



This booklet gives girls an overview of the badge requirements and badge steps for the Junior STEM Career Exploration badge. It also includes interesting background information to spark girls' interest in STEM careers. Volunteers can access the Volunteer Toolkit (VTK) to find complete meeting plans, including detailed activity instructions and handouts.



**Junior**

# STEM Career Exploration

**W**hat are some of your dreams for the future? Would you invent a new product? Make a huge discovery? Be a veterinarian, food scientist, or engineer? The options are endless!

Explore what you're interested in and what you care about. Then, create a plan for how you'll change the world!

## Steps

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

## Purpose

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

STEP

# 1 Explore your interests

**If you had a day to yourself with no schedule or plan, what would you do?** Would you play a video game? Walk your dog? Go on a hike?

Now, imagine you could do that every day! There are people who have jobs doing each of these things: a programmer codes your video game, a veterinarian makes sure your dog and other pets are healthy, and an environmental scientist studies nature.

Each of these people has a **career** (that's another word for job!) that makes a difference for other people, animals, or the environment. They help to make the world a better place!



# MIX & MATCH CAREERS

No matter what you like to do, you can find a job doing it. But, when you find a job that makes a difference, you can also change the world!

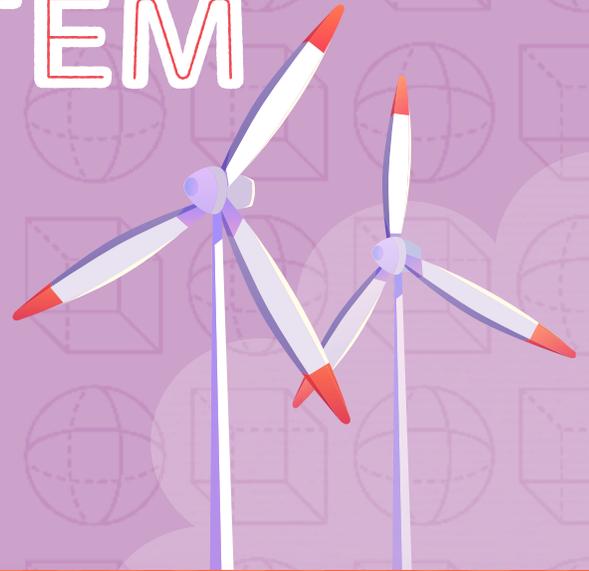
Combine the interests below to create a career that helps others. Then, add in some things you like to do and brainstorm possible jobs for your future!

If you like...	And...	You might want a career...
<i>Baking</i>	<i>Taking care of animals</i>	<i>Creating recipes for healthy pet treats that can be made in a factory</i>
<i>Camping</i>	<i>Building forts</i>	
<i>Designing costumes</i>	<i>Coding</i>	
<i>Inventing things</i>	<i>Gardening</i>	
<i>Sports</i>	<i>Cooking</i>	

# SOLVE PROBLEMS WITH STEM

**STEM stands for Science, Technology, Engineering, and Math.**

We use STEM to build bridges, create apps, grow our food, help people stay healthy, protect the planet, and so much more.



Check out some of the ways you can use STEM to make a difference!

## COMPUTER SCIENCE

- Build computers, cell phones, and other technology to connect people around the world
- Write programs to collect data, analyze it to find patterns, and protect it from hackers
- Program robots to do jobs that are too hard, dangerous, or boring for humans

## HEALTH & WELLNESS

- Invent new medical devices, such as a wristband that can monitor your health
- Teach athletes how to take care of their bodies, on and off the field
- Research how to prevent and treat human diseases

## ENGINEERING

- Give people access to clean water by building everything from small wells to gigantic dams
- Design eco-friendly buildings with features such as solar panels or lights that conserve energy
- Build new ways for people to move safely and comfortably from place to place

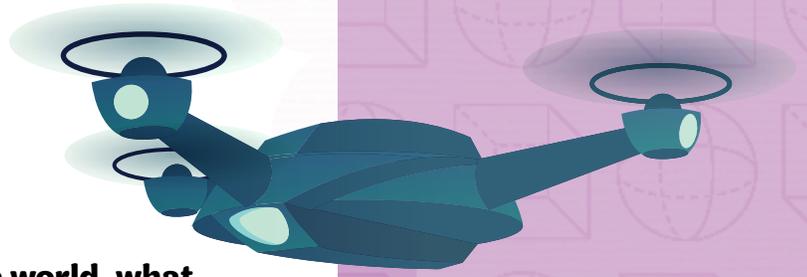
## STEP 2 Discover the possibilities

**If you could change one thing about the world, what would it be?** Would you protect endangered animals? Stop global warming? Solve world hunger?

Whether you want to invent something, make a huge discovery, or help others, you could make that happen with a career in STEM.

By thinking about what you like to do and combining that with something you care about, you can find a job you like and want to do.

So, what are you waiting for? You know more about you than anyone else, so find a career that can build the future!



### FOOD & AGRICULTURE

- Develop new ways to grow food and feed more people
- Invent ways for drones to gather information that helps farmers run their business
- Create new flavors or food combinations

### CREATIVE TECHNOLOGY & DESIGN

- Invent websites, video games, and apps that help people learn new things, connect with others, and find information they need
- Design products using technology such as CAD software, sensors, and 3D printers
- Create technology for museum exhibits, theme parks, and other spaces to make them safer and more fun

### NATURE & THE ENVIRONMENT

- Help wildlife by learning what animals need to live
- Explore nature by looking at rocks and fossils, tracking weather patterns, or studying space
- Conduct experiments to find out more about how plants can be used for medicine

# IMAGINE YOUR STEM FUTURE!

**Dress up, take a selfie, or draw a picture!**



## STEP 3 Learn about the day-to-day

**Once you have an idea of a job you may want in the future, it's a good idea to find out more about it!**

If you dig in and find out it's not a job you'd like to have, that's okay! It's just as important to learn what you don't like as it is to learn what you do like.

When you know more about what's possible, you can find a job that's right for you!

## EXPLORE THE BASICS

To find out more about the big world of careers or learn about a certain job, you might read a book, research online, or take a workshop.

**No matter how you do it, make sure to find out these four things about the job:**

- 1. What do people in the job do?** Where do they usually work? What kind of tools do they use? What are their favorite and least favorite parts of their job?
- 2. What skills do you need for the job?** What kinds of classes can you take in school?
- 3. How can people who do this job help others?** How does the job make a difference to people, animals, or the environment?
- 4. What can I do today?** How can I learn more about this job? Are there workshops, field trips, or events?



## STEP

# 4 Brainstorm your next steps

**Now that you have a better idea of what you want to do, how will you do it?**

You might complete a Girl Scout badge or Journey about the topic, learn a new skill, take a book out at the library, go to a STEM camp, or go to a STEM event at your council or science museum.

Whatever you want to do, brainstorming next steps is the first step to reaching your dream!

## EXTRA, EXTRA, LEARN MORE ABOUT IT!

**If a job sparks your interest, learn more about it!** Here are some ideas to get you started:

### LEARN SOMETHING

- Research to find out more about the field or career
- Learn a new skill
- Explore what to study in school. For example, if you want to be a website designer, you could focus on digital marketing or computer science

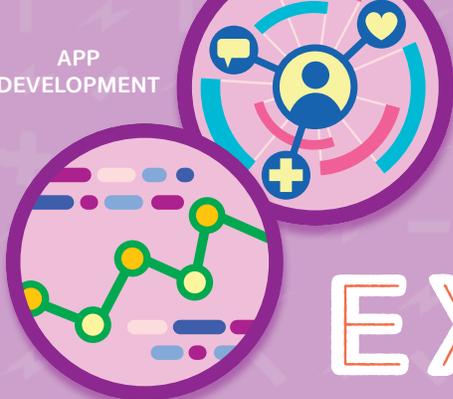
### GET HANDS-ON

- Complete a Take Action or Bronze Award project about the topic
- Go to a STEM camp or event at your Girl Scout council or science museum
- Visit different job locations, like offices, hospitals, and workshops

### CONNECT WITH OTHERS

- Find a mentor who can tell you more about the job and give you advice
- Join a club to talk with others who are interested in the same thing
- Look for organizations that connect you with information, news, and opportunities

APP  
DEVELOPMENT



THINK LIKE  
A PROGRAMMER

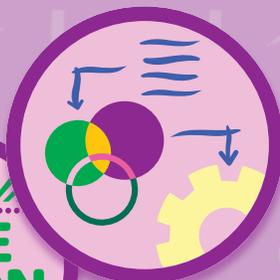
Get going with  
these Girl Scout badges  
and Journeys!



SNOW OR CLIMBING  
ADVENTURE



ANIMAL HABITATS



THINK LIKE  
AN ENGINEER



TAKE ACTION  
AWARD

DIGITAL  
GAME DESIGN



# KEEP EXPLORING!

## COMPUTER SCIENCE

- Think Like a Programmer Journey
- Coding for Good three-badge series
- Cybersecurity three-badge series

## ENGINEERING

- Think Like an Engineer and Get Moving Journeys
- Robotics three-badge series
- Mechanical Engineering three-badge series
- Automotive Engineering three-badge series

## CREATIVE TECHNOLOGY & DESIGN

- Think Like a Programmer and Think Like an Engineer Journeys
- Coding for Good three-badge series
- Badges that focus on art and design, like Drawing, Jeweler, Musician, Scribe, and Product Designer

## FOOD & AGRICULTURE

- Simple Meals badge
- Gardener badge

## HEALTH & WELLNESS

- Junior First Aid badge
- Staying Fit badge

- Practice with Purpose badge
- Junior Snow or Climbing Adventure badge

## NATURE & THE ENVIRONMENT

- Think Like a Citizen Scientist and Junior Outdoor Journeys
- Badges that focus on plants and animals, like Animal Habitats and Flowers
- Badges that focus on earth and space, like Space Science Investigator, Eco Camper, and Camper

## STEP 5 Share your goals

**Imagine yourself in your dream career: What skills will you need to have?** What will you have to do to get there? What could you do right now to get ready?

By now, you might have lots of ideas for how you can reach your dream career. So, create a vision board to put your plans down on paper!

As you create your vision board, find words and pictures that motivate you. What can you use to show your personal strengths and interests? How will you show your vision for how you want to make a difference? What steps will you take?

Once you've created a vision board, you can also show it to others to share how you'll make the world a better place.

**What represents you today? What represents you in the future? Whatever you think of, find something that symbolizes it and add it to your vision board!**



# WHAT'S YOUR VISION?

To help create your vision for how you'll make a difference, imagine yourself in the future and all the steps it took you to get there!

Use the space below to organize the steps for your vision board.

## First, decide on your vision:

How do you see yourself when you're all grown up?

What job will you have?

.....

.....

## Then, create some next steps to reach your vision:

What's something you can do...

At school? .....

.....

At home? .....

.....

By yourself? .....

.....

With others? .....

.....

What's one new skill you can learn?

.....

.....

What's one wild idea to help you reach your goals?

.....

.....

## Now that I've earned this badge, I can give service by:

- **Making a difference with STEM**
- **Sharing what I've learned about careers in STEM with younger Girl Scouts**
- **Doing a presentation for my class about the fun and exciting careers I've learned about**

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## I'm inspired to:

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