



Create and Innovate

Do you have a favorite picture book? What makes it special? Is it the story? The cover? The art inside? Someone made or created the book. They wrote the story. They created the art.

Makers build things to help people, animals, and the planet! They find new ways to do things, too. Sometimes they fail, and that's okay! They learn something new.

Steps

1. Make something to solve a problem
2. Make something for someone else
3. Make something even better

Purpose

When I've earned this badge, I'll know how to create and innovate objects that help others.



Step 1: Make something to solve a problem

People have all kinds of problems. They lose things like headphones and keys. They need clean water. They want to walk or ride bikes instead of using cars or buses. Makers can make or **create**

things to help solve problems like these. They might build a playground or plant a garden. They find new ways to do things, too.

Objects need certain parts to work. Makers also add features. **Features** are parts that aren't needed for the object to work but are still useful or fun.

What's a user?

Makers create objects to solve problems for a user. A **user** is whoever uses the object. It might be a person, animal, or even a community. A **community** is a group of people with something in common. It could be your school, neighborhood, or Daisy troop.



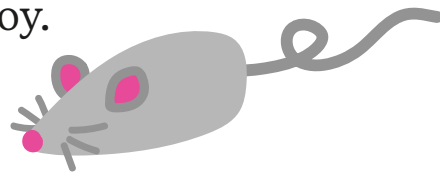
Choices—do one:

Help yourself. Makers sometimes solve problems for themselves. Do you help with chores at home? Make art? Do you ever have problems doing these things? What could you create to help? Maybe make a corkboard to put up important items or a case to store pencils and pens. Draw and create your idea. Include important parts it needs to work. Add special features for you!



Help others. Choose someone or something to help. It could be your friend, family, community, or even an animal. What's something they might need? If you can, ask them. Maybe you'll help your community plant seeds for a garden. Maybe you'll make a cat toy.

Draw and create your idea. Include any parts it needs to work. Add features your user might like.



Words to Know

Brainstorm: To come up with new ideas and different ways to solve a problem.

Community: A group of people with something in common, such as a school, neighborhood, or troop.



Create: To make something.

Design thinking process:

The steps makers take to solve problems and create objects. They define the need, brainstorm solutions, design (make a plan), build, test, redesign, and share.



Feature: Any part of an object that is useful, fun, or different from other similar items.

Innovate: To make something better or try something new.

Maker: A person who creates art or designs objects.

Need: Something you must have to survive.

User: The person, people, or group that uses an object.

User-centered design: Creating something by focusing on what the user wants, needs, likes, and dislikes.

Want: Something you'd like to have but can live without.

Step 2: Make something for someone else

Makers get to choose parts and features for their creations. They want their object to work. They also want their user to like it. When makers use what they know about their users to create objects, that's **user-centered design**.

Makers think about what their users want and need. A **need** is something you must have to survive. Food and clean water are needs. A **want** is something you'd like to have but don't need. Sweatshirts *need* to fit and be comfortable. The user may *want* their sweatshirt to have a hood.



Did You Know?

The best way to find out what someone wants and needs is to ask them!



Choices—do one:

Create for a loved one. Choose a person you care about. What do they like? What might they need? Choose a gift to make for them. What features can make the gift special? Maybe you add their favorite color. Maybe you add a helpful feature. Draw your idea. Then create it!

Create for your favorite character. Choose a character from a movie, TV show, book, or video game. What do you know about them? What happens in their story? What could you create to help them? Draw your idea. Then create it! Make sure to add special features for your user.



Making for Good

Makers can solve all kinds of problems! They might make things as part of their job. They might make things for themselves or their family.

Some makers are inventors. Inventors are people who create new objects. They might make a new computer or refrigerator. They might make dog shoes to protect a pet's furry paws.

Some makers are engineers. Engineers are people who build things. They might create a well for clean water. They might design a vehicle or airplane.

Some makers are entrepreneurs. Entrepreneurs are people who build businesses. They make things and sell their creations to other people.

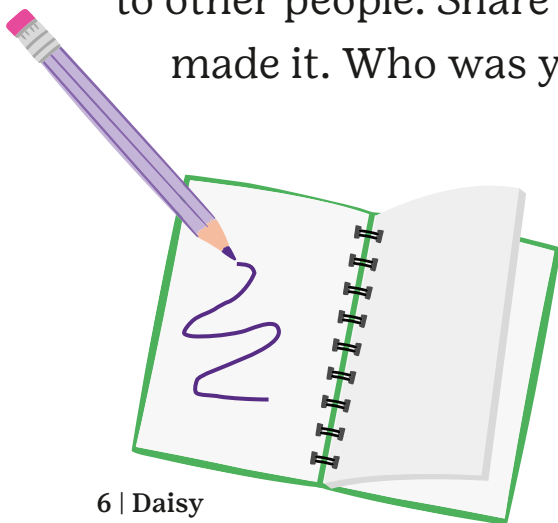
Step 3: Make something even better

Innovation is when you make something better or try something new. Sharing what you make can help you to innovate.

With help from other people, you can **brainstorm** or come up with ideas. You get information that can make your idea even better. You might come up with something entirely new!

Choices—do one:

Improve it. Choose something you made in this badge. Show it to other people. Share why you made it. Who was your user?



How did you build it? Ask them to test it and tell you what they think. Do you need to fix something? What can make it even better? Have them help you brainstorm. Then sketch your ideas.

Innovate it. Choose something you made in this badge. Share it with friends and family. Discuss with them the idea of innovation: trying something new. If you were to make the object again, how would you do it differently? Would you add a new feature or change what it can do? Can you use different materials? Sketch your ideas.

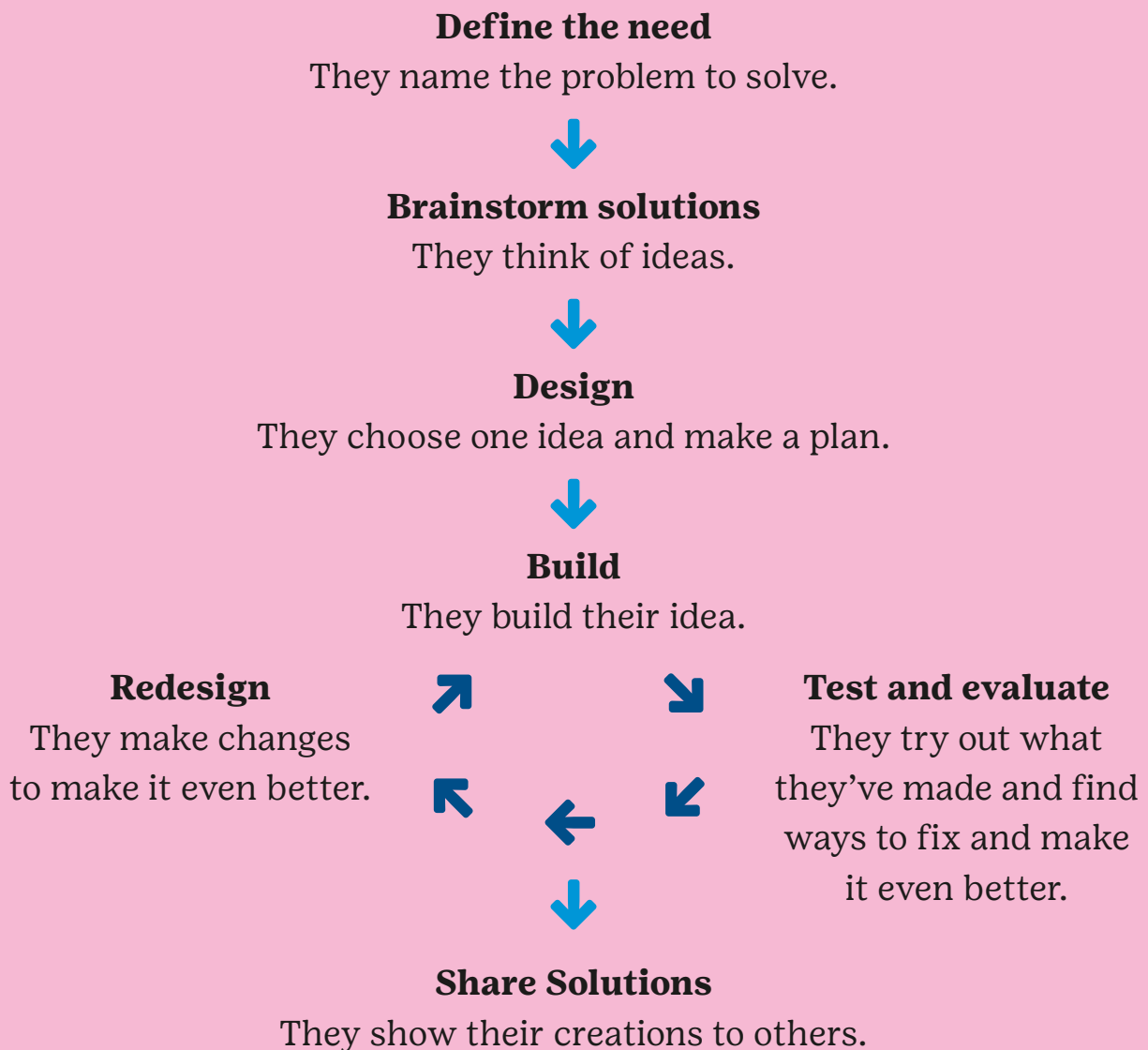
► **For more fun:** Make your changes. If you have extra materials, use your sketch to rebuild your object.

Get Designing!

How do you create something great? Try ideas, make mistakes, and learn along the way! Makers use the **design thinking process** to help. It's a set of steps to solve problems and create.

The Design Thinking Process

As part of the design thinking process, **makers:**





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