



4-H PLUS

Project Learner User Sheet

A quick guide to starting your 4-H project

Shop Wood and Metal

What can I do in the 4-H Shop Project?

- Learn about safe practices in the shop from a careful and experienced adult.
- Learn about the care and use of different kinds of tools for working with wood or metal.
- Experiment working with different kinds of wood or metal.
- Make a sketch or drawing of something you would like to build.
- Build a simple shop project.
- Learn how people make a living in the field of woodworking or /metalworking.
- Start collecting some basic shop tools of your own.

Planning

In shop projects you will build items out of wood or metal. Whatever materials you use, you will need to know how to measure, bore holes, shape pieces and attach the pieces together.

Working with wood

Learn to recognize different kinds of wood and their characteristics such as appearance, strength, stiffness, and freedom from warping. Find out the difference between softwoods and hardwoods.

Practice using measuring tools such as a ruler, tape measure or combination square. Use a pencil or awl for marking wood. Learn about the various methods and tools for cutting and shaping your woodworking project.

Explore the difference between constructing a building and making furniture or cabinets.

Learn how to fasten your woodworking project together. Study when to use nails, screws, or glue. Find out how different woods respond to these fastening methods.

Working with metal

When you work with metal you may use different kinds of iron, steel, and aluminum. Each metal has many properties and uses.

Practice using measuring tools for metal work. Use a soap stone or scratch awl to mark metal. Learn about various tools for cutting metal such as a hack saw, file or cold chisel.

Metal work is divided into two major areas; Cold Metal Work and Hot Metal Work. In cold metal work you will work the metal without a lot of heat. Some examples of cold metal work are drilling, filing, or cutting metal with a hacksaw. In hot metal work you may use high heat to bend, cut, or weld metal. Some examples of hot metal work are cutting iron with an oxy-acetylene torch or using a welder to join metal together.

Resources

- Woodworking 4-H Cooperative Curriculum System Publications
- Woodwork & Metalwork books from your school or public library
- Middle School & High School Wood Shop / Metal Shop Instructor
- Take a shop class at school or through community educator

What are some additional resources?



CURRICULUM TASK FORCE
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What do you do now? Look for ideas below.

Write your own ideas for preparing, doing, and sharing in the open areas.

Preparing

Check out woodworking or metalworking books from the library.

Visit a tool store or hardware store.

Make a list of basic tools needed to set up a workshop.

Start now filling out your 4-H record and planning calendar.

Set goals for your project and keep records of your work.

Learn about safe shop practices and caring for tools.

Visit a wood or metal shop and find out about different kinds of wood or metal and their uses.

Practice drawing project plans.

Build a project made of wood or metal.

Set up a workshop in your home.

Experiment working with metal and wood.. Keep a journal of what you learn.

Doing

Draw plans for a cabinet, end table, work bench, deck, or even a house.

Experiment with different finishes.

Work with a 4-H leader or mentor to expand your shop skills.

Sharing

Build a project for someone else.

Help a younger member get started in the 4-H Shop Project.

Give a shop demonstration at your 4-H club meeting.

Use your skills in a 4-H Community Pride Project.