



Model Design and Building

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 2004 • 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

1. Study and understand the requirements for personal safety when using such modelmaker hand tools as knives, handsaws, vises, files, hammers, screwdrivers, hand drills and drill bits, pliers, and portable power tools, and when to use proper protective equipment such as goggles when grinding or drilling.

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Hammers:

Screwdrivers:

Hand drills
and drill bits:

Pliers,

Portable
power tools:

When to use proper protective equipment such as goggles when grinding or drilling:

Know what precautions to take when using flammable or hazardous products such as glue, epoxy, paint, and thinners.

Discuss these with your counselor before you begin your modelmaking project and tell why they are important.

2. Explain the uses for each of the following types of models: architectural, structural, process, mechanical, and industrial.

Architectural:

Structural:

Process:

Mechanical:

Industrial:

Do research into the different types of materials that could be used in making these models.

- 3. With your counselor's advice, select a subject from requirement 4 for your model project (no kits).

Subject: _____

- Prepare the necessary plans to the proper scale.

Make a list of materials and a list of the required tools.

Materials:

Tools:

This model should be your own original work.

Tell why you selected this subject.

6. List at least six occupations in which modelmaking is used and discuss with your counselor some career opportunities in this field.

	Occupation	Career Opportunities
1.		
2.		
3.		
4.		
5.		
6.		

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>.