Inventing

Merit Badge Workbook

This workbook can help you but you still need to read the merit badge pamphlet.

This Workbook can help you organize your thoughts as you prepare to meet with your merit badge counselor.
You still must satisfy your counselor that you can demonstrate each skill and have learned the information.
You should use the work space provided for each requirement to keep track of which requirements have been completed,
and to make notes for discussing the item with your counselor, not for providing full and complete answers.
If a requirement says that you must take an action using words such as "discuss", "show",
"tell", "explain", "demonstrate", "identify", etc, that is what you must do.

Merit Badge Counselors may not require the use of this or any similar workbooks.

No one may add or subtract from the official requirements found in Boy Scout Requirements (Pub. 33216 – SKU 637685).

The requirements were last issued or revised in 2017 • This workbook was updated in June 2017.

Scout's Name:_____ Unit: _____

Counselor's Name: _____ Counselor's Phone No.: _____

http://www.USScouts.Org • http://www.MeritBadge.Org

Please submit errors, omissions, comments or suggestions about this **workbook** to: Workbooks@USScouts.Org
Comments or suggestions for changes to the **requirements** for the **merit badge** should be sent to: Merit.Badge@Scouting.Org

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1. In your own words, define inventing.

Then do the following:

a. Explain to your merit badge counselor the role of inventors and their inventions in the economic development of the United States.

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b. List three inventions and how they have helped humankind.

1. _____

2. _____

3. _____

2. Do ONE of the following:

☐ a. Identify and interview with a buddy (and with your parent's permission and merit badge counselor's approval) an individual in your community who has invented a useful item. Report what you learned to your counselor.

☐ b. Read about three inventors.

☐ 1. _____

☐ 2. _____

☐ 3. _____

Select the one you find most interesting and tell 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. Explain the term patent infringement.

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 oneunpatented 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.

When working on merit badges, Scouts and Scouters should be aware of some vital information in the current edition of the *Guide to Advancement* (BSA publication 33088). Important excerpts from that publication can be downloaded from http://usscouts.org/advance/docs/GTA-Excerpts-meritbadges.pdf.
You can download a complete copy of the *Guide to Advancement* from http://www.scouting.org/filestore/pdf/33088.pdf.