

Daisy Scout Self-Guided Badges

Badge: Automotive 1 - Design *(All 3 steps!)*

Step 1: Choose special features for your vehicle.

- Where is your vehicle going to be driving? Who will be using your vehicle? Brainstorm features your vehicle might need to serve its users.

Step 2: Sketch your vehicle.

- Head to the art studio and draw your ideas!

Step 3: Sculpt and share your vehicle

- Visit the reuse and recycle studio or the lego tables and build your prototype vehicle.

Badge: Automotive 2 - Engineering *(All 3 steps!)*

Step 1: Create your automotive engineering plan

- Visit the Design Lab and learn about the Engineering Design Process posted on the brick wall and create your own engineering plan.

Step 2: Build a vehicle prototype

- Visit the reuse and recycle studio or the lego tables and build your prototype vehicle.

Step 3: Test your vehicle prototype

- Does your vehicle roll? Can it carry passengers? What can you do to improve your design?

Badge: How Robots Move *(All 3 steps!)*

Step 1: Learn about the parts of a robot

- Visit the Robots and Circuits area in the Makerspace. Look at the different kinds of robots and see what parts they each have!

Step 2: Find out how robots move

- Look at the different types of robots, how do they move? Do they use wheels? Sensors? A controller?

Step 3: Make a robot move

- Pick a robot and program it to move!

Badge: Designing Robots *(All 3 Steps!)*

Step 1: Plan your robot

- Visit the Artist Studio and draw a design for your robot prototype!

Step 2: Create a prototype

- Visit the Recycle It area in the Makerspace to create a cardboard robot prototype. What can you use to make your robot move?

Step 3:

- Get feedback on your robot

Badge: Journey - Think like an Engineer (2 of 3 steps)

Step 1: Find out how engineers use design thinking to solve problems

- ❑ Visit the Design Lab and learn about the Engineering Design Process from the web on the wall.

Step 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.

- ❑ Explore the Art Studio, Design Lab and Makerspace to decide where to complete all three design challenges. For example, you could build a Fairy House in Reuse and Recycle

Brownie Girl Scout Self-Guided Badges

Badge Painting (3 of 5 steps)

Step 1: Get Inspired

- ❑ Visit the Artist Studio and look at the artwork. What do you like about them?

Step 2: Paint the real world

- ❑ Use the digital easel to paint a landscape, person or still life at the digital easel.

Step 3: Paint a mood

- ❑ Use the digital easel to create a painting that expresses an emotion. What colors make you feel sad, happy, or angry?

Badge: Designing Robots (3 of 5 steps)

Step 2: Learn about the parts of a robot

- ❑ Visit the Robots and Circuits area in the Makerspace. Try out different kinds of robots to see how they work!

Step 3: Plan your robot

- ❑ Visit the Artist Studio and draw a design for your robot prototype!

Step 4: Create a Prototype

- ❑ Visit the Recycle It area in the Makerspace to create a cardboard robot prototype. What can you use to make your robot move?

Badge: Inventor (1 of 5 steps)

Step 1: Warm up your inventor mind

- ❑ Visit the Recycle It area and use a recycled box to create a new use for the box.

Step 2: Find lots of ways to solve the same problem.

- ❑ Choose a problem you would like to solve. Think of ways to solve the problem using materials or tools from the Design Lab, Artist Studio, and Makerspace!

Step 3: Make a needs list.

- ❑ Make a list of materials and tools you will need to create your prototype.

Badge: Computer Expert (2 of 5 steps)

Step 1: Paint or draw with an art program

- ❑ Visit the Artists area and paint a landscape, person, or still life at a digital easel.

Step 5: Have some computer fun

- ❑ Visit the Design Lab and use the computers to have some fun on Tinkercad!

Badge: Brownie Girl Scout Way (1 of 5 steps)

Step 4: Leave a Place Better Than You Found It

- ❑ The Magic House, MADE for Kids is a very busy place, so be sure to keep the space nice and clean for others by cleaning up when you are finished playing. Leave the place better than you found it!

Junior Girl Scout Self-Guided Badges

Badge: Drawing (*All 5 steps!*)

Step 1: Experiment with different materials

- ❑ Visit the Art Studio to draw a still life using various coloring options. What colors or materials do you like to use to draw?

Step 2: Learn how to add shading

- ❑ Look at the Still Life in the Art Studio to learn about shading. Can you add depth to your still life by drawing light or heavy lines?

Step 3: Get some perspective

- ❑ Visit the Still Life area of the Art Studio. Can you “zoom in” on the objects in the still life? Try filling the entire paper with one small area of the still life.

Step 4: Use your imagination like a graphic artist

- ❑ Use the materials in the Art studio to draw a cartoon character, design a new cover for your favorite book or design and draw a logo.

Step 5: Make your masterpiece—and show it off!

- ❑ Use the lightbox at the Entrepreneur Center to photograph your artwork!

Badge: Junior Girl Scout Way (1 of 5 steps)

Step 4 - Leave a Place Better Than You Found It

- ❑ The Magic House, MADE for Kids is a very busy place, so be sure to keep the space nice and clean for others by cleaning up when you are finished playing. Leave the place better than you found it!!

Badge: Entertainment Technology (2 of 5 steps)

Step 1: Animate your own Artwork

- ❑ Visit the Designers area and animate your own story using the Legos for a stop motion video.

Step 2: Dig into video game development

- ❑ Visit the Designers area and use the Bloxels to create your own video game character!

Badge: Product designer, (1 of 5 steps)

Step 5: Mess up so you can try again!

- ❑ Draw and design your product in the Artists area or build a prototype using the materials in the Recycle It area in the Maker space.

Badge: Designing robots (1 of 5 steps)

Step 4: Create a prototype

- ❑ Visit the Recycle It area in the Maker space to create a cardboard robot prototype. What other materials can you use to make your robot move?

Badge: Jeweler (1 of 5 Steps)

Step 3: Turn everyday objects into jewelry

- ❑ Use the recycled material in the Recycle It area in the Maker space to make jewelry out of everyday objects.

Badge: Musician (1 of 5 Steps)

Step 4: Make your own music

- ❑ Make your own instrument in the Recycle It area in the Maker space with the recycled materials. Can you make an instrument that you can tap, rattle or shake?

Cadette Girl Scout Self-Guided Badges

Business Creator (All 5 Steps!)

Step 1: Come up with an idea that solves a problem

- ❑ Choose a problem you would like to solve and come up with a solution for it! Head to the art studio and use a pencil and paper to sketch out a plan.

Step 2: Design a prototype and get feedback

- ❑ Explore the Art Studio, Design Lab and Makerspace and decide which area to construct your prototype. As you explore, think about all of the different materials you might be able to use to create your design! After building, share it with a friend and get feedback.

Step 3: Revise your prototype

- ❑ Now that you have gotten some feedback, revise your prototype. Is there something you can add or re-think to improve your design?

Step 4: Create your business plan

- ❑ Who would want to buy this device? Who would benefit from using it? Make a plan to sell to those people.

Step 5: Make your pitch

- ❑ Once your plan is complete, present your business plan and prototype to your peers!

Comic Artist (4 of 5 steps)

Step 2: Choose a story to tell

- ❑ What kind of stories do you like? Brainstorm what kind of story you want to tell.

Step 3: Draw it out

- ❑ Head to the Art Studio. Who is in your story? Where is it taking place? Draw the characters and setting.

Step 4: Frame it on four panels

- ❑ Stay in the Art Studio. On a new piece of paper draw your story into four parts- one beginning, two middle parts, and the end!

Step 5: Add the words

- ❑ Add word bubbles, thought bubbles, and action words. Fill them in to help tell your story.

Journey: Think Like an Engineer (2 of 3 steps)

Step 1: Find out how engineers use design thinking to solve problems

- ❑ Visit the Design Lab and learn about the Engineering Design Process from the web on the wall.

Step 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

- ❑ Explore the Art Studio, Design Lab and Makerspace to decide where to complete all three design challenges. For example, you could build a life vest for a dog in the textiles studio!