



**COLORADO STATE UNIVERSITY**  
**EXTENSION**



# Woodworking

Project units 1-4 are designed for members 8-18 years old.

## Unit 1 - Measuring Up

Inspiring youth to:

- Learn how to organize your shop
- Learn how to identify woodworking tools
- Practice woodworking safety
- Learn how to measure and mark boards, use a square, a hand drill and a hand saw
- Identify different types of nails and screws
- Make a sandpaper block
- Construct a butt joint and use a hammer safely

## Unit 2 - Making the Cut

Inspiring youth to:

- Learn how to select wood based on grain
- Recognize the difference between plywood and fiberboard
- Learn how to develop a plan
- Learn how to use a combination square and make a miter cut
- Learn how to make a curved cut
- Learn how to use a sander
- Learn how to identify types of woodworking tools and much more!

## Unit 3 - Nailing it Together

Inspiring youth to:

- Learn how to stay current with technology
- Learn how to use a T-bevel, powered circular saw, and radial arm saw
- Learn about hinges, hasps, and flush plates
- Learn the difference between clamps
- Learn how to use various types of wood stains and much more!

## Unit 4 - Finishing Up

Inspiring youth to:

- Design a woodworking shop
- Use a router, jointer, portable planer and scraper
- Learn about dovetail joints
- Learn how to use bleaches, strippers, and adhesives
- Learn how to build a wood vehicle, hockey board, step stool or chair and much more!

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# Woodworking

## Project Tips:

- Complete the woodworking e-record and secure in a sturdy binder/notebook.
- Unit 1 has very specific restrictions on the tools used in building an article to display. This is done for reasons of safety and to provide a fair comparison among projects.
- An exhibit which shows evidence of not following these restrictions will not be ranked.
- The internet has many options to find dimensional plans.



## Judging Criteria:

- Straightness, accuracy and smoothness of saw cuts
- Level of difficulty and precision of joints
- Skill employed in the use of nails, screws, gluing and other hardware
- Item free of tool or sandpaper marks
- Appropriate finish evenly applied
- Article attractiveness and quality of exhibit
- Correct proportions and proper wood for the intended use
- Accuracy in measurements, ability to follow instructions, quality of workmanship



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## Resources:

- Exhibit & Judging Requirements
- Record Books
- Manual Information

Located at: [Colorado4h.org](http://Colorado4h.org)





**Beyond  
Ready**

# Woodworking Industry Careers



## Regulation & Inspection

Work with manufacturers, government, retail, research, and more to ensure safe products and structures



## Fabrication & Repair

Create and design products as well as repair and rebuild



## Research

Test out products, designs, and methods; Work with consumer safety and support



## Timber Growth & Harvest

Grow and harvest of different wood products for consumer and industrial use



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## **Degrees/Certifications:**

Construction Technology  
Education  
Forestry  
Horticulture  
Tourism/Business  
CAD Technician/Design  
Mechanical Engineer  
Research



## Arborist

Provide support and work with different businesses for tree growth and conservation



## Supervision & Management

Provide oversight of projects, builds, and staff to complete work



## Retail

Provide sales of products at different retail levels to support the woodworking industry



## Advocacy/Political Appointments

Opportunity to influence policy, safety protocols and standards for the industry