



# Inventor's Resource Guide

*Logic will get you from A to B. Imagination will take you everywhere.  
~ Albert Einstein*

# WGVU PUBLIC MEDIA KIDS INVENTION CONTEST

## STEPS TO INVENTING

### 1. Find an idea or problem:

*It has been said that need is the driving force of an invention. Your idea for an invention may come from something that you or someone you know needs. There are several ways to find ideas for inventions:*

a) Ask people if there is anything they need. For most people, problems can be found everywhere.

Questions to get you started:

- What does not work like you would like it to work?
- What problems would you like to have solved by something at home?
- What problems would you like to have solved by something at school?
- What problems would you like to have solved by something at a store, car, building, etc.?
- If you could invent something to make life easier, what would it be?

b) Brainstorming. You can brainstorm alone or with others (parent(s), friend, teacher, sibling, family relative, etc.). An example could be trying to find a problem in the following industries or fields:

- |                 |                  |
|-----------------|------------------|
| ▪ Arts          | ▪ Household      |
| ▪ Communication | ▪ Manufacturing  |
| ▪ Education     | ▪ Safety         |
| ▪ Environmental | ▪ Sports         |
| ▪ Food          | ▪ Transportation |

### Problem Template

Problem(s):
The problem(s) I chose to solve:

### 2. Identify possible solutions:

*Find a way to correct some of the problems. Your ideas for solving the problems can be a big step toward inventing a new or improved product. Keep in mind that your invention does not have to be a product. Instead, it can be a new process for doing something.*

- Keep an open mind and try to come up with a solution to one of the problems. Remember, because something doesn't work the first time or hasn't been tried before, doesn't mean there isn't a solution to the problem or that it won't work.
- There are usually many solutions to a problem. Try to find as many as possible so you can narrow down your list to what you feel is the best one.

### Solution Template

Solution:
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Do you have everything you need to make your idea(s) become a solution?
What materials will you need or use?
Will you need any special tools?

### 3. Research and Plan:

*Before an invention can be successful, you have to make a plan. Your plan should include all the steps you can think of, from beginning to end.*

Don't be surprised if you have to change your plans along the way. Sometimes a plan will not work as well as you first thought it would. Keep an open mind for change as you may discover a better way for completing a certain step.

#### Research Template

What can I read about that will help me with my invention?
Who can I talk to about solving the problem and planning properly?
What steps should I follow?
How can I test my invention?

### 4. Design:

*What solution do you want to design your invention around? Decide what materials you will use for the invention, what it will look like, and how it will work.*

**\*\*Very important: check/verify that your invention is original and that it doesn't already exist**

Reminders:

- Inventors may not use matches, lighters, candles or any other open flame heat source that is flammable.
- Inventions may not contain any biohazard content that could become dangerous.
- Adult supervision is allowed in the building/making of the model or prototype but, the idea and design **must** belong to only the student.

### 5. Create the invention:

*Now the fun and work begins! Follow your plan step by step. You will need to build a model/prototype of your invention or create illustrations detailing your invention. Be sure to follow the Eligibility and Judging "Guidelines" section.*

It is not necessary to spend money to create your invention model to demonstrate how it works. Create your invention using household items or items you can borrow or purchase at a minimal cost.

Remember: Your invention/model may not be perfect at first- this imperfection gives you the opportunity to make changes and improve your invention/model.

## 6. Test your invention:

*Test your invention and make any improvements you feel will help the invention work best. If you have difficulty with a certain part of your invention, ask for help. Try different things until you overcome the difficulty...**most of all, don't give up!***

### Invention Test Template

What I thought would happen with my invention?
How well did it work? (If it didn't work right, don't give up, keep trying different solutions)
What are some possible improvements you could make?
What I thought would happen with my improvements, did they work?
What are some possible future improvements?

### **Invention Contest resource websites:**

<http://wgvu.pbslearningmedia.org/>

<http://asktheinventors.com/>

<http://www.uspto.gov/kids/>

<http://invent.org/>

<http://pbskids.org/designsquad/>

<http://inventivekids.com/>

[www.rubegoldberg.com](http://www.rubegoldberg.com)

<http://www.42explore2.com/invent.htm>

United States Patent and Trademark Office-

[www.uspto.gov](http://www.uspto.gov)