After, reflect on the experience and how it supported or changed your career path. Remember to always inform your caregiver about partnering with adult experts.

Ideas for Your Next Steps

Build your network:
Connect with professionals and experts, seek out internship or apprenticeship opportunities, or attend and ask questions at a local job fair.

Develop a mentorship:
Connect with a professional in the field, get feedback on your resume and applications, or seek out a long-term role model.

Gain firsthand experience:
Try job shadowing; take a class, workshop, or online course; join a club at school; or volunteer in your community.

Sharpen your skills:
Watch videos to learn a new skill, develop your skills by volunteering your services, or try your hand at freelance work.

Learn more with Girl Scouts:
Check out the Award and Badge Chart and the Award and Badge Explorer on girlscouts.org to find Girl Scout programs that relate to each field!

girl scouts

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Volunteer's Guide to the Ambassador STEM Career Exploration Badge*

Tips and ideas to help you guide your troop through this badge.

Step 1: Explore how you want to make a difference • 30–40 minutes

Ask: If you could make your voice heard around your community or the world, what would your message be? What would you do to help shape the world around you?

Share: Maybe you're drawn to helping people who are unhoused, hungry, or without clean water. Or you might want to protect the environment and keep nature balanced for future generations. Do you have a passion for helping injured animals or connecting them with homes or special care? Your interests today will determine your career and the role you will play in the future. Find out what inspires you. What are you passionate about? What projects have you done in the past that have shaped who you are today? How can your interests continue to shape your future? Explore your ideas for the future and find out how STEM can help you make a difference.

Do: Discuss examples from "Take on Big Issues with STEM" on page 3 in the Ambassador Booklet.

Tips: Remind Ambassadors that the purpose of the badge is to decide how they want to change the world and make a difference with a career in STEM. Check out the resources in the Volunteer Toolkit to share throughout the badge.

Activity Choices—do one:

- **Create art about you.** Have Ambassadors create and share an art piece that reflects their interests, strengths, and passions. Some may have a difficult time finding a starting point, so it might be helpful to find examples of various forms of art, like painted portraits, avatars, collages, mosaics, or sculptures to inspire Ambassadors. If you have a particular art medium or style for them to try, show specific examples and provide the materials needed. If you want to leave the art open for creative expression, then provide a range of materials and mediums for them to choose from. If working virtually, find websites or apps that allow for digital art or avatar design. To encourage Ambassadors, ask questions like, "What other art inspires you? How can you make an impact on an issue that's important to you? In what ways do you use STEM in your life today?"

  Materials: *Examples of art; various art and craft supplies; computers, tablets, or smartphones (optional)*

- **Survey your community.** Suggest that the group meet at the town center or a municipal building. Ask them to consider how they might reach out to learn more from their community. They can interview community members to hear firsthand accounts of what is happening, read local newspapers, post on the community bulletin board, or connect with the town forum online. Once they've gathered ideas from their community, encourage Ambassadors to share their findings and discuss how they might be able to help. Ask questions like, "How might STEM skills be useful? Could you work with those most impacted to create a new solution or improve something that already exists?"

  Materials: *Paper; pens or pencils; computers, tablets, or smartphones (optional)*

- **Collect histories of STEM.** Prepare a list of successful women and people from other underrepresented groups who have made an impact with STEM. Have Ambassadors choose a person to research. They can watch interviews, search for articles, or read their biography to learn about the career path they chose. Once they've researched their person, have Ambassadors create a career map to show the steps the person took to make an impact. Ask questions like, "What was their career path? What steps did they take? What obstacles did they overcome? How have they made an impact in the world using STEM?" After everyone has shared, ask Ambassadors, "How can you use what you've learned to inspire your own path to make a difference?"

  Materials: *Computers, smartphones, or tablets; large paper; pens or pencils; markers*

*Detailed choice activities, meeting tools, and additional resources and materials can be found within the Volunteer Toolkit on my.girlscouts.org.

Step 2: Discover your career possibilities
• 30–40 minutes

Ask: When you envision yourself in 5, 10, or 20 years, what kind of life are you leading?

Share: Now that you've explored your interests, discover what careers might be a good fit for your future. Maybe you want to take on challenges like reducing a company's environmental impact or creating digital 3D images of prototypes for new products. Will you help secure networks and data? Maybe you'll design digital campaigns or apps to connect people with common interests or goals? Remember that a career is not just a job—it allows you to grow personally and professionally, help others, and make an impact in your field. Ultimately, your career gives you the tools you need to change your world.

Do: Tap into Ambassadors' prior knowledge and experience. Discuss specific careers they may already be interested in and how they use STEM to make a difference. Explain, "For the rest of the badge, you'll explore careers and examine what your future might look like in different fields of STEM. You can choose to investigate one field, all of them, or any other STEM fields that better suit your interests." List the six STEM fields on large paper and discuss their descriptions, found below and on page 4 of the Ambassador Booklet. Encourage Ambassadors to take note of careers that interest them. Explain that for Step 3, they will learn about the day-to-day of a career that mathes their interests.

Computer Science: Focuses on the study of computers, the internet, and how they're used. It includes areas such as programming, robotics, and cybersecurity.

Creative Technology and Design: Combines art, design, and computer science to create things that are both useful and fun, from an app or a building to sound effects or a new pair of sneakers.

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Food and Agriculture: Focuses on growing, cooking, and consuming food.

Health and Wellness: Focuses on human health, including taking care of patients, researching diseases, and treating specific parts of the body.

Nature and the Environment: Focuses on science, nature, space, and the outdoors.

Activity Choices—do one:

- **Interview your network.** Encourage Ambassadors to connect with at least five members of their extended family and community networks. Invite them to interview you as a place to start if they wish. Explain that the purpose is to find out about different careers and how they're connected to STEM. Have Ambassadors then come together, share their findings, and discuss how the careers they learned about use or relate to STEM. Challenge Ambassadors to organize the careers into the six STEM fields. From there, they can brainstorm and add other careers to the lists including the examples on pages 5–7 in the Ambassador Booklet. After, ask Ambassadors to decide which career or field interests them the most. Ask questions like, "Which field interests you the most and least? Which career might help solve a problem or an issue you're passionate about? Could any of these open doors or translate into other fields or careers? What career do you want to learn more about in Step 3?"

  Materials: *Paper; pens or pencils; computers, smartphones, or tablets (optional)*

- **Find career clues.** Have Ambassadors brainstorm a list of STEM careers. Then invite each Ambassador to choose a career to research and come up with five clues. If Ambassadors need support, share prompts such as, "Something I do every day is ___. My career often requires a degree in ___. I work with (animals, people, or the environment). Some of the tools I use include ___. My STEM field is ___." To play the game, ask each Ambassador to reveal their clues until another player correctly guesses the career. To encourage more thought and discussion, challenge them to guess it correctly within three tries or play multiple rounds. Ask for a volunteer to organize guessed careers by fields, if possible. After the game, ask Ambassadors, "What careers did you learn about that match your interests? Which career do you want to learn more about in Step 3?"

  Materials: *Computers, smartphones, or tablets; paper; pens or pencils*

- **Complete STEM challenges.** Gather the materials needed for each challenge in "Explore a World of STEM" in the Ambassador Booklet and try each one ahead of time. If meeting in person, these challenges can be set up as stations for Ambassadors to rotate through in pairs. If meeting virtually, drop off materials ahead of time so that Ambassadors can do the challenges together from home. Once they've completed the challenges, discuss their thoughts on the challenges and careers for each field. Ask questions like, "Which activity was most challenging or most interesting? Did any challenge spark a hidden strength or passion? What career do you want to learn more about in Step 3?"

  Materials: *Paper; pens or pencils; variety of ingredients to make simple food combinations; forks or spoons; eye mask; computer, smartphone, or tablet (optional)*

Step 3: Learn about the day-to-day • 20–30 minutes

Materials: *Computers, tablets, or smartphones; paper; pens or pencils*

Ask: What might your day-to-day look like in your future career?

Share: For this step, decide on a career that excites you and matches your passions, interests, or strengths. Learn about the professional work environment and how you'll collaborate with others. For example, what kinds of daily, weekly, or monthly responsibilities are involved? What are some of the skills or tools needed for the job? What program or training is needed? What support systems are in place that allow for your personal and professional growth?

This is your opportunity to learn what you can! Do this step with friends who have similar interests or use your career goals to drive your own experience. If it's not what you thought or doesn't match your interests, you can always change course and explore another option. That's a part of the process, too.

Do: Discuss "Elements of a Job" on page 9 of the Ambassador Booklet.

Activity Choices—do one:

- **Connect with someone in STEM.** Share a list of careers or specific fields that Ambassadors are interested in and explain that they will be conducting interviews to learn more about their career choices. Suggest Ambassadors work with others who have similar career goals to conduct interviews with professionals in their field of interest. Support Ambassadors to find someone to interview by emailing your networks or connecting with local organizations. Ask Ambassadors to prepare a list of questions ahead of their interview, such as asking what they had to do to get to where they are and what they enjoy most or least about the job. After the conversation(s), ask Ambassadors, "How do you feel now that you've learned more about the career? Does it confirm your goal?" Explain that it's okay for Ambassadors to find another career if they decide that it wasn't the right fit for their interests.
- **Get firsthand experience.** Support Ambassadors to find an experience related to their career or field of interest. This can be in the form of a job-shadowing experience or tour, depending on the career, and can also be arranged in person or virtually. It may help to reach out to your networks with a list of careers or specific fields that Ambassadors are interested in and explain that they are looking to get a firsthand look into their career. During the experience, encourage Ambassadors to take detailed notes of what they observe and ask questions or write them down to be answered later. After the experience, encourage Ambassadors to reflect on what they've learned. Ask, "How do you feel now that you've gotten a closer look at your career choice? Does it confirm your goal?" Explain that it's okay for Ambassadors to find another career if they decide that it wasn't right match for their interests.
- **Research your future in STEM.** Ambassadors may be comfortable performing research on their own, so you can encourage them to really dive deep into their career of interest and find out everything they can about it. Suggest they investigate organizations or associations related to their career, as well as find videos that show professionals in action. Ambassadors can search for job listings to learn the qualifications required and the responsibilities of the role. Once they've gathered information on their careers, ask Ambassadors to share their findings with the troop. Have them consider all of the information they learned and ask, "What excites you most and least about this role? What might be challenging, and rewarding? How does STEM fit in? How does this career match your interests and passions?"

Step 4: Choose your career pathway • 20–30 minutes

Materials: *Computers, tablets, or smartphones; paper; pens or pencils*

Ask: What do you need to do to reach your career goal?

Share: Depending on your career choice, you might need to consider big steps. Careers often have specific requirements, such as needing a bachelor's degree to become a biomedical engineer. Other careers like nursing or radiology require you to complete a licensing program. There are some career options that require fewer years in school. For example, you can start an apprenticeship after earning an associate's degree in electrical technology. You can become part of a professional collective and utilize existing talents and strengths, or even start your own business to build up your experience and professional network.

The exciting part about finding your career path is that there are many options for each step, and there's some flexibility in how you fulfil the requirements. The important thing is that you reach your end goal so that you can make a difference in the world. How you get there is up to you!

Do: Discuss "Ideas for Your Next Steps" on page 11 of the Ambassador Booklet.

Activity Choices—do one:

- **Take inventory of what you need to do.** To begin, spark a conversation about past accomplishments and experiences Ambassadors have had through Girl Scouts, with their family, school, community, or other organizations. Ask, "What are some of the most memorable things you've done or been able to accomplish?" Point out some of the skills they have developed, such as critical thinking, strategic planning, teamwork, open-mindedness, creativity, and perseverance. Then have Ambassadors track their related skills and experiences in a visual way, adding pictures

or keepsakes to a box or creating a digital suitcase. Then encourage Ambassadors to create a checklist of things they need to do to prepare for their career. They should include skills, education requirements, training needed, as well as other considerations, such as moving and what that may entail. Encourage their ideas by asking, "What have others in similar roles done? How can you make your path unique to your interests, skills, and strengths? Which steps are priorities, and which might be considered secondary, bonus, or optional? Is there any order to what you need to do?"

- **Plan your future.** Explain, "Some careers do not require traditional training or education, and there may be opportunities to gain hands-on experience right away." Encourage Ambassadors to consider all their options, looking into community colleges, state colleges and universities, trade schools, and tech institutes, as well as exploring organizations that may offer internships or apprenticeships to high school graduates. Challenge them to consider new and innovative ways to enter the field. Ask questions like, "What schools offer the programs you need? What other options exist?" If they have questions about an opportunity, encourage them to find out who they can contact to get answers.
- **Get feedback and ideas from others.** Ask Ambassadors to form groups with others who have the same or similar goals. Suggest they start by sharing what they know about their career and then brainstorm their next steps together. They can plan and map out the steps they will take. Encourage groups to share their plans with others and come back together to discuss the feedback they got. Finally, ask Ambassadors, "Which options or steps are you most excited about? How can others work with you or support you to reach your goals? What challenges might you face and how will you overcome them?"

Step 5: Take the next steps •
20–30 minutes

Materials: *Varies depending on the experience*

Ask: What will your first step be on your career path?

Share: Your journey to make a difference starts now! After learning, researching, and planning, you are ready to take your first step and actively work towards pursuing your goal. Each step you take brings you closer to your career in STEM and changing the world. If you're ever nervous or afraid, that's okay—but never let that stop you, because once you get started, you're unstoppable! As you grow from new knowledge and experiences, your plan may change and your path may shift, but that is part of the process, too. Taking steps and continuously learning about yourself and the field you are pursuing will get you to where you are meant to be and ultimately allow you to make the world a better place.

Activity Choices—do one:

- **Learn a new skill.** Have Ambassadors decide what they want to learn and then do it. For example, they can join or start a club, enroll in a class, or use video tutorials to get one step closer to their career goals. Encourage them to refine an existing skill by volunteering their services or teaching their skill to others. Support them by helping them explore their options and encouraging them to take their first step. As they decide, ask questions like, "How will that skill help you in your career? How will it help you change the world?" To help them reflect, ask, "How do you feel about your progress and step you've made towards your career in STEM?"
- **Get a start on your future.** Support Ambassadors as they start the application process for a college program, internship, job, or another opportunity. Ask questions like, "Who will you ask for letters of recommendation? Who do you need to contact to receive your high school transcripts? What experiences or skills might you include in your application?" Suggest they make a checklist of what they need to do and gather to complete the application. Encourage Ambassadors to include community service, volunteer work, Girl Scout experiences, and other skills with their applications. Help them highlight their skills and strengths so that they align with the role. Suggest that they connect with a friend or adult to get feedback on their documents and then empower Ambassadors to take the step and submit!
- **Take any first step to reach your goal.** Explain, "Each career path is as unique as the individual pursuing it. Some careers have lengthier academic requirements, while others require a foundation of practical experiences and well-developed skills." Based on their career and interests, help Ambassadors to determine their own path to success. Encourage Ambassadors to look at their plan and choose a first step that works best for them. For example, they can start to build their network and connect with a mentor or get involved in the community and start to make a difference. Ask questions like, "How do you want to start your journey? What support or resources do you need to take the next step towards your goals for the future?"

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