

2019-2020 Wood Science Judging

Decision making skills and the ability to clearly express one's self are great attributes in many careers today. The 4-H judging teaching technique can help members develop these skills. Judging is making a decision and then telling why you made it. Through this experience youth will learn to appreciate standards, to observe closely and to develop their reasoning ability. 4-Hers will learn about a variety of wood science topics including equipment, safe practices, skills and workmanship. The top ten senior participants from each county are eligible to participate in the state contest. Should ten seniors not be available, juniors may be named to the County Team.

Resources:

- Woodworking Wonders 4-H project series. Beginners Levels 1-2, Seniors Levels 1-4
- Various woodworking website links provided within guidelines

A. Juniors

- 1. Identify 5 of the 13 tools listed in Measuring Up, 4-H Wood Science Project Manual (Level 1, pg. 8).**
- 2. Be able to identify at least one safety practice with the 13 listed tools (Level 1, Pg. 10-11).**
- 3. Be able to identify the parts of a hammer (Level 1 pg. 17) and the parts of a hand saw (Level 1, pg. 21.)**
- 4. Demonstrate one or more of the following skills:**
 - a. Demonstrate how to countersink a nail or properly remove a nail from a piece of wood (Level 1, pg. 18).**
 - b. Measure a piece of wood using the provided measuring tool (Level 1, pg. 14 & 16).**
 - c. Select the correct type and grade of sandpaper and demonstrate how to correctly sand a piece of wood (Level 1, Pg. 29-30).**

5. Be familiar with the following terms in the glossaries of Level 1, pg. 36.

Brace and Bit	Knots	Saw
Butt Joint	Milter Box	Screw
Chisel	Plans	Screw Driver
GFCI	Protractor	Tack Cloth
Grain	Safety Glasses	Wood File

6. Rank a class of 4 finished or unfinished items considering workmanship, appearance, and suitability & quality of the finish.

B. Seniors

1. Given the list of tools found in Levels 1-4, identify and provide one safety practice for each.
2. Be familiar with the terms in the glossary of Levels 1-4.
3. Nail Identification (Resource: <https://www.thespruce.com/nail-sizes-and-types-1824836>)

Brad Nail	Roofing Nail	Common Nail
Box Nail	Duplex Head Nail	Ring Shank Nail
Concrete Nail	Finish Nail	

4. Bolt Identification (Resource: https://www.designingbuildings.co.uk/wiki/Types_of_bolts)

Anchor Bolt	Carriage Bolt	Elevator Bolt
Flange Bolt	Hanger Bolt	Tap Bolt
Lag Bolt	Machine Bolt	Plow Bolt

5. Wood Identification (Resource: <http://www.wood-database.com/#h>)

Birch (Paper)	Teak	Rosewood (Brazilian)
Cedar (Eastern Red)	Poplar	Mahogany (Honduran)
Cherry (Black)	Maple (Red)	Hickory (Bitternut)
Ebony (African)	Oak (Red)	Walnut (Black)

6. Demonstrate one or both of the following two skills:
 - a. Measure, mark and cut wood as directed using various woodworking tools identified in Level 1-4 woodworking books.

- b. Screw two pieces of wood together (Level 2, pg. 18 & 19).**
 - c. Demonstrate the use of a rasp and clamp to smooth the edge of a piece of wood (Level 1, Pg. 21).**
 - d. Demonstrate how to use a T-bevel and protractor to mark an angle cut on a piece of wood (Level 2, Pg. 22-23).**
 - e. Demonstrate how to use a miter box (Level 2, Pg. 22).**
 - f. Demonstrate how to use a chisel (Level 4, Pg. 20).**
- 7. Rank one class of 4 finished or unfinished items considering workmanship, appearance, and suitability & quality of finish. Provide written reasons for your placings.**