



# The Story of Your Invention

## What is an Invention?

An invention is something new that enables us to solve a problem or do something better or easier.

## The Purpose of This Invention Journal:

All stories have an ending, and in this case, the ending of what you are doing is your invention. But all stories also have a beginning and middle. The purpose of this Invention Log is to tell the entire story of your invention and in it, you will record what you did, why you did it and how you did it, during every step in making your invention. This Invention Log is an important part of the invention process and is a complete and accurate record of the ideas, plans, and processes by which the invention was created. Invention Logs are often used by students to prove they came up with the idea and invention – and often are used as part of the patenting process.

## How to Use This Invention Journal:

The Invention Log is not a book report that is created after you are done, but rather a diary, that is continuously filled in as you work on your invention. Follow the steps in the Invention Process and fill out the various pages as you work on them. When you are done with any page, print your name and the date at the bottom. If you need extra space for any section, please add the information to a page at the end of the journal) and use that for any purpose. Once you are done, put the pages in the order in which you did them and staple them to make a complete Invention Log. This log will also be used as part of the final presentation. Because of this, except for things like a list of materials, all sections should be filled in using complete sentences. Please do not use single words or short phrases. Teams share one Invention Log and should attach the signatures of all inventors.

- To use this journal in Google Docs, please copy and paste the Word Doc into a new Google Doc. The formatting may change slightly.

If you prefer to access and use the ICW National Invention Convention curriculum, please click the link below and go to the top right-hand corner and click “Join for Free”

[National Invention Convention Curriculum inHub 2022-2023](#)

Name of your invention:

The problem that it solves:

**NEED TO ADD UPDATED RUBRIC**

## Statement of Originality:

I promise that the ideas in this Invention Log are my own. (If a team, all should complete.)

Inventor's Name(s):

Date:

Grade:

School and/or school district name:

Name of your invention:

The problem that it solves:

## Requirements and Restrictions:

To participate in Invention Convention there are certain restrictions and requirements:

- Remember that animals are not allowed, so if your invention is for animals, you must demonstrate it in pictures or on a stuffed toy. Demonstrations/presentations may not include human beings or living creatures.
- If doing an actual display board, not a digital display board (using PowerPoint or other program), it must be no wider than 24" with the 12" wings folded in.
- to set on a tabletop.
- Your invention does not have to be a working model, but you need to be able to explain how it would work. If it can be operational, it should be.
- Inventors may not use lighters, matches, candles or any other open flame or heat source or anything material or liquid considered combustible.

- Inventions may not contain biohazards or utilize any materials that are/or could become dangerous.
- Other restrictions include: stun guns, martial arts weapons, guns, replica guns, ammunitions, fireworks, knives of any size, mace, pepper spray, razors, box cutters or balloons.

# Explaining the Problem and Identifying a Solution (Identifying & Understanding)

Episode 1- Step 1 Identifying a Problem <https://youtu.be/Dp5CXRGH6do>

1. What problem are you trying to solve? The more specific you are in describing the problem, the better your solution will be. How did you come up with the problem?
2. What is the result you are trying to achieve? The more specific you are in describing the result you want, the better your solution will be.
3. What are some possible solutions, and which one did you choose to do? How did you decide which solution to try? The more specific you are in describing the solution you will create, the better your invention will be. How did you come up with the solution?
4. Has this solution been done before? If it exists, how is your approach different and better? What research did you do to see if this invention had been done before? Who did you talk to? Where did you look? What Internet site did you search? You should also show 4 pieces of evidence of different types of research – talking with experts, looking things up on the Internet, interviewing friends, and family as to how useful this would be, etc.

# Originality:

**Episode 2 - Step 2 Research & Understanding your Problem:** <https://youtu.be/fq8tyf2RUIw>

It is very important that your solution is original and does not already exist or is substantially different from another invention.

Has this solution been done before? If it exists, how is your approach different and better? What research did you do to see if this invention had been done before? Who did you talk to? Where did you look? What Internet site did you search? You should also show 4 pieces of evidence of different types of research – talking with experts, looking things up on the Internet, interviewing friends, and family as to how useful this would be, etc.

A.

B.

C.

D.

Document any similar inventions you found, describing how yours will be different:

These are great places to research to find out if your idea already exists.

- Libraries (ask a librarian for advice on where to look!)
- The Internet (e.g., [www.google.com](http://www.google.com), [www.bing.com](http://www.bing.com))
- Stores (e.g., [www.amazon.com](http://www.amazon.com), [www.bestbuy.com](http://www.bestbuy.com), [www.walmart.com](http://www.walmart.com), [www.target.com](http://www.target.com))
- Books about your topics (look up at [www.bn.com](http://www.bn.com) or [www.amazon.com](http://www.amazon.com))
- Professionals in the Industry (check out [www.linkedin.com](http://www.linkedin.com) for possible people to interview)
- Trade/Industry-Specific Publications (each industry has topical magazines and websites about the industry)

- United States Patent and Trademark Office (Visit [www.uspto.gov](http://www.uspto.gov) to search for patents and trademarks)
- Domain registrars (e.g, [www.GoDaddy.com](http://www.GoDaddy.com) to see if your product name .com is taken)

# Creating and Improving the Design (Ideating and Designing & Building)

Episode 3 - Steps 3 & 4 Ideating & Designing your solution: [https://youtu.be/wb\\_qfveBZCM](https://youtu.be/wb_qfveBZCM)

Episode 4 - Step 5 Building Your Prototype: <https://youtu.be/QQyTfIC2gQA>

1. Make a drawing of the invention you are thinking about building. Label all the important parts and features. Explain how the invention will work. If you need more space, use another blank page. (If you are using Google Docs or another program, please describe the invention, the different parts involved in the invention's creation and how it would work)
2. What problems or issues might you encounter with this design? Is this design compatible with the principle of sustainability? Who did you talk to about this design? (another student, parent, teacher, etc.) What were their comments about your design?
3. How can you fix those problems or address those issues?
4. Repeat steps 1 to 4 until you have a design that you think will work. You may have to make multiple copies of a blank page until you have a good design. (Students using Google Docs or another program may use this portion to answer question 4.)

# Testing:

## Episode 5- Step 6 Testing & Evaluating Your Prototype: [Testing and Refining](#)

You should test your invention to see what works and what does not. You will modify and redesign.

What are the pros and cons of your invention?

### **Pros:**

1.

2.

3.

### **Cons:**

1.

2.

3.

What is the impact on society and environment?

What is your invention's social value and marketability (refer to glossary of terms for a definition)



Keep repeating the process until your invention works well. If you are unable to build the prototype, please make sure you can describe how and why it would work.

# Communicating:

Episode 6 - Step 7 Communicating Your Invention: <https://youtu.be/pD1ul-DrmJM>

Link to view recording of display board tips: [Graham Fisher - Civitas Market Designer - Display Boards](#)

## **Digital Display Board Template for PowerPoint:**

FOLLOW LINK AND ENABLE EDITING & SAVE TO YOUR COMPUTER.... THEN BEGIN EDITING THE TEXT IN POWERPOINT ON YOUR COMPUTER. If you edit text in the document, from the link without saving first to your computer, you will change the text for any others accessing the document.

<https://inventionconvention.org/ohio/wp-content/uploads/sites/21/Virtual-Display-Board-Template-Ohio-Invention-Convention-1.pptx-.pptx>

## **Video Submission:**

You will create a 6 minute or less video of you talking about and sharing your invention. (See Guidelines for Creating a Pitch Video) [2022-2023 Video Submission Rules and Instructions](#)

Here are some questions that judges will be listening for the answers to in your video. To help you prepare, you might want to write down some of the important parts of your answers so that you have them when you practice giving your presentation:

- How did you come up with the idea for this invention?
  
  
  
  
  
  
  
  
  
  
- What people, situations or conditions does this problem affect?
  
  
  
  
  
  
  
  
  
  
- How did you think up your solution to the problem? Was this your first solution or did you try others?

- Where did you get the materials for the invention?
- Who helped you build the invention and what did they help you do?
- Are there other materials that you could use that are better?
- Who has used your invention and what did they think about it?
- What changes might you want to make to your invention?

Be proud of what you have done. You will use the problem-solving and communication skills you have gained here throughout your life and career. Congratulations on what you've done!

## **SUPPORT VIDEOS FOR PREPARING YOUR VIDEO SUBMISSION:**

[Creating Your Pitch Video](#)

[2021 Tips for Tricky situations when preparing your pitch video](#)

[Link to instruct parents on how to upload their video to YouTube to make a YouTube link of their video for registration](#)

### **Example Video Submissions:**

4<sup>th</sup> Grade: <https://youtu.be/t8WYwUqWVr8> 4:02

5<sup>th</sup> Grade: (Team 1 student in front of camera with prototype & board other on iPad video facetime) <https://youtu.be/AqHjAQwJkqs> 3:43

6<sup>th</sup> grade: <https://youtu.be/DRXU70fpUUs> 5:00

6<sup>th</sup> Grade: <https://www.youtube.com/watch?v=xJgnObM5MZI&feature=youtu.be> 4:43

8<sup>th</sup> Grade: (Team in front of camera) <https://m.youtube.com/watch?v=Sz3Kd3Udndk> 5:06

9<sup>th</sup> Grade: <https://youtu.be/AWrHnOkcjis> 4:41

10<sup>th</sup> Grade: (Team with digital board & recorded video conference) <https://youtu.be/p6GqAYJezQY> 5:48

11<sup>th</sup> Grade <https://www.youtube.com/watch?v=aeqnwm7yBJg&app=desktop> 5:33

## Glossary - Let's Explore Some Terms

These are terms that have to do with inventing. Some of these terms are used in this Invention Log, and some may be terms that you will want to use to describe your process. Please read over these terms before you get started.

**advertise** - the act or practice of calling public attention to one's product, service, need, etc., especially by paid announcements in newspapers and magazines, over radio or television, in social media, on billboards, etc.

**brainstorm** – to produce an idea or way of solving a problem by holding a spontaneous group discussion or individual thinking session.

**data collection** – the process of gathering and measuring information of different variables, in a systematic way that helps one to answer research questions, test hypotheses and evaluate outcomes.

**design** – to plan and make decisions about something that is being built or created. To create the plans, drawings, etc., that show how something will be made.

**durable** – able to withstand wear, pressure or damage.

**engineer** – people who invent, design, analyze, build and test machines, systems, structures and materials to fulfill objectives and requirements while considering the limitations imposed by practicality, regulation, safety and cost.

**entrepreneur** – a person who organizes and operates a business or businesses, taking on greater than normal financial risks in order to do so.

**experiment** – a scientific procedure undertaken to make a discovery, test a hypothesis, or demonstrate a fact.

**hypothesis** – a proposed explanation made on the basis of limited evidence; a starting point for further investigation.

**improvements** – the act or process of making something better; the quality of being better than before.

**interview** – a formal discussion to establish needs or requirements; a report or reproduction of information is obtained.

**inventor** - a person who invented a particular process or device or who invents things as an occupation.

**invest** – to put (money) to use, by purchase or expenditure, in something offering potential profitable returns.

**market** - to advertise and offer a product for sale; to present something in a particular way and make people want to buy the product.

**marketable** - able or fit to be sold or marketed; meets enough market

needs to be able to be sold. **original** – created directly and personally by

a particular artist, not a copy or imitation. **operational** - in or ready for

use.

**patent** - a government authority or license conferring a right or title for a set period, especially the sole right to exclude others from making, using, or selling an invention.

**perseverance** – continued effort to do or achieve something despite difficulties, failure or opposition.

**pitch** – promotion by means of an argument and demonstration; a short verbal dialogue that tells the story and benefits of a product.

**problem** – a matter regarded as unwelcome or harmful and needing to be dealt with and overcome.

**product** – something that is made or grown to be sold or used.

**profit** - money that is made in a business, through investing, etc., after all the costs and expenses are paid, a financial gain.

**profitable** – yielding advantageous returns or results; yielding a financial profit or gain.

**prototype** – an original or first model of something from which other forms are copied or developed; an early version of a product that helps the inventor consider different options for design before finalizing a go-to-market design.

**publication** – the act or process of producing or printing a book, magazine, newspaper, etc. and making it available to the public.

**research** – the study of materials and sources in order to establish facts and reach new conclusions.

**seek** – to search for something or someone; ask for help to achieve something.

**solution** – something that is done to deal with a problem; something that solves a problem.

**source** – the point or place which something starts from; a place, person, or thing from which something originates.

**substantially** - to a great or significant extent.

**test** – a procedure intended to establish the quality, performance, or reliability of something, especially before it is taken into widespread use.

**testimonial** – a written or spoken statement in which you say that you used a product or service and liked it.