

# Wood Sawhorse

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Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Description:**

The project is a wood sawhorse that can be used for workspace for future projects. It requires layout and wood working/construction skills.

**Materials:**

4- 1x6x30" DF (or equivalent) - Legs  
2- ½" x 10" x 12" Plywood - End Gussets  
1-2x6x30" DF Top  
40- 1-5/8" Drywall Screws  
Glue  
Sandpaper  
Stain or Other Finish

**Tools:**

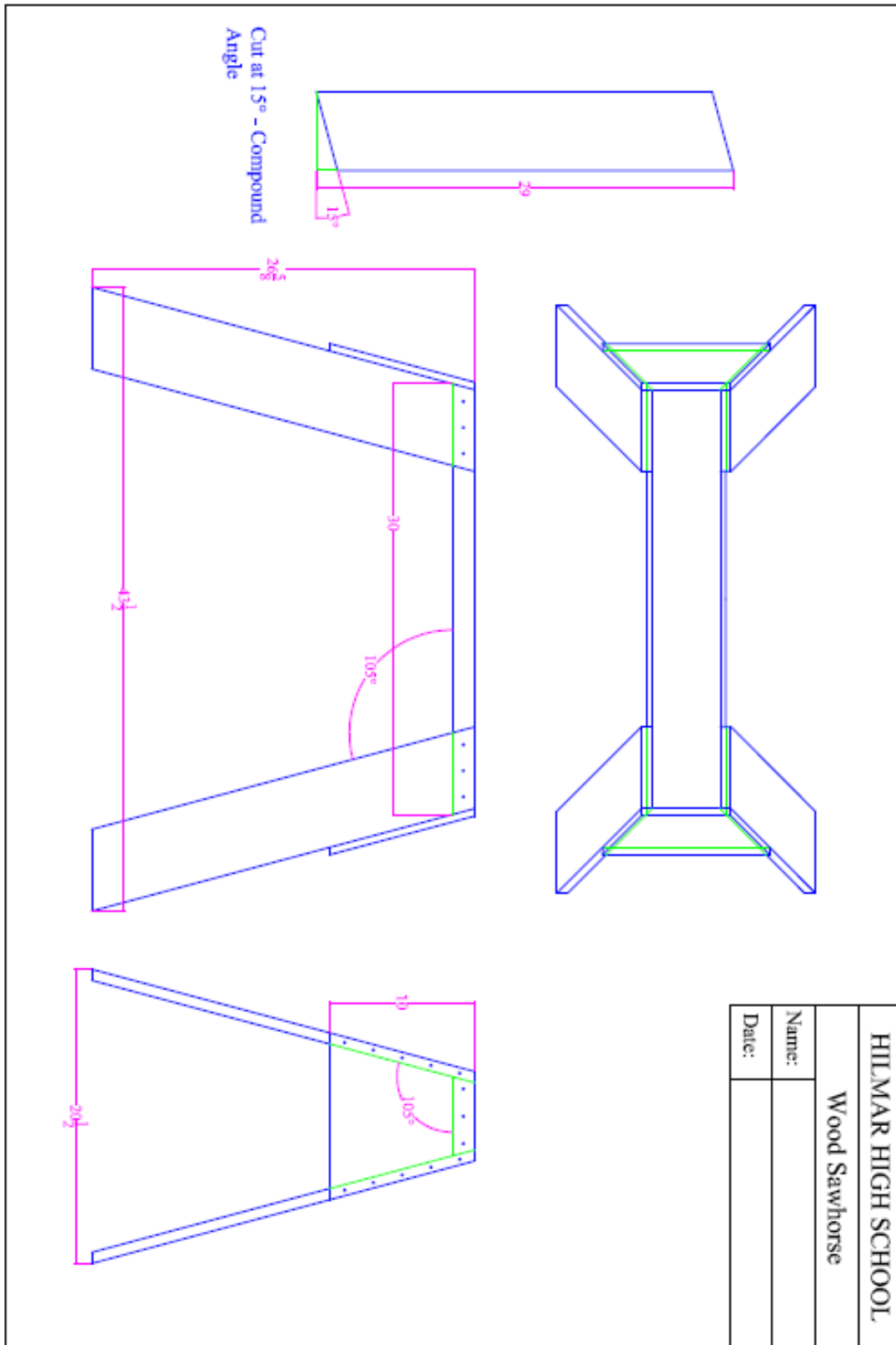
Compound Miter Saw  
Cordless Hand Drill and Drill Bits  
#10 Countersink Drill Bit  
#2 Phillips Bit Driver and Bits  
Cordless Circular Saw  
Palm Sander  
Steel Tape  
Protractor  
Sliding T Bevel  
Framing Square  
Pencil  
Assorted Clamps

Drawing/Photo:





**Plans:**





**Student Worksheet:**

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Complete this worksheet prior to starting the project.

1. What angle do you set the compound miter saw to cut the legs for the sawhorse? \_\_\_\_\_
2. What is a compound angle? \_\_\_\_\_
3. How long should the legs be once they are cut? \_\_\_\_\_
4. What part of the sawhorse is assembled first? \_\_\_\_\_
5. What size and type of fastener is used? \_\_\_\_\_
6. How many screws are used in the whole project? \_\_\_\_\_
7. Why is it important that the 4 legs are the same? \_\_\_\_\_  
\_\_\_\_\_

**Grading Rubric:**

Criteria (tolerance 1/8")	Possible	Score
Top Piece - Accurate Dimensions	5	
Legs, All 4 are the same	5	
Angles - Correct (15°)	5	
Fit up of the legs - Accurate and flush	5	
Countersinks and screw installation on legs	5	
End Gussets - Accurate and Flush	5	
Countersinks and screw installation on Gussets	5	
Cuts clean and square	5	
Workmanship (fit, screws, finish)	5	
TOTAL	45	

## Wood Sawhorse #2 Teaching Notes:

### Agricultural Standards Met:

4.0 Technology - Students know how to use contemporary and emerging technological resources in diverse and changing personal, community, and workplace environments:

4.6 Differentiate among, select, and apply appropriate tools and technology.

5.0 Problem Solving and Critical Thinking - Students understand how to create alternative solutions by using critical and creative thinking skills, such as logical reasoning, analytical thinking, and problem-solving techniques:

5.1 Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks.

5.3 Use critical thinking skills to make informed decisions and solve problems.

6.0 Health and Safety - Students understand health and safety policies, procedures, regulations, and practices, including the use of equipment and handling of hazardous materials:

6.1 Know policies, procedures, and regulations regarding health and safety in the workplace, including employers' and employees' responsibilities.

6.2 Understand critical elements of health and safety practices related to storing, cleaning, and maintaining tools, equipment, and supplies.

6.4 Maintain safe and healthful working conditions.

6.5 Use tools and machines safely and appropriately.

6.6 Know how to both prevent and respond to accidents in the agricultural industry.

B1.0 Students understand personal and group safety:

B1.1 Practice the rules for personal and group safety while working in an agricultural mechanics environment.

B1.2 Know the relationship between accepted shop management procedures and a safe working environment.

B2.0 Students understand the principles of basic woodworking:

B2.3 Know how to identify, select, and implement basic fastening systems.

B2.4 Complete a woodworking project, including interpreting a plan, developing a bill of materials and cutting list, selecting materials, shaping, joining, and finishing.

### Objectives:

By successfully completing this project students will be able to:

- Read a plan to obtain critical dimensions
- Measure and layout a wood project
- Identify by name common woodworking tools
- Select and properly use hand and power tools used for wood work
- Cut and assemble wood components successfully

### Alternate Tools:

A hand saw can be used to cut the wood to replace the compound miter saw and the circular saw. A band saw can replace the compound miter saw on some cuts.

**Safety Review:**

- Use of the hand power drill.
- User of the compound miter saw.
- Use of the circular saw.

**Project Time:**

Demonstration: 15-30 minutes

Build: 3 - 5 hours

**Demonstration Notes:**

(Tips, methods to stage the project)

1. Begin by reviewing materials and tools used for the project.
2. Review the plan and show how the plan describes the project.
3. Demonstrate the proper use of compound miter saw and a circular saw.
4. Demonstrate how to measure and mark the cuts you need, especially the angles.
5. Demonstrate cutting the wood and accounting for the amount the saw takes out of the wood.
6. Demonstrate how to layout and install the legs.
7. Review hand power drill safety as you demonstrate drilling and countersinking the screw holes for the legs and gussets.
8. Remind students of workmanship. Final project should be clean and free of sharp edges.

**Bill of Materials**

(Excel, update with local prices)

Projects: 20

Size	Description	Units	Qty/Project	Cost/Unit	Order	Amount
2 x 6 x 10	Fir	each	0.25	\$ 6.00	5	\$ 30.00
1 x 6 x 10	Fir	each	1	\$ 4.00	20	\$ 80.00
1/2" Ext.	Plywood - Gusset	each	0.04	\$ 50.00	1	\$ 50.00
1/8" x 1/2"	Drywall Screws	5lb Box	0.05	\$ 15.00	1	\$ 15.00
	Glue	bottle	0.01	\$ 5.00	1	\$ 5.00
					0	\$ -
					0	\$ -
	Cost Per Project:	\$ 9.00			TOTAL	\$ 180.00

Project from: Dick Piersma