

Invention Brainstorming Guide

With this guide, your child will be guided through the steps involved in the inventing process: Observing, problem identification, solution brainstorming, and creating/designing solutions.

If you feel that your young inventor needs additional help in understanding what an invention is check out our books that describe inventions we see and use in our everyday lives. Our Young Inventor's Journal brings your young inventor through steps to understanding inventions even further!

Tools You'll Need

- A printed version of the Invention Brainstorming Guide
- Access to the internet
- A pencil
- A timer



STEP 1: Let's figure out what problem you want to solve. Every inventor sets out to solve a problem. But how do you figure out what problem you want to solve?

OBSERVE:

Part 1: Go on an adventure to see what inventions you can find in your house. Try the kitchen, there are lots of objects there that solve problems. Make a list of 2 or 3 inventions that you find.

Name of Object	What problem does it solve?
Example: Toaster	Example: A person wants to heat up their bread for a sandwich or for breakfast and make it crunchy.

Part 2: For a few days, carry your paper and pen around and write down what you see. In particular - keep an eye out for problems that need solving. Your invention could be the next best thing!

Location	Problem that needs to be solved
Example: Grocery Store	Example: My mother has reusable grocery bags with her but nowhere to put them in her cart.



ASK QUESTIONS:

Another great way to find a problem that needs to be solved is to interview people. You can find out a lot by asking the right questions. Interview people in your family or friends. For this activity try to interview your family or friends and write down their answers to the following questions on your paper! - feel free to make up your own questions too!

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Question	Answer
What problem would you like to see solved?	
Is there something that you do at work or at home that you find difficult or frustrating?	
Would a new product or tool help you? If so, what do you think it would be?	
Are there tools or products that don't work as well as you would like them to work?	
If you could invent something to make your life easier, what would you invent?	

Name:

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For more information on how to enter win the Inventor's Showcase visit

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STEP 2: It's time to Brainstorm! Brainstorming is a process of coming up with lots of creative ideas to solve a problem. No idea is too silly when you are brainstorming.

BRAIN DUMP

Look through your observations and interviews that you've written down and choose 4 problems that you want to explore further. For each problem **set a timer for 10 minutes** and write down all the things that pop up in your mind when you think about the problem.

Problem #1:	Problem #2:
Problem #3:	Problem #4:



NOW ITS TIME TO BRAINSTORM SOME SOLUTIONS.

Using the table below, pick one of the problems you explored and write it down at the top. Next, jot down all the different solutions you can think of to solve the problem. After you list all your solutions, go back and fill in the 2 columns to the right – why do you think it is a good idea and why it might not work. It's important to think about both the negatives as well as the positives!

Problem:		
Solution	Reasons this is a good idea	Reasons it might not work



STEP 3: Now it's time to select the solution that you think is the best from your brainstorm and begin to plan out your invention!

PART 1: IS IT AN ORIGINAL IDEA?

Before you go too far, you will want to check to see if anyone else has already come up with the same idea. There are a couple of different ways to check. Your parents/guardians or an older sibling can help.

- **1. Google Search:** Type your idea into Google Search and see what comes up. You may need to come up with some keywords that describe your invention.
- 2. Google Patent Search: Visit Patents.Google.com and insert a brief description to see if there are any current patents that are similar to your idea. A patent is an exclusive right granted to an inventor for their solution to a problem. There are lots and lots of inventions so it may be difficult to find one just like yours but it is good practice to take a look. (Sample: Type in "Dog Raincoat" and see what comes up).

PART 2: DESCRIPTION

(adults, kids, anyone)?	n. What does it do? How will it work? How does a person use it? Who is it for



PART 3: DRAWING

With most inventions, it is a good idea to draw it out. What will it look like? Will there be different parts? Is it small? Is it big? You can use the grid below to draw your invention from different angles:

View from the top	View from the bottom
View from the left side	View from the right side
View from the left side	View from the right side
View from the left side	View from the right side
View from the left side	View from the right side
View from the left side	View from the right side



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WANT TO GO A STEP FURTHER? Build a prototype! A prototype is a model of your invention. To make a prototype you may need some help from your parents/guardians or another adult.

ASK YOURSELF:

- · What can you build a model out of?
- How big will it be? (If your invention is really big try to build a smaller version of it!)
- What help will you need to build your model?

Use your **description** and your drawings to guide you.

NOW YOU ARE READY TO SUBMIT YOUR IDEA INTO THE INVENTOR'S SHOWCASE.

To enter please submit your description along with your drawings or a photo of your prototype. *Have fun inventing!*

For information on how to enter to win the Inventor's Showcase scan the QR Code Below!





