



## INDEPENDENT STUDENT LEARNING AT HOME

### LESSON 4: Documentation and Journaling

#### TODAY I WILL LEARN...

Inventors come up with great ideas, but have you ever wondered how they protect these ideas so others do not steal or copy them? Inventors are careful to document every step of their invention process so that they have a record of their work and can prove that their ideas are their own and that they came up with them first.

Today, you will learn about how a patent protects an invention. You will also understand how to use an invention journal to record your invention process so that you can protect your unique invention idea.

#### MATERIALS

##### Resources Provided by YIP:

- Video: Documentation and Journaling – Guided Instructions
- Slide Deck: Documentation and Journaling – Guided Instructions
- Video: USPTO *Science of Innovation*: [https://www.youtube.com/watch?v=3T-NBDGovno&feature=emb\\_logo](https://www.youtube.com/watch?v=3T-NBDGovno&feature=emb_logo) (6:56)
- Link: Science News For Students Explainer, <https://www.sciencenewsforstudents.org/article/explainer-what-patent>
- PDF: YIP Inventor's Journal **OR** Virtual YIP Inventor's Journal

##### Materials from Home:

- Pens/pencils
- Notebook or other paper for writing and drawing
- Optional: ingredients for making a s'more (2 graham crackers, marshmallow, piece of chocolate)

#### INVENTOR PLAN

*Note: You may choose to use the Virtual YIP Inventor's Log in place of or along with the hardcopy of the YIP Inventor's Journal **OR** use another logbook of your own. Logbooks of some kind are required for submission to the Northern New England Invention Convention and the Invention Convention US Nationals.*

##### **Instruction: Patents and Documentation**

1. Watch Video: Documentation and Journaling – Guided Instructions. Refer to Slide Deck if needed for review.
2. Explain to someone at home what a patent is.

3. Read the PDF: *Science News for Students Explainer: What is a Patent?*  
(link: <https://www.sciencenewsforstudents.org/article/explainer-what-patent>)
4. Download the YIP Inventor's Journal and print it to use, **OR** use an alternative journal for your project journey. You will need this logbook as you continue to invent with YIP.
5. Write your name, school and grade on the first page of your YIP Inventor's Journal.
6. Use the following guidelines for your journal:

Suggested Guidelines for your YIP Inventor's Journal:

- Write in ink and do not erase.
  - Leave no empty spaces.
  - Date your notes.
  - Begin your journal with all your problem ideas and the results of your survey.
  - Record your invention ideas and describe how you got them. Also, record changes as time goes by.
  - Explain what your invention does.
  - Explain why your idea is new and original (an invention) or that it is an improvement on an already existing invention (an innovation). List places you have checked to be sure your idea is new (your research process).
  - Write about problems you found and how you solved them.
  - Tell how your invention works.
  - Make a diagram of your ideas whenever possible.
  - Tell what you changed and why.
  - Describe all materials and parts you use. List your costs.
  - Diagram and describe the tests you run. Include the results of each test.
  - Describe your search for a catchy name.
  - Sign and date all entries at the same time they are made and have them witnessed at least once a week.
7. Remember that as you go through the YIP program and work on your own invention project, you should continue to use the YIP Inventor's Journal. Whenever you are working on or even thinking about your invention, you should record your ideas and what you are doing. You can also use other paper and insert it into the journal if needed. Be sure to date each entry and have someone sign your journal activities as you complete them.

**Activity: Teach Me S'more**

1. Explain to a family member how to make a s'more (omit the step of toasting the marshmallow to avoid the need to use fire or other heat source). Imagine that your family doesn't have any idea what a s'more is or how to make it. Consider what steps they must go through to build the treat.
2. If you have the ingredients at home, (ask an adult if it is okay to use the ingredients and to make a s'more treat first), have your family member actually make the s'more following your directions exactly. They may only do what you tell them to do and when you tell them to do it.
3. Or, if you wish, first you will write down the instructions for making a s'more step by step. Then, give these instructions for someone else to read and follow. Ask the other person to build the s'more based only on these instructions.

*Note: If you do not have the ingredients for a s'more at home, try explaining to a family member how to build a peanut butter and jelly sandwich or a ham and cheese sandwich. Again, be sure to ask an adult if it is okay to use these ingredients and make the snack first.*

**CHECK AND REFLECT**

1. Reflect on the Teach Me S'more activity. What was challenging in this exercise? Did the family member build the s'more correctly? Were your instructions detailed or were steps incomplete or left out?