1. In your own words, define inventing.

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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.

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 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.

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⬜ b. Read about three inventors.

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Select the one you find most interesting and tell your counselor what you learned.

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 3. Do EACH of the following:

 a. Define the term intellectual property.

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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.

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| Which government agency: |  |

The types of intellectual property that can be protected:

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How such property is protected:

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Why protection is necessary:

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

Components:

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Types of patents available:

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

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

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

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 d. Explain the term patent infringement.

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

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Tell your counselor about one unpatented invention and its impact on society.

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

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

Recommendations:

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Make a sketch:

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Discuss your recommendations:

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 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.

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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.

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

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This proposal should include a detailed sketch of the invention.

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⬜ b. Create a model of the item using clay, cardboard, or any other readily available material.

List the materials necessary to build a working prototype of the item.

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

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⬜ 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.

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| Usefulness: |  |
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| Marketability: |  |
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| Appearance: |  |
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| Function: |  |
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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.

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\*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.

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⬜ 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.

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

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

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

**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**](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**](http://www.scouting.org/filestore/pdf/33088.pdf)**.**

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