Making the Cut

Woodworking Youth Activity Guide

Name ____________________________

County __________________________

National 4-H Curriculum

BU-06876
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.

Experiential Learning Cycle

1. Experience the activity, perform, do it.
2. Share the results, reactions, observations publicly.
3. Process by discussing looking at the experience, analyze, reflect.
4. Generalize the project and the skill practiced to their own everyday experiences.
5. Apply what was learned to a similar situation or different situation, practice.

Youth do before being told or shown how.
Youth share how they will use the project and the skill practiced in other parts of their lives.
Youth discuss what was most important about what they did.

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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Making the Cut

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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:

- **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.

**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!

**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.

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.

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 __________________________

### 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.

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

### 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!
# Making the Cut
## Achievement Program

- Do at least seven of the required activities and/or the More Challenges each year you use this book.
- Complete at least 21 of the required activities and More Challenges within three years.
- Have your woodworking helper initial the activities as you complete them.

## Required Activities

<table>
<thead>
<tr>
<th>Activities</th>
<th>Date Completed</th>
<th>Helper's Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chapter 1 – Getting Ready</strong></td>
<td></td>
<td></td>
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<tr>
<td>The Right Tool</td>
<td></td>
<td></td>
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<tr>
<td>Safety Poster</td>
<td></td>
<td></td>
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<tr>
<td>Safety Presentation</td>
<td></td>
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<tr>
<td>Rules for Tools</td>
<td></td>
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<tr>
<td>Careers in Wood</td>
<td></td>
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<tr>
<td>Career Interview</td>
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<tr>
<td>Bill of Materials</td>
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<tr>
<td><strong>Chapter 2 – Starting with Wood</strong></td>
<td></td>
<td></td>
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<tr>
<td>Ideas to Build</td>
<td></td>
<td></td>
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<tr>
<td>Collecting Ideas</td>
<td></td>
<td></td>
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<tr>
<td>Identifying Wood</td>
<td></td>
<td></td>
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<tr>
<td>Which Wood?</td>
<td></td>
<td></td>
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<tr>
<td><strong>Chapter 3 – Fitting Together</strong></td>
<td></td>
<td></td>
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<tr>
<td>Driving Screwdrivers</td>
<td></td>
<td></td>
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<tr>
<td>The Right Combination</td>
<td></td>
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<tr>
<td>Checking the Angle</td>
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<tr>
<td>Telling the Story</td>
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<tr>
<td>Making Angles</td>
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<tr>
<td>Cutting on the Angle</td>
<td></td>
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<tr>
<td><strong>Chapter 4 – Finishing Factors</strong></td>
<td></td>
<td></td>
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<tr>
<td>Sanding Results</td>
<td></td>
<td></td>
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<tr>
<td>Pad Sanders</td>
<td></td>
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<tr>
<td>Testing Finishes</td>
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<tr>
<td>Spreading It On</td>
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</tbody>
</table>

## Optional Activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>Page #</th>
<th>Date Completed</th>
<th>Helper's Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>More Challenges</td>
<td></td>
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<td></td>
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</tbody>
</table>
- More Challenges are optional activities. Select and complete any of them. Record the activity and date below and have your helper, leader or parent initial each one. If you’ve thought of some not listed in the book, write those in, too.

Write your own activity here.

Date_________________  Helper’s Initials_________________

Write your own activity here.

Date_________________  Helper’s Initials_________________

Write your own activity here.

Date_________________  Helper’s Initials_________________
Making the Cut

Achievement Program Certificate

I certify that

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

Signature
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.

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.

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

Toolbox

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.

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.

Rules for Tools

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

Hand Saw

Hammer

Sanding Block

Adhesives

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

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

1. 
2. 

Protecting the eyes, ears and lungs

7

8
**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.

---

**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?
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

Careers in Wood

Circle the occupations that might require working with wood:

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

2. Discuss your research with a partner or a small group of students. What are your favorite websites? Why?

3. Interview a member of your family who works in the wood or forest industry. Include their name, position, and years in that role. What skills did they learn in that career? How do those skills relate to their current job?