



Model Design and Building

Merit Badge Workbook

This workbook can help you but you still need to read the merit badge pamphlet (book). No one can add or subtract from the Boy Scout Requirements #33215. Merit Badge Workbooks and much more are below: [Online Resources](#).

Workbook developer: craig@craiglincoln.com. Requirements revised: 2003, Workbook updated: April 2008.

Scout's Name: _____ Unit: _____

Counselor's Name: _____ Counselor's Ph #: _____

1. Study and understand the requirements for personal safety when using such modelmaker hand tools as

knives, _____

handsaws, _____

vices, _____

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. _____

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. _____

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). _____

Prepare the necessary plans to the proper scale,

Make a list of materials

- | | | |
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| <input type="checkbox"/> _____ | <input type="checkbox"/> _____ | <input type="checkbox"/> _____ |
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| <input type="checkbox"/> _____ | <input type="checkbox"/> _____ | <input type="checkbox"/> _____ |
| <input type="checkbox"/> _____ | <input type="checkbox"/> _____ | <input type="checkbox"/> _____ |

and a list of the required tools.

- | | | |
|--------------------------------|--------------------------------|--------------------------------|
| <input type="checkbox"/> _____ | <input type="checkbox"/> _____ | <input type="checkbox"/> _____ |
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This model should be your own original work. Tell why you selected this subject. _____

4. Do ONE of the following:

- a. Make an architectural model. Build a model of a house to a scale of 1/4" = 10" (50:1 metric). Discuss with your counselor the materials you intend to use, the amount of detail required, outside treatment (finish, shrubbery, walks, etc.), and color selections. After completing the model, present it to your counselor for approval.

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

Occupations	Career Opportunities
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Online Resources (Use any Internet resource with caution and only with your parent's or guardian's permission.)

Boy Scouts of America: ► scouting.org ► [Guide to Safe Scouting](#) ► [Age-Appropriate Guidelines](#) ► [Safe Swim Defense](#)
► [Scout](#) ► [Tenderfoot](#) ► [Second Class](#) ► [First Class](#) ► [Rank Videos](#) ► [Safety Afloat](#)

Boy Scout Merit Badge Workbooks: [BSA Troop 780](#) -or- usscouts.org -or- meritbadge.org Merit Badge Books: www.scoutstuff.org

FineScale Modeler: <http://www.finescale.com>

Model Airplane News: <http://www.modelairplanenews.com>

Modeltec magazine: <http://www.thecrookstons.com/modeltec>

Scale Auto Magazine: <http://www.scaleautomag.com>

Organizations and Web Sites: <http://www.modelaircraft.org>

Association of Professional Model Makers: <http://www.modelmakers.org>

International Plastic Modelers' Society USA: <http://www.ipmsusa.org>

North American Model Engineering Society: <http://www.modelengineeringsoc.com>