

CABINETMAKING

The following rules are for the Wisconsin state contest only. Students/Teams that qualify for the national contest need to adhere to the rules and guidelines for that national contest. The rules can be found in the Skills USA Championships Technical Standards available from [SkillsUSA Publication Sales](#). For both state and national contests, you should also watch for contest updates sent from the Wisconsin SkillsUSA state office. For national contests, you can find contest updates at the national [SkillsUSA](#) website.

PURPOSE of the CONTEST

To evaluate each contestant's preparation for employment and to recognize outstanding students for excellence and professionalism in the field of cabinetmaking and millwork.

GENERAL REGULATIONS Contestants must follow all rules listed below as well as the “**General Regulations**” of the Wisconsin Skills Championships. The “General Regulations” can be found at:

http://www.skillsusawi.org/wordpress/?page_id=130.

ELIGIBILITY

Open to active SkillsUSA members enrolled in programs with cabinetmaking or millwork as the occupational objective.

RESUME

All competitors must create a one-page résumé and submit a hard copy to the technical committee chair at orientation. *Failure to do so will result in a 5 point penalty.*

CLOTHING REQUIREMENT

Work shirt (long or short sleeve) and pants, leather work shoes, and safety glasses with side shields or goggles. Prescription glasses can be used only if they meet the ANSI Z87 standard and are equipped with side shields. If not, they must be covered with goggles. NOTE: Cloth shoes or sandals are not acceptable for this event.

SAFETY REQUIREMENT

Both the instructors and the contestants certify by agreeing to enter this contest that the contestant has received instruction and has satisfactorily passed examination on the safe use of the following power equipment that may be used in the contest:

- | | |
|------------------------|------------------------|
| • Table saw | • Portable Router |
| • Miter saw | • Biscuit Joiner |
| • Pneumatic Nailer | • Portable power drill |
| • Kreg Pocket hole jig | • Orbital power sander |

They also certify that the Wisconsin Association of SkillsUSA Inc., the Wisconsin SkillsUSA Championships technical committee and state judges are released from all responsibility relating to personal injury resulting from the use of the above-listed power equipment. *Contestants will be removed from competition if proper training has not been provided and/or they are using the equipment in an unsafe manner.*

EQUIPMENT AND MATERIALS

- .1. Supplied by the technical committee:
 - . • All necessary stationary power tools, equipment and workstations for contestants
 - . • Project hardware and fasteners
 - . • Project material, including adhesives other than wood glue.
- .2. Supplied by the contestant:
 - . a. Safety glasses
 - . b. Ear plugs or hearing protection
 - . c. Pencils
 - . d. Claw hammer
 - . e. Measuring tape
 - . f. Combination square
 - . g. Nail set
 - . h. Utility knife
 - . i. 4 - 24" pipe or bar clamps
 - . j. One set of flat-blade and cross-head screwdrivers OR handle with interchangeable bits
 - . k. Sanding block & abrasive paper (80/120/150g)
 - . l. Cordless portable drill & extra battery
 - . m. 6"- #2 square drive for Kreg screws
 - . n. Extension cord (10'- 12 or 14 gauge recommended)
 - . o. Palm or orbital sander with abrasives (100/120/150g)
 - . p. Block plane
 - . q. 1/16", 3/32", 1/8", 5/32", 3/16" & 1/4" twist drills
 - . r. PVA wood glue (such as Franklin Tite-Bond)
 - . s. VIX bits 5/64", 7/64", 9/64"
 - . t. Portable router, 1/2" collet, with subbase for template guide
 - . u. 1 inch dia template guide
 - . v. 1/2" dia, solid carbide, downshear, straight spiral router bit.
3. Optional Tools
 - . • Metal rule (6", 12" or 24")
 - . • Shop apron
 - . • Hand saw
 - . • Caliper
 - . • Magnetic driver tip holders; power screwdriver bits
 - . • 3-way plugs
 - . • 1/4" to 1" chisel set
 - . • Band clamp
 - . • Calculator

NOTE: No additional tools will be permitted

SCOPE OF THE CONTEST

Knowledge Performance

The contest will include a written test to measure knowledge of woodworking terminology and processes, safety rules, and the ability to read technical drawings and instructions.

Skill Performance

The contest consists of workstations that require the building of a small cabinet from the materials and drawings supplied. Contestants will demonstrate their ability to perform jobs or skills selected from the following list of competencies as determined by the SkillsUSA Championships technical committee.

Contest Guidelines

- The contestant will read drawings, lay out, cut and bore parts using the available tools. In addition, the parts must be accurately cut, joined assembled, and sanded to tolerances specified.
- Contestant will be given all necessary information by job sheets or prints of projects to be constructed. Contestants will use joinery techniques as specified.
- All contestants will be provided with similar kits of wood and hardware.

1. Design and Layout

- a. Determine materials from technical drawing or blueprint
- b. Sketch shop drawings as required
- c. Layout cuts and joinery on workpieces

2. Cut and Shape Components

- a. Cut project components to specified size and shape: cabinet sides, bottom and back; interior frames, face frames, drawer and door parts, trim and moulding.
- b. Make joinery cuts: rabbets, dados, grooves, miters, tapers, bevels and chamfers. Bore holes for dowels, make slots for biscuits. Bore and countersink / counterbore for screws.
- c. Rout profiles as required.

3. Assemble, Fasten and Install Components

- a. Assemble wood sub-assemblies and main assembly as indicated in the project drawings. (i.e. drawers, interior frames, doors, sides, legs, top, back, shelves, top, back and bottom.)
- b. Use clamps, adhesives, dowels, biscuits and metal fasteners correctly, as required.

- c. Attach moulding and trim as specified.
- d. Install hardware: Hinges, pulls, knobs, drawer slides, shelf supports, handles or other hardware as required.

4. Prepare Surfaces for Finishing

- a. Remove excess glue
- b. Clean surfaces, remove pencil and other marks
- c. Sand all surfaces to remove millmarks and scratches.
Use appropriate grit sequence i.e. 80/ 120/ 150

Contest Project Evaluation

Contestants will be evaluated on the following:

1. Safety

- One point will be deducted for each safety infraction. Safety infractions will be noted by the staff during the competition.

a. Safety equipment

- push sticks--where applicable
- eye protection--face shield, goggles

NOTE: Absence of prescribed personal safety items may cause disqualification.

b. Clothing, personal

- long, unbuttoned sleeves
- shirt-tail out
- loose jewelry, ties, etc.
- hair too long--not tied up or under cap

NOTE: The contestant may be penalized up to five points for not complying with the general clothing requirements.

c. General machine operation and work area

- dirty, messy work area
- safety infractions on machine use
- not using guards

2. Layout and Construction of Project

a. Accuracy in measurement and cutting

- One (1) point will be deducted for each dimensional error, plus or minus 1/64" (.015", 0.4mm) in part dimensions, overall dimensions, fit of joints, placement of hardware.

b. Workmanship and neatness

- **One (1) point off for each instance of the following:**
 - Marks or dents from tools
 - Protruding nails or screws
 - Chipped/broken exposed edges
 - Glue spots in exposed areas
 - Mill marks or cross-grain sanding marks
 - Pencil or other marks not removed
 - Arrises not broken (sanded smooth)

c. Completion

It is understood that not all contestants will complete the project.

For judging purposes, the project will be divided into components, and points will be awarded for each component completed