



Level 2

National 4-H Curriculum
BU-06876

Making the Cut



Woodworking Youth Activity Guide

Name _____

County _____



REVIEWED & RECOMMENDED
National 4-H Curriculum

Notes to the Helper

Children need the support of concerned adults at all ages and stages, but never more so than when working with tools and learning technical skills. Youth, while discovering their own talents, will need you to help them understand activities and reconcile problems encountered in doing woodworking projects. Whether helper, teacher, guardian or other trusted adult, you're an invaluable part of the experiential learning process. While there may be trying times ahead in the learning process, there will also be profound satisfaction in helping youth learn how to learn. Thank you for helping youth realize their potential.

Woodworking Wonders Series



Woodworking Wonders encompasses four books for youth including: *Measuring Up*, for grades 2–4; *Making the Cut*, for grades 4–6; *Nailing It Together*, for grades 6–8; and *Finishing Up*, for grades 9–12. There is a Helper's Guide that will give you answers that are required for youth to finish their books, as well as other activities and resources to supplement the youth curriculum.

It is important to note that while these books were written for the age group indicated, they can be used by youth of any age or grade based on abilities and experiences with tools and woodworking projects. Each of the books includes a goal and achievement page that youth can use to monitor their progress and to complete the work outlined in each guide. The journey that begins by opening this book, making plans, charting accomplishments and completing activities, will teach youth not only about the topic at hand, but also will teach skills essential to a successful life. In the following pages, for example, youth will learn planning and organization, record keeping, researching, decision making and communication skills while completing woodworking activities.

• **Making the Cut**

This book is for youth who have mastered the skills from the lessons in *Measuring Up*, level one in Woodworking Wonders. Level two takes youth through the next increment of learning by refining some skills and developing new ones. As with *Measuring Up*, *Making the Cut* emphasizes safety. Assist and help youth learn, but ALWAYS make sure the environment, tools and tool-handling technique include all safety precautions.

• **Helper's Guide**

The *Woodworking Group Helper's Guide* provides additional learn-by-doing activities that can be adapted to home schooling, the classroom, youth groups, clubs or other groups. You'll also find helpful information about characteristics of youth, life-skill development, experiential learning, meeting ideas and, of course, answers needed for the youth guides.

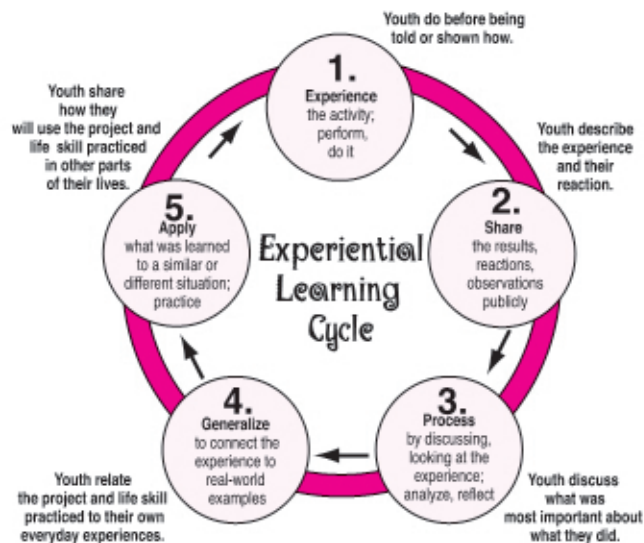
Your Responsibilities

Your responsibilities in the experiential learning process include:

- Assisting youth as they complete the activities in this book
- Directing youth to think through their projects — why something happened or didn't happen.
- Helping youth choose woodworking projects that are appropriate for their skill level
- Helping youth perform difficult tasks
- Helping youth evaluate the quality of their work
- Emphasizing safety rules for youth.

Your enthusiasm and encouragement will mean more to youth than you can imagine. Encourage youth to ask questions and see how they can apply new knowledge to woodworking and their lives. With your help, youth can set goals, identify resources, practice communication skills and evaluate their own progress.

Each chapter is filled with activities so youth can practice what they read about. The lessons are short, but the activities may take some time. The Experiential Learning Model is used to construct the curriculum. The idea behind it is to help youth learn how to help themselves. Research has found that learning-by-doing is one of the best ways to teach skills.



Pfeiffer, J.W., & Jones, J.E., "Reference Guide to Handbooks and Annuals" © 1983 John Wiley & Sons, Inc. Reprinted with permission of John Wiley & Sons, Inc.

With that, we leave you to a task that will be a learning experience for you as well as a pleasure. Thanks for your interest in youth.

Acknowledgements

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Writer and editor:
Denice McConnell, Pennsylvania

Design and Production:
Northern Design Group, Minnesota

Technical Plans:
Bobby Rogers and Michael Bower

Original Design Team: Roger Tormoehlen, Extension 4-H Youth Specialist, Purdue University, and Cherie Hofmann. An earlier version of the series was done by Ronald Hawthorne, volunteer; Art Redinger, Extension Educator, 4-H; Dick Reel, Extension Educator, 4-H; Katherine Rust, volunteer; and Thomas Thurston, volunteer, all from Indiana, Purdue University.

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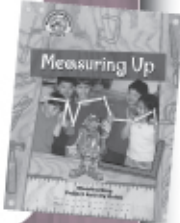


For more on
woodworking, look
for these other
guides in this set



Measuring Up

- Chapter 1 - Getting Started
- Finding Your Place
- Tools and Equipment
- Safety Is No Accident
- Chapter 2 - Working With Wood
- What's Wood?
- Chapter 3 - Practicing Your Skills
- Taking Measure
- Pounding Away
- I Saw, You Saw, Handsaw
- Chapter 4 - Making Connections
- Holding It Together
- Sticking Together
- Butting Up
- Chapter 5 - Finishing Up
- Sanding Tips
- Painting — The Finish
- Project Plans
- Flower Box
- Letter or Napkin Holder
- Picture Frame



Neiling It Together

- Chapter 1 - Careers in Woodworking
- What's the Latest?
- Careers You Can Choose
- Chapter 2 - Making Connections
- Hanging Around
- Clamping Techniques
- Connecting Rods
- Living on the Edge
- Dado Joints
- Chapter 3 - Finishing Flourish
- Staining
- Chapter 4 - Making a Mark
- Getting an Angle on Things
- Plan Magic
- Planes Away
- Chapter 5 - Is It Wood?
- Laminating Wood
- Plywood
- Project Plans
- Bookcase
- Jigsaw Puzzle
- A Box of Many Uses



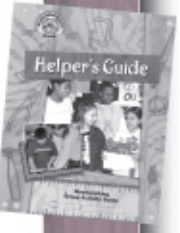
Finishing Up

- Chapter 1 - Planning and Doing
- Tools for the Expert
- Wood 'n Money
- Chapter 2 - Fewer Teels
- Tools of the Trade
- Taking the Edge Off
- Cutting With Power
- Chapter 3 - Joinery
- Dovetail Joints
- Mortise and Tenon Joints
- Chapter 4 - Exotic Woods
- Woods of the World
- The Art of Veneer
- Overlays and Inlays
- Chapter 5 - Advanced Finishing
- Techniques
- Sanding With Power
- Sticking Together
- Refinishing
- Project Plans
- Step Stool/Chair
- Table Hockey Game



Helper's Guide

- Introduction
- Welcome to the Helper's Guide!
- Ages and Stages
- Developing Life Skills
- Defining Experiential Learning
- Chapter 1 - Woodworking Fun
- Making Meeting Plans
- Picnic Tables or Bird Houses?
- Center of Activity
- Woodworking Bingo
- Touring a Lumberyard
- Chapter 2 - More About Wood
- What Wood Would It Be?
- Public Performance
- Woodworking Skillathon
- Woodworking Promotion
- Chapter 3 - Woodworking Games
- Going Public
- Woodworking Pyramid
- Woodworking Quiz Bowl
- Glossary Games



- Answer Key
- Meeting Ideas
- Shop Talk Glossary
- Resources



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Welcome to

+ Making the Cut +

More than likely, you've finished the first book of the Woodworking Wonders series, *Measuring Up!* You're probably in the 4th, 5th or 6th grade and you're ready to learn more about using tools. *Making the Cut* is your next challenge.

This book will help you learn more about woodworking careers, woods, finishing techniques and, of course, tools. Get ready to make some fun projects! In the appendix you'll find plans for improving that napkin/letter holder you first made in level one. You'll also find plans for a birdhouse and a footstool. All of these projects are useful and make great gifts.

How This Book Works

Woodworking is a valuable life-long skill. You can make a career of it or you can apply woodworking knowledge to hobbies and household repairs. We want you to understand how *Making the Cut* is organized.

Each chapter teaches skills about related topics. Following a short lesson, you'll find activities that will help you practice your newly learned skills.

Under each new skill to learn will be these headings:

What You'll Learn



About Woodworking: *this will be a skill you learn from the activity*

About Yourself: *this will be a life skill you'll learn doing the activity*



Toolbox

This will tell you what tools and supplies you'll need to complete the activity.



Activities

Activities follow each lesson. You're required to do up to 21 of the activities and the More Challenges if you use this book for three years. You're required to do seven activities each year.



Talk it Over

Questions that will help you think through what you've learned and how it applies to your life.

Make a letter or napkin holder,



Clovers Mean Safety

You'll also see clovers scattered throughout the book. Clovers tell you to look for safety tips. We want you to be careful and safe with each skill you learn!

a birdhouse,



More Challenges

These are ways to learn more about the woodworking skill or ways to learn and apply life skills. These are optional activities that will add to your understanding.

Interesting Facts

Occasionally you'll see facts that will expand the lesson's information.

or a foot stool.

So, fill out *My Plans* and your *Achievement Program* on the next two pages and get ready for more adventures in woodworking.



My Plans

First Things First. Check these off as you complete them.

- Select your woodworking project helper, if you don't already have one.
- Complete the four steps of My Plan on this page.
- Do at least four woodworking leadership experiences each year you use this book.
- Do at least seven activities each year.
- Complete the minimum number of the activities for each year you use this book. The activities are listed in the Achievement Plan on the next page.

Photo of my project helper

Name: _____

My project helper is: _____

Phone: _____ E-Mail: _____

1. Project Goals

I plan to make these woodworking projects while I use this book:

I plan to complete the *Making the Cut* Achievement Program by _____ Date _____

2. Leadership Experiences

Each year plan, participate or lead at least two of the experiences listed below. You can add your own leadership activities in the last line.

Experiences	Plan to do	Date Completed
Give a demonstration on the proper use of a tool.		
Assist with a woodworking judging activity.		
Arrange an exhibit of a woodworking project.		
Help conduct a woodworking workshop or meeting.		
Recruit a friend to be part of a woodworking group.		
Give a presentation about types of woods.		
Demonstrate the use of safety equipment.		
Assist with a community service project involving woodworking.		
Other activities		

3. Project Highlights

Record and date the most fun things you learn. Include what you make, repair, paint or refinish.



4. Project Review

When you complete My Plans, ask your parent, guardian or woodworking helper to review it. Is it a reasonable plan? Do you have access to tools you'll need? Are the dates you planned to do things OK? Putting two heads together at the planning stage can help avoid conflicts later. Good luck!



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Achievement Program Certificate

I certify that

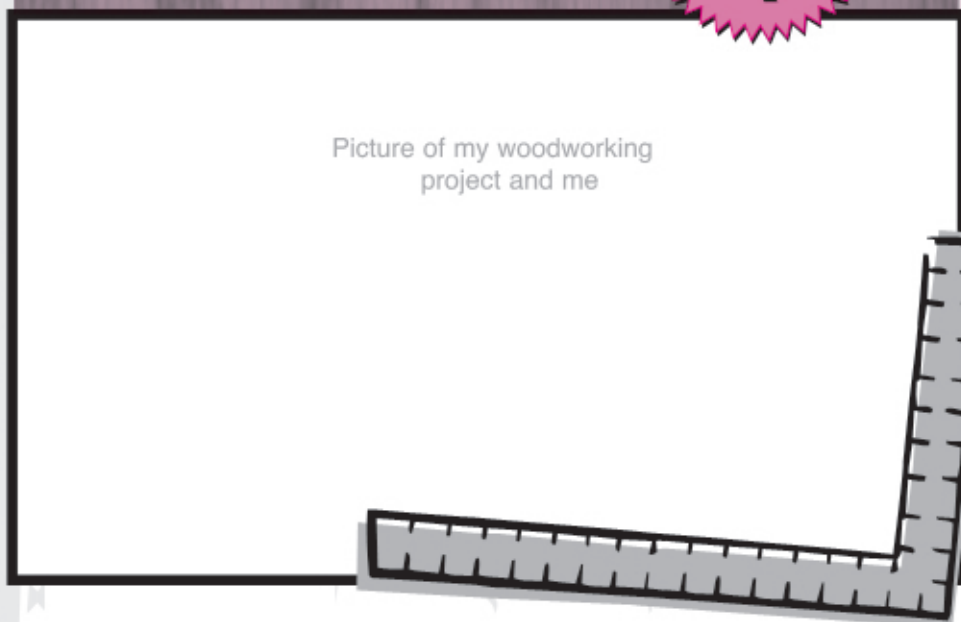
*has successfully completed the requirements of the
Making the Cut Achievement Program.*

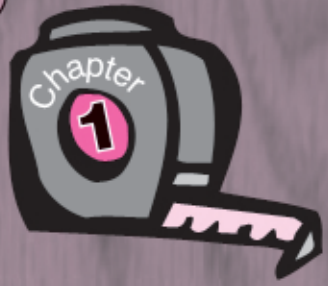
Helper _____

Date _____



Picture of my woodworking
project and me





The Right Tools

Planning helps you think through what you'll need in tools and supplies. Once you start a project, planning will help you not have to stop and gather materials. Organizing helps prepare you mentally to complete the project. You'll practice planning skills as you go through each activity in this book.

Write down what you'll need for each job. Think through each step and gather all your materials in one place. Make sure you have the proper safety gear you learned about in Measuring Up as well as safety equipment you'll learn about in this book. The first activity in this chapter will take you through a planning exercise.

Getting Ready

As you probably know, planning makes things go more smoothly. In this chapter you'll practice your organizing and planning skills. Both will help you prepare to do the projects in this book. This chapter will help you think about careers in woodworking. It's a lot to cover, but you can do it!

What You'll Learn

- About Woodworking: *Identify functions of tools*
- About Yourself: *Organize by category*

The Right Tool

In this activity, pretend you want to build a birdhouse. The tools listed in the Woodworking Tools Word Bank will help you figure what you need for the job. Can you think of other tools to use? Write them in the blanks.

Toolbox

Pencil, catalog or a visit to a local lumberyard

Woodworking Tools Word Bank

- ___ Saw
- ___ Ruler
- ___ Tape Measure
- ___ Wood Rasp
- ___ Brace and Bit
- ___ Hammer
- ___ Nails
- ___ Clamp
- ___ Sanding Paper
- ___ Nail Set
- ___ Glue
- ___ Paint
- ___ Sanding Block
- ___ Pencil
- ___ Try Square
- ___ Utility Square



Use the Word Bank and follow these steps:

1. Circle the tools needed to build this birdhouse.
2. Organize the tools into four categories. On the line in front of each, indicate whether each tool is used for:
 - Measuring/Marking (M)
 - Smoothing/Shaping (S)
 - Fastening (F)
 - Cutting (C)
3. Mark the tools you now have with an asterisk (*).
4. Mark the tools you would like to have someday with a dollar sign (\$).



Discuss with your helper the advantages of having good tools to use. Write down the main points of your discussion.

Discuss a plan for how you can obtain additional tools. What are your ideas?

Discuss how planning can help you achieve your goals. Write down the key points of your discussion.



Share it

How many tools did you have?
What tools will you need to build a birdhouse that you do not have?

Process it

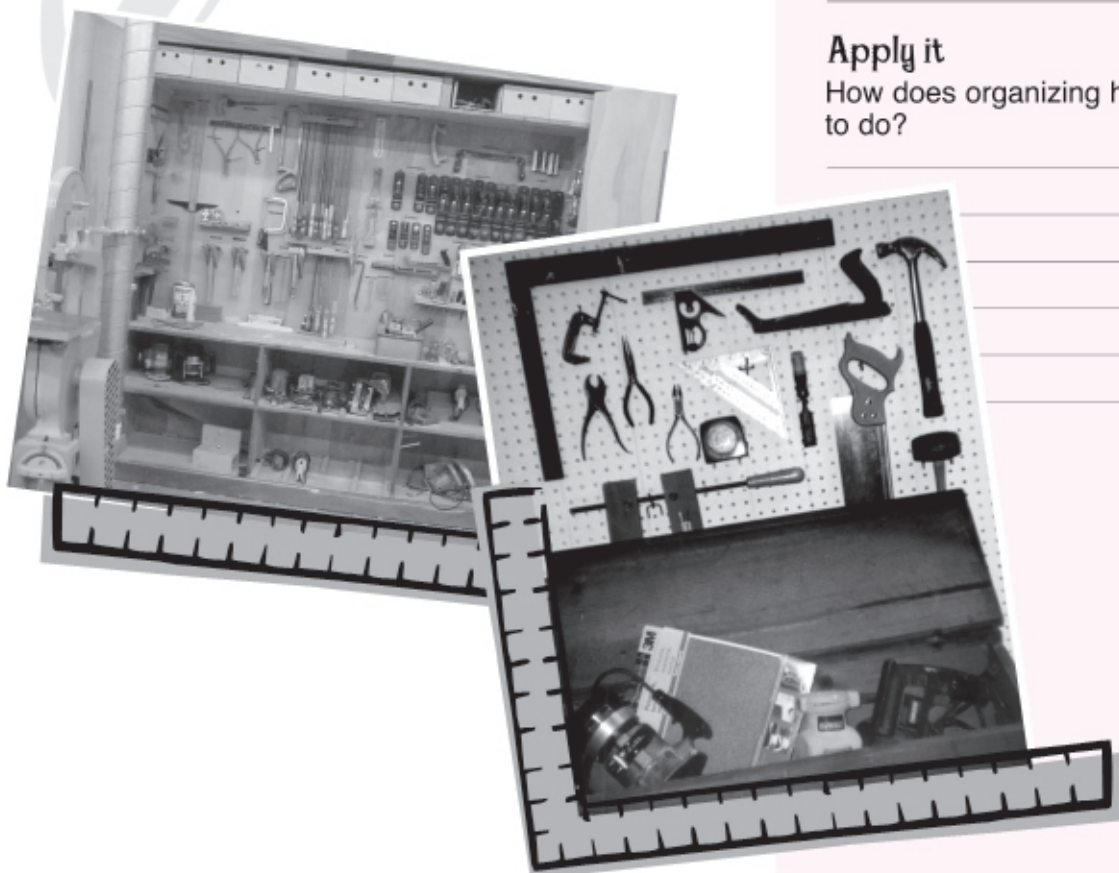
Why is it important to know what tools are used for?
Will the four categories of tools be used in everything you make?

Generalize it

Why is it important to organize items by their function?

Apply it

How does organizing help you plan what you want to do?



Safety First

Practicing safety is serious business. Almost every tool you use is potentially dangerous. As a more experienced woodworker, you can set an example for others. You learned some basic safety rules in *Measuring Up*. Review the safety rules on next page and think about how they apply to your own situation.

What You'll Learn

About Woodworking: *Demonstrate safety techniques*
 About Yourself: *Planning and organizing*

Safety Poster

Make a poster you can put in your work area. Combine safety rules you learned in the first Woodworking Wonders series, *Measuring Up*, with the safety rules in this activity. This will help you remember safety rules and it will remind people who visit your work area about safety rules they are to follow. You might use the poster as an exhibit in a library or home-building supply store.

Safety Presentation

After you've made your poster, you have "the bones" for creating a presentation or skit to demonstrate rules for tools. Plan a way to present those rules to your family or to a woodworking group in an entertaining way. You can be funny, or you can be serious. You can have one actor or many actors. Or, you might choose to give a demonstration of safety equipment. Either way, just get your point across! Write the title of your presentation here along with the tools you'll use.

Use a separate sheet of paper for more space to write the complete skit or presentation.



No woodworking tools needed unless you use them for props, poster paper and colored markers and other poster-making tools, your imagination to make a poster and to create a skit that demonstrates the need for safety



Protecting the eyes, ears and lungs

Rules for Tools

Describe at least one safety rule to follow when using these woodworking tools or materials:

Hand Saw _____

Hammer _____

Sanding Block _____

Adhesives _____

List two pieces of safety equipment you would need to build the birdhouse in the previous activity, *The Right Tool*:

1. _____

2. _____



Talk it Over

Share it

Why did you plan your presentation the way you did?

How did you decide which rules to put on your safety poster?

Process it

What "Rules for Tools" do you consider most important?

Generalize it

What was a situation you experienced where "safety first" was not followed?

What are some safety rules you practice in school? While shopping? While riding your bike?

Apply it

How do planning and organizing help you in school?



More Challenges

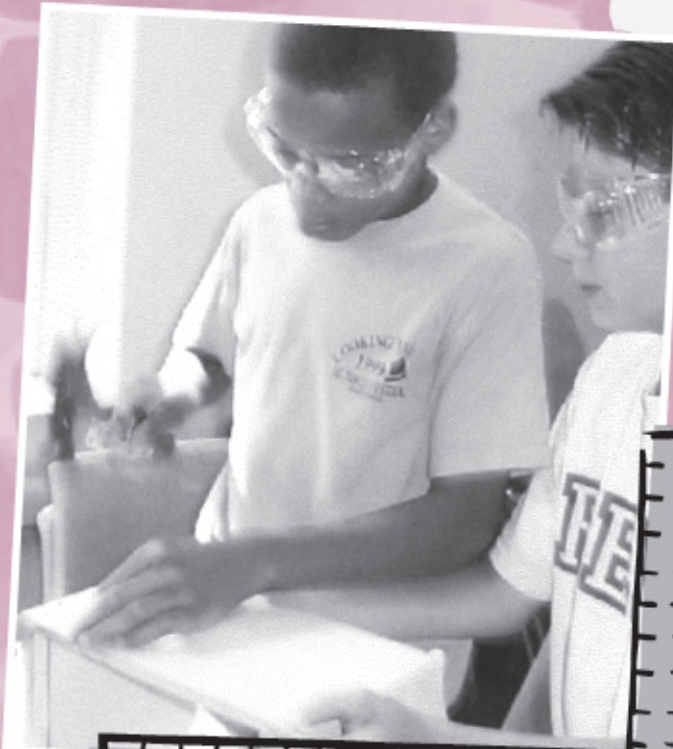


1. Make a work area clean-up checklist. Include the clean-up jobs you will need to do for the project you're working on. Share your checklist with your parent or helper. Did you remember everything?



Safety Rules

- * Always wear goggles or glasses while working
- * Wear close fitting clothing to avoid getting it caught in equipment
- * Use paints, varnishes and adhesives in a well-ventilated or open area
- * Keep your work area well ventilated or use a mask while working
- * Keep your work area neat and clean with everything properly stored
- * Keep sharp tools out of pockets and stored where they won't hurt someone
- * Wear earplugs when working around loud equipment or while hammering





Exploring Woodworking Careers

When you think of woodworking, what types of careers come to mind? Do you think of a small woodworking business that makes crafts for sale? Or, do you picture a person in a factory who makes high-quality kitchen cabinets or furniture?

While both of these ideas are possible careers, there are many other ways to make a living in the woodworking industry.

You'll be identifying possible careers and then exploring some of them in the next activity.



What You'll Learn

About Woodworking: **Learn about potential careers**
About Yourself: **Relating to others**



Pencil and paper



Careers in Wood

Circle the occupations that might require working with wood:



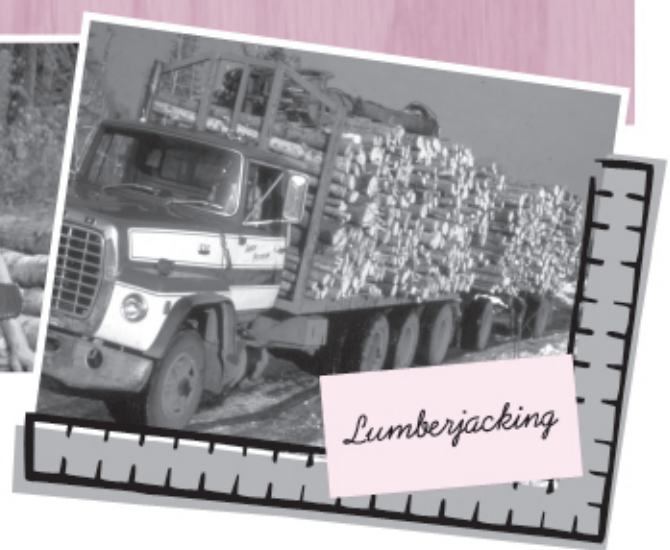
- | | | |
|-----------------|------------|---------------|
| Carpenter | Engineer | Heart Surgeon |
| Cabinet Maker | Architect | Ambassador |
| Forestry Ranger | Astronaut | Baker |
| Secretary | Writer | Retail Sales |
| Rodeo Rider | Accountant | Forester |

Think of some other occupations that deal with wood or forestry products and write them down:



Career Interview

Ask your parent or helper to help you arrange a visit with someone who has made their career in the wood industry. Before visiting the person at work, create a list of questions to ask and put them on the Interview Form. Complete the form. If you're going to interview more than one person, make several copies of the form before you place your questions in the form.



Lumberjacking



Careers in Wood Interview Form



Person's Name: _____

Company Name: _____

Position: _____

Years in position: _____

Prior positions held: _____

What does he or she do on the job each day _____

What he or she likes about the work: _____

What would the person like to change about the work _____

My questions:

Education required: (circle one)

High School Technical School College Graduate School

What skills a person needs to be successful in this job:
On those skills that apply, place an "L" for low or an "H" for high to indicate the level for how important each skill is to the job.

- | | |
|------------------------|-------------------------|
| _____ Solving problems | _____ Using a computer |
| _____ Speaking | _____ Managing people |
| _____ Leadership | _____ Working on a team |
| _____ Making decisions | _____ Teaching others |
| _____ Writing | _____ Using technology |
| _____ Organizing | |

List other skills:



Talk it Over

Share it

What careers did you explore?

How did you decide whom to contact for the interview?

Process it

Why is interviewing a person a good way to learn about careers?

What skills were most important to be successful in this job or career?

What is another good way to learn about careers?

Generalize it

What did you like about the career you studied? Why?

What personality traits fit the person's career?

Apply it

How do your personality traits fit with this possible career?



More Challenges



1. Check the World Wide Web (Internet) for information about careers in the wood or forest industry. List the web sites you find.

