



Inventing

BYU Merit Badge PowWow Official Merit Badge Worksheet

Scout's Name:
Scout's Address:

Instructor's Name:
City: State: Zip:

Instructions

- 1) The Scout is to review the merit badge book before the first week of PowWow.
- 2) Bring this work sheet, paper, and pencil or pen each week.
- 3) Bring a Merit Badge blue card with you on the second week.

Requirement Instructions*

- 1) The first week the class will cover requirements 1, 3abd, 4 and 9.
- 2) Homework will be requirements 2, 6 and 7
- 3) The second week will cover requirements 5 and 8

***Due to possible time constraints at the PowWow, certain requirements that were originally planned to be completed in class may need to be completed as homework. Please LISTEN to ALL INSTRUCTIONS in class to be aware of any changes.**

1. In your own words, define inventing.

What is the role of inventors and their invention in the economic development of the United States?

List three inventions and how they have helped humankind.

1.

2.

3.

2. Read about three inventors.

List which inventors you read about below.

1.

2.

3.

Which inventor did you find most interesting?

What did you learn about this inventor? Report to your counselor what you learned.

3. Do EACH of the following:

a. Define the term intellectual property.

Explain which government agency oversees the protection of intellectual property, the types of intellectual property that can be protected, how such property is protected, and why protection is necessary.

Which government agency:

The types of intellectual property that can be protected:

How such property is protected:

Why protection is necessary:

b. Explain the components of a patent and the different types of patents available.

Components:

Types of patents available:

c. Examine your Scouting gear and find a patent number on a camp item you have used.

With your parent's permission, use the Internet to find out more about that patent.

Compare the finished item with the claims and drawings in the patent. Report what you learned to your counselor.

d. What does patent infringement mean?

4. Discuss with your counselor the types of inventions that are appropriate to share with others without protecting and explain why.

Tell your counselor about one nonpatented or noncopyrighted invention and its impact on society.

5. Choose a commercially available product that you have used on an overnight camping trip with your troop.

Make recommendations for improving the product, make a sketch that shows your recommendations, and discuss your recommendations with your counselor.

Recommendations:

Make a sketch:

Discuss your recommendations:

6. Think of an item you would like to invent that would solve a problem for your family, troop, chartered organization, community, or a special-interest group.

Then do EACH of the following, while keeping a notebook to record your progress:

a. Talk to potential users of your invention and determine their needs.

Then, based on what you have learned, write a proposal about the invention and how it would help solve a problem.

This proposal should include a detailed sketch of the invention.

b. Create a model of the item using clay, cardboard, or any other readily available material. List the materials necessary to build a prototype of the item.

c. Share the idea and model with your counselor and potential users of your invention. Record their feedback in your notebook.

7. Build a working prototype of the item you invented for requirement 6*, then test and evaluate the invention. Among the aspects to consider in your evaluation are cost, usefulness, marketability, appearance, and function.

Cost:

Usefulness:

Marketability:

Appearance:

Function:

Describe how your initial vision and expectations for your idea and the final product are similar or dissimilar. Have your counselor evaluate and critique your prototype.

*Before you begin building the prototype, you must share your design and building plans with your counselor and have your counselor's approval

8. Do ONE of the following:

a. Participate in an invention, science, engineering, or robotics club or team that builds a useful item. Share your experience with your counselor.

b. Visit a museum or exhibit dedicated to an inventor or invention, and create a presentation of your visit to share with a group such as your troop or patrol.

9. Discuss with your counselor the diverse skills, education, training, and experience it takes to be an inventor.

Discuss how you can prepare yourself to be creative and inventive to solve problems at home, in school, and in your community.

Discuss three career fields that might utilize the skills of an inventor.

1.

2.

3.