

Daisy Make the World a Better Place

In this meeting, you will earn your Rose petal. This petal stands for making the world a better place. Do you remember hearing that line in the Girl Scout Promise and Law? What are some things you can do to make the world a better place? For example, pick up trash? Recycle? Plant flowers? What other things can you think of? To earn the Rose Petal, you will use your powers of observation to make a nature collage. Observation means to look really closely at something and to keep track of what you see.

Step One; During a family walk around your neighborhood, point out things you see that don't belong in nature. What were some of the objects hardest to find? If they were the ones that blended in with the ground or plant or trees, that's called camouflage. Some animals and insects can hide and protect themselves by using camouflage. For example, there is a butterfly that looks exactly like a leaf. And fish that look like rocks or stones.

Step Two: On a piece of large paper, create a collage that shows what you observed during your walk. You can either draw pictures or paste pictures you find in newspaper or magazines. Your collage is one way to spread the word and get other people to think about helping others but keeping the neighborhood clean. So creating your collage and displaying it for others to see is one way to make the world a better place. Make sure you share your work using the hashtag **#GSJSChallenge**

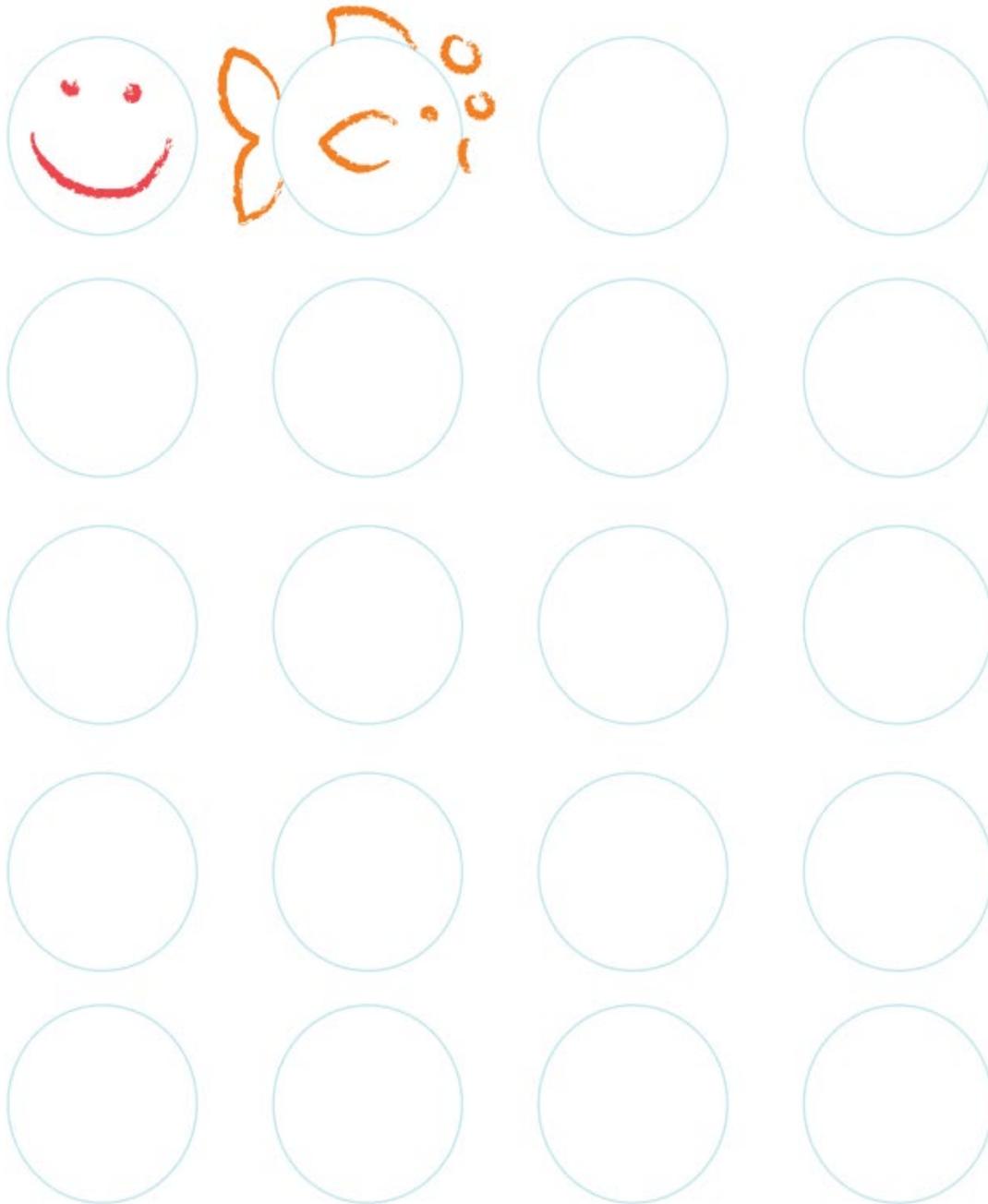
Brownie Inventor Badge

Have you ever wished that you could come up with an easier or faster or more fun way to do something? That's what inventors do - they create new things or new ways to do something. And inventors are always looking for new ways to help people. Can anyone think of an invention that helps them? Do you have a dishwasher where you live? Josephine Cochran invented the first one in 1886! She was tired of having her valuable plates accidentally broken when they were washed by hand so she invented a machine to do it for her. Discuss other ideas of inventions that you use with your family.

Step One: Inventors must be very creative to think of ideas of new inventions and ways to improve products we already use. Use the circle sheet to get your creativity going by using the circles to create as many different drawings as you can. No idea is too silly- just be creative!

Think in Circles

Make the circles into anything you imagine!



Step Two: Minute to Win it!

Now that your creativity has been sparked, find a product in your home that your family uses every day. This could be a toothbrush, a lamp, a remote control, etc. Gather your family and discuss how the item helps you and if there anything that bothers you about it. For instance, the remote always gets lost! Then, set a timer for 1 minute and have everyone write down as many ways as they can think of to improve this item. After the buzzer sounds, share your ideas. The most creative idea wins! Feel free to do this with several items around your house, you just may come up with the next great invention!

Step Three: Needs Notebook

They say that necessity is the mother of invention. This means that people invent things to solve their problems! Grab a notebook and write down the things your family needs to keep your house running smoothly. Pots and pans are needed to make meals, lamps are needed to give light when it gets dark, beds and pillows are needed when its time for sleep. Write down, or draw, at least 5 things your family needs to be happy. Can you think of ways to make these items even better?

For inspiration, read this list of famous women inventors and how they made the world a better place with their inventions:

Women Inventors

Check out these amazing inventions created by women.
Maybe the next great invention will be yours!

Need:

When it rains, I can't see out of my car windshield.

Invention:

Mary Anderson came up with an invention in 1903 that is still used today—the windshield wiper!



Need:

Nurses and doctors have to turn on the lights and wake patients up to read their charts.

Invention:

Rebecca Schroeder invented the Glo-sheet when she was 10 years old. The Glo-sheet is a special type of paper that glows in the dark and is used for hospital charts.

Need:

I love bacon, but the grease isn't healthy for me to eat.

Invention:

Abigail Fleck was eight years old when she came up with the idea for the Makin Bacon® dish. The dish is used to cook bacon in a healthier way.



Need:

I don't like vacuuming.



Invention:

Helen Greiner invented the Roomba® robot vacuum, which can vacuum a room on its own.

Need:

Police officers have a dangerous job.

Invention:

Stephanie Kwolek is the inventor of Kevlar®. This material is used in special vests that protect police officers from bullets.



Need:

I want my baby to feel safe and close to me when we go out.

Invention:

Ann Moore invented the Snuggli® baby carrier. She was inspired by watching mothers in West Africa carry babies in slings close to their bodies.

Need:

My Crocs are comfy, but they could use some decorations.

Invention:

Sheri Schmelzer and her three daughters invented Jibbitz™, charms that could decorate Crocs footwear. In 2006, the Crocs company purchased her idea for \$10 million.

Need:

I'm having trouble learning math.



Invention:

Jennifer Tuttle is the inventor of Multiplication Madness, a kit that uses music to help kids improve their math skills.

Step Four: Mind Map

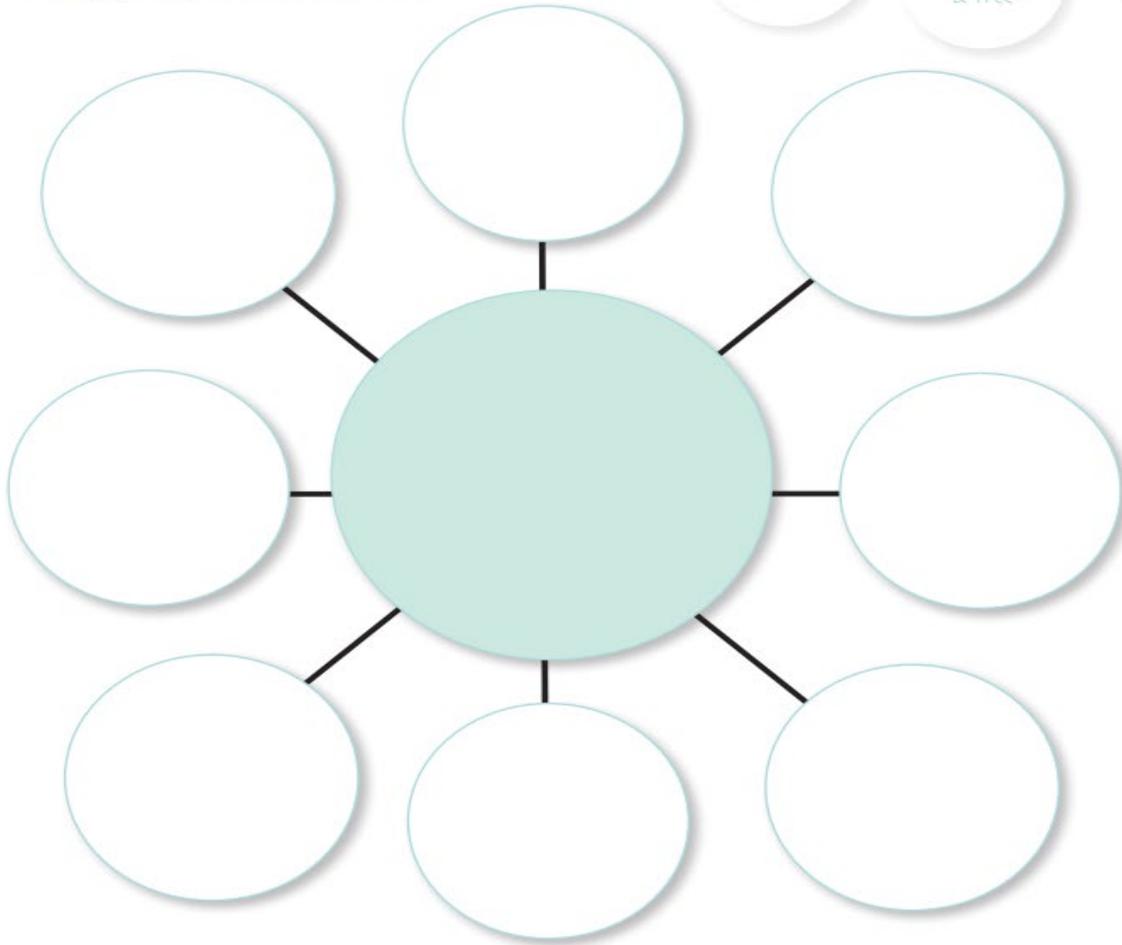
Inventors use a variety of methods to generate ideas. One way is to use a mind map. A mind map places the need at the center and ideas to solve the problem around it in circles. Use the mind map on the next page to see how many solutions you can create to solve a problem from your needs notebook. You can add more circles if you'd like. Don't forget to share your completed mind map using the hashtag **#GSJSChallenge**.



Mind Map

DIRECTIONS:

Put your "needs list" problem in the middle and your ideas for how to solve it in the outer circles. Draw more circles or add more paper if you have more ideas!



Step Five: Share your solution

Imagine you could create a robot that would solve a problem for you! It could perform a chore that you dislike, or just be a friend to play games with! Use items from around your house to build your robot prototype, (You did this in the Virtual Badge Break) then make a short video of what your robot can do and share it using the hashtag [#GSJChallenge](#).

Junior Product Designer

A product is anything developed by one person for another. Can anyone give an example of a product they used today? (toothbrush, toothpaste, shampoo, blow dryer, pencil sharpener, notebook, and handbag.) An innovative product is one that improves other people's lives. Can you think of examples for innovative products? (smart phone, waterproof fabric for a tent, lightweight running shoes.)

Step One: Word Associations

Innovators often have to think "outside of the box" to come up with solutions to problems or ways to make products better. Use this word association exercise to get your brain ready to think creatively and see connections between items:

(One word connects the three others in the list)

- | | | |
|-------------|--------|----------|
| 1. Picnic | Card | Pool |
| 2. Earth | Book | Inch |
| 3. Car | Tree | Elephant |
| 4. Box | Green | Sea |
| 5. Greeting | Credit | Library |
| 6. Wagon | Cart | Steering |
| 7. Storm | Needle | Potato |
| 8. Yard | Pogo | Chop |
| 9. Blue | Goose | Black |
| 10. Gas | Police | Train |

(answers revealed at the bottom of this sheet)

Step Two: Innovation Interview

Read the story below about how the chocolate chip cookie was invented:



Who Invented the Chocolate Chip Cookie?

Ruth Wakefield owned an inn in Massachusetts where she would cook meals for her guests. In 1930, Ruth wanted to make a batch of chocolate cookies from a recipe that called for baker's chocolate—but she didn't have any. So she cut up a bar of semisweet chocolate and added it to the batter instead. She thought it would melt like baker's chocolate and blend entirely into the cookies. But it didn't! When the cookies came out of the oven, the chocolate bits had softened, but weren't completely melted. Ruth served them anyway, and the delicious chocolate chip cookie was born.

Now pair up with a partner and interview them about them about one of their favorite products. Ask each other:

What is your favorite product?

What do you like about it?

What do you like least about it?

Have you ever used another product that does the same thing?

If you have the product, share it or use it in front of each other.

Then take a minute to brainstorm how you might make the other person's product better. You can write down your ideas or even draw them.

Step Three: Product for a Penguin

Pretend you are a product designer and your customers are all penguins! Use this link to learn about your customers so that you can design a product to help them:

<https://zoo.sandiegozoo.org/animals/penguin>

There is also a penguin cam so you can watch your “customers” and observe their behavior:

<https://zoo.sandiegozoo.org/cams/penguin-cam>

Now that you have done your “market research” you are able to brainstorm ideas for products that would make their lives better.

girl scouts  Junior

Product for a Penguin

Penguin Problems

- Most penguins can't fly.
- They live where it is very cold.
- They have webbed feet that are good for swimming, but not great on land.
- The birds have to lean on each other because of the cold weather.
- Emperor penguins are the fifth heaviest birds on the planet.



Possible Products

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Step Four: Product Prototype

For this activity, find a teammate and brainstorm ideas for a household product. Decide which one you want to work on -- and then together show what your improved product might look like. You can draw how your idea solves the problem. Or you can create a prototype or model of what your idea would look like and how it would work using cardboard, paper, or other craft supplies.

When you are finished, make a 30 second commercial to tell about your product and how it will help make the world a better place for people who buy it. Make sure to share your commercial using the hashtag **#GSJSChallenge**.

Step Five: Troubleshooting.

Coming up with ideas is only the first step. Innovators aren't worried when their ideas aren't perfect, because the best products are developed over time, with lots of feedback from people who use them. Just think of all the commercials that say "New and Improved" to let you know that they are making their product better! Using the product you created in step 4, discuss with your family reasons why your product may not work, or ways you can make it better. When you search for the cause to a problem and find ways to solve it, that is called Troubleshooting. List at least 5 problems you can solve to make your prototype even better.