

# Robot Building Party

## Guidelines for Volunteers

### In-Person Event Set Up

#### 1. Registration

- a. Supplies: Tables and chairs; laptop, tablet, or registration sheets; name tags; pens; tablecloths
- b. Consider displaying the Why Girl Scouts flyer. It can be found on our website.
- c. Include table nearby for light refreshments, preferably with no nuts or other allergens
- d. Make sure you can direct families to restrooms and identify whether there are changing tables available

#### 2. Girl Space

- a. Decorate for a party! Consider the theme (Animal Dance Party or Robot Building Party) but generally focus on bright and fun decorations
- b. Play age-appropriate music at a lower volume as families arrive
- c. Configure tables and chairs in a circle. Make sure to follow all social distance guidelines when setting up chairs.
- d. Greet families as they arrive and pair girls with a buddy

#### 3. Adult Space

- a. Arrange chairs and/or tables in a circle with council staff/volunteers as participants, not at the “head” of the group. Make sure to follow all social distance guidelines when setting up chairs.
- b. Keep the girl and childcare space in view of adults, especially if this is an unfamiliar space for families

#### 4. Childcare

- a. Set up a space for younger siblings to play under the supervision of volunteers or older Girl Scouts
- b. Make sure the space is in view of the adult space, but encourage parents/caregivers to let their little ones play so they can focus on the conversation

### In-person Detailed Event Schedule: 75 minutes

#### Welcome (15 Minutes)

- Greet every family, ask them to sign in, fill out a name tag, collect collateral and pick up some refreshments before settling in a chair or at a table
- If you collected RSVPs, consider printing simple information (name, email) and just ask families to initial by their name or fill in missing information
- Make sure you have enough staff/volunteers to keep the line moving and ensure families know

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what to expect by periodically telling families when you will be starting

### Party + Platica (45 Minutes)

- Welcome families and introduce all staff/volunteers
- Thank families for coming and explain the flow of the party before asking parents/caregivers to separate from girls and younger children.

See detailed instructions below:

- Girls: Animal Dance Party or Robot Building Party
- Parents/Caregivers: Plática

### Closing (15 Minutes)

- Bring parents/caregivers together with girls for one final activity. Distribute patches and any other product giveaways.
- Make sure to thank families for coming and ensure staff/volunteers are available to answer questions or help families register after the party ends.

### In-Person Activation

Note: Please make sure to follow all COVID-19 guidance from local government, CDC, and GSMH.

### Materials:

- Pictures of different types of robots (printed for in-person)
- Index cards for in-person or blank paper for virtual
- Supplies to build robots – whatever you have available: shoeboxes, toilet paper rolls, pipe cleaners, construction paper, scissors, glue, tape, markers, crayons, yarn, googly eyes, stickers, pom-poms, etc.
- Use your imagination to bring the robot theme to life!

### Introduce the party activity.

Robots are very helpful in understanding information and helping humans do things, especially things we cannot do ourselves. Who builds robots? How do robots know what to do? Think about what you would like your robot to do if you had one. What would your robot look like?

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How would your robot help you or make your life easier? Today, we are going to learn about robots and build our own!

### Review these definitions.

Share with the girls that sometimes when we learn new things, we also learn new words that help us better understand. Ask the girls to repeat the word back to you and make sure they understand the meaning.

Here are three words we will use today:

1. **ROBOTS** are machines that can do many complicated actions automatically, especially a machine programmed by a computer.
2. **ENGINEERS** are people who solve problems. Engineers are creative and use their imaginations to build lots of things, like bridges, buildings, planes, and roads. Engineers are also practical and invent real things that can help people in the real world, like computers, TVs, and phones. There are different kinds of engineers. Engineers who work on computers are sometimes called **programmers**.
3. An **ALGORITHM** is a list of steps that you can follow to finish a task. A recipe is a type of algorithm; it tells you how to cook a dish by following step-by-step instructions. Robots learn how to do things by following an algorithm.

***Note:** If social distancing, let the girls keep their crayons and mark the floor with tape to show how far apart girls need to stay from each other.*

### Learn about robots.

1. Ask the girls to join you by sitting in a circle. Explain why Girl Scouts sit in circles (see Girl Scout Circle).
2. Ask girls: What is a robot?
  - a. If they are stuck, show girls different types of robots. Ask them to guess what each type of robot does. Note how each robot is different and ask girls why robots might look different if they do different things.
3. After they all have a chance to answer, share that a robot can be a simple machine, made of different parts that work together to make a robot that can move and do things.
4. Ask girls: What makes a robot different from other machines?
5. After they all have a chance to answer, share that a robot knows how to follow instructions automatically, meaning there does not have to be a person telling it what to do or even turn it on every time. Does anyone remember what we call the people who create robots? (Answer: Engineers!)
6. Explain: Computer engineers are called **programmers**. They create the special instructions for robots to follow. Robots follow sets of step-by-step instructions, called **algorithms**, that tell them what to do. When an algorithm is coded (or written) into something that can be run by a robot, it is called a **program**.

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### Play Programmer Says.

Introduce yourself as the Programmer and ask girls to pretend they are Robots.

- The Programmer will choose something for the Robots to draw. Choose something familiar to the girls: a house, a sandwich, a dog, etc.
- The Programmer will give instructions to the Robots for each part of the drawing.
- The Robot(s) will only draw what the Programmer tells them to, one step at a time.
- After 5-10 steps, ask the girls to share their pictures. Do they all look the same? Did the girls notice a step that was missing? What other steps did the Robots need to make a complete picture?
- You can introduce this as **debugging**, or when programmers fix problems in their code.

### Build a robot!

1. Give each girl an index card. Ask them to write down the name for their robot and what they robot will do on one side. On the other side, ask them to write out an algorithm with at least five steps for their robot.
2. Let the girls pick their supplies and start building their robots!
3. Encourage girls to think about what their robot needs to do the algorithm. Are there any supplies not available that would help? How can they problem solve by using a different type of supply right now?

### Closing with parents/caregivers.

1. Ask parents to join their girls in the circle. Ask one of the girls to explain why Girl Scouts sit in a circle.
2. Ask the girls to show their parents/caregivers the robot they made and explain their algorithm.
3. If time allows, ask girls and parents/caregivers to get into small groups of 3-4 families and play Programmer Says.

### Virtual Event Schedule: 45 Minutes

5 Minutes

Welcome families as they log on and share the flow of activities for the party

20 Minutes

Girls: Robot Building Party

20 Minutes

Parents/Caregivers: Plática

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*Adapted from the Daisy Robotics 1: What Robots Do badge and Brownie Robotics 1: Programming Robots badge*

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- Use your imagination to bring the robot theme to life!

### Virtual Activation

A virtual Robot Building Party can follow many of the same instructions. Make sure adults know that girls will need some supplies to build their robots, referring to the examples under Materials, but anything around the house will do!

### Introduce the party game to girls and parents/caregivers.

Explain that first we are going to learn about robots with the girls (and the adults are welcome to stay, too!) After about 20 minutes, the girls will do an activity on their own away from the video while the adults talk together. When the adults are done, we will do one more activity together.

### Girls learn about robots.

1. Ask the girls to join you in the virtual circle. Explain why Girl Scouts sit in circles.
2. Ask girls: What is a robot?
  - a. If they are stuck, show girls different types of robots. Ask them to guess what each type of robot does. Note how each robot is different and ask girls why robots might look different if they do different things.
3. After they all have a chance to answer, share that a robot can be a simple machine, made of different parts that work together to make a robot that can move and do things.
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- After 5-10 steps, ask the girls to share their pictures. Do they all look the same? Did the girls notice a step that was missing? What other steps did the Robots need to make a complete picture?
- You can introduce this as **debugging**, or when programmers fix problems in their code.

### Girls build robots while adult engage in Plática.

After about 20 minutes, follow the instructions below:

1. Give each girl an index card. Ask them to write down the name for their robot and what they robot will do on one side. On the other side, ask them to write out an algorithm with at least five steps for their robot.
2. Let the girls pick their supplies and start building their robots!
3. Encourage girls to think about what their robot needs to do the algorithm. Are there any supplies not available that would help? How can they problem solve by using a different type of supply right now?
4. During this time, parents will engage in a plática, where any questions can be answered. See the Guide to Conducting a Platica.

### Closing with parents/caregivers.

After parents/caregivers have conducted the Plática, ask girls to join the video again and go around the virtual circle to share their robots.