



Wood Science Project Brief

Learning Objectives

- Practice the life skills of decision making, communicating with others, leading self and others, planning and organizing and learning to learn.
- Gain understanding of safety rules that apply in woodworking
- Understand the operation of tools and machines in woodworking
- Identify different wood species
- Develop or enhance wood craftsmanship skills

Fair Projects (building)

- Tool identification poster
- Display a project you have made in woodworking
- Safety rules chart
- Develop a plan for a woodworking project
- Educational poster on wood species
- Label the parts of a drill
- Educational poster on four types of wood stains
- Visit the fair(s) and get ideas

Demonstration Ideas

- How to use a square
- How to use a clamp
- How to sand wood
- Understand applying wood finishes
- Understand how to make a joint
- How to identify wood species
- Show the use of tools in machines in woodworking
- How to complete a small woods project

Field Trips

- Visit a hardware store
- Visit a woodworking shop
- Attend a woodworking show
- Visit a cabinet shop

Ideas for Speech Topics

- Wood species
- Wood finishes
- Wood stains
- Importance of a good finish

Critical Thinking

- Name one of the four types of wood stains and explain its characteristics.
- What is one type of joint and can you describe how it is made?
- What are three safety rules and why are they important?
- Name one wood species and its major uses.
- What are some advantages and disadvantages of using a wood finish?
- What the four things every piece of wood has?
- What are two common tools used for woodworking and what are their uses?

Community Service

- Help younger kids start a woodworking project
- Volunteer at a hardware store
- Make a project for a family member, friend, or neighbor
- Make plaques for awards committee
- Make birdhouses for nursing homes or community park

Science & Technology

How have you used science and technology in this project area?

Examples:

- Communicate the proper use of tools
- Describe the different types of wood stains and what makes them different.
- Identify parts of a tree to be manufactured into boards.
- Using measurement for construction of items.
- Design plans on the computer

Show Me Character

Trustworthiness - includes honesty, promise keeping and loyalty.

- Be dependable when working with dangerous equipment
- Be honest with your project leader and your teammates
- Only use equipment you have been trained to use
- Show off your talents-choose to build from scratch not using kits or pre-assembled projects

Respect - includes courtesy and proper treatment of people and things.

- Don't judge people based on the quality of their projects remember that everyone has tried their best
- Show care and respect for everyone's projects
- Treat others' projects the way you want your project treated

Responsibility - includes the pursuit of excellence, accountability and perseverance.

- Learn safety procedures for all equipment you use
- Be prepared with the materials you need to complete your projects
- Listen carefully to the instructions of your leaders
- Do your part when working in groups

Fairness - involves consistently applying rules and standards appropriately for different age groups and ability levels.

- Take turns using the equipment so everyone has equal time building and constructing
- Follow specifications and guidelines for your project
- Allow everyone access to the same materials

Caring - promoting the well being of people and things in a young person's world. It denotes action and not just feelings.

- Be willing to help friends even if you are competing against them
- Thank leaders and facilitators that help you with your project
- Share your tools and supplies if someone else runs low or is having trouble

Citizenship - includes making the home community and county a better place to live for themselves and others.

- Always clean up your workspaces and messes left behind by others
- Share your talents by building something that you can donate or give as a gift
- Don't use any supplies that are not allowed
- Create waste free environments and think of ways to better your community and environment by using your skills

Show Me Standards

Missouri 4-H members will acquire the knowledge and skills to gather, analyze and apply information and ideas, communicate effectively, recognize and solve problems, make decisions and act as responsible members of society.

4-H members will acquire a solid foundation which includes knowledge of:

- **Science** – Properties and principles of force, motion, matter and energy
- **Mathematics** – The geometric and spatial sense involving measurement, trigonometry, and similarity and transformation of shapes.

Resources

871 Woodworking Unit 1
Y8710 Measuring Up

872 Woodworking Unit 2
Y8720 Making the Cut

872 Woodworking Unit 3
Y8730 Nailing It Together

874 Woodworking Unit 4
Y8740 Finishing Up

All Units
Y620 4-H Project Record,
Y407 Woodworking for Wildlife
LG8750 Woodworking Helper's Group Activity Guide

To Order

Extension Publications online at <http://extension.missouri.edu/explore/shop/> or by phone at 1-800-292-0969
For additional resources check with your local University of Missouri Extension Center or www.4-hmall.org/