



Woodworking Display – Illinois*

Individual | Skilled and Technical | Architecture and Construction

To evaluate each competitor's preparation for employment and recognize outstanding students for excellence and professionalism in woodworking.

Eligibility

Open to active SkillsUSA members enrolled in career and technical programs with carpentry, cabinetmaking, or woodworking as the occupational objective.

Standards and Competencies

Standards and competencies assessed will be determined by the project designed by the competitor.

WWD 1.0 — Design and Layout

- 1.1. Create project design
- 1.2. Determine materials from a design
- 1.3. Draw detailed plans
- 1.4. Estimate labor and material cost
- 1.5. Sketch shop plans

WWD 2.0 — Assemble, fasten and install components

- 2.1. Apply clamping devices
- 2.2. Assemble drawers, panel door and joint
- 2.3. Assemble ends, back, bracing and face frame
- 2.4. Fasten parts with nails, screws and staples
- 2.5. Fasten top to casework
- 2.6. Glue boards edge to edge
- 2.7. Install catches, doors, drawer rail and guides, hinges, pulls and knobs, shelves and track and slide from sliding doors
- 2.8. Reinforce joints with block/dowel

WWD 3.0 — Cut and shape components

- 3.1. Cut butt joint, counter top, dado/rabbit joint, doors, doweled joint, and drawer guides and runners (rails)
- 3.2. Cut drawer front, sides, back and bottom
- 3.3. Cut ends, back and interior bracing
- 3.4. Cut face frame, miter joints, molding trim, mortise and tenon joints, frames and panels, shelving, spline joints and tongue and groove joints
- 3.5. Cut out for sink
- 3.6. Edge (shape) counter top
- 3.7. Plane stock
- 3.8. Square solid stock

CPD 4.0 — Finish surfaces

- 4.1. Apply lacquers, paints, stains, varnishes/polyurethanes and wood filler to nail or screw holes
- 4.2. Clean surfaces
- 4.3. Remove excess glue
- 4.4. Sand Surfaces
- 4.5. Swell dents

CPD 5.0 — SkillsUSA Framework

- 5.1. Demonstrate mastery of the essential elements outlined within the SkillsUSA Framework.

Scope of the Competition

The competition consists of three parts: evaluation of the display, notebook and an interview.

Knowledge Performance

Professional Development Career Readiness Assessment – Assesses preparedness to enter the workforce as defined by the SkillsUSA Framework which identifies skills that are essential for success in the workplace and life. (5% of competition score).

There is no written technical skill knowledge exam for this competition.

Skill Performance

The competition is designed to assess the competitor's ability to design and produce a woodworking display and answer questions in a brief interview related to all aspects of their creation of the design. Projects will be evaluated based on originality, degree of difficulty, overall construction, the accuracy of joinery and finishing quality.

Competition Guidelines

Display Design and Workmanship

1. The entire project may be constructed out of any make of wood or laminate that is related to the field of woodworking.
2. Projects can be stained. Stain should be consistent without drips.
3. Projects are to be left unpainted, including primers and other coatings.
4. All copyright laws must be followed in the creation of the design.
5. Construction should match the design sketches and or drawings. Measurements should be accurate and lines up precisely. Appropriate joinery should be used.
6. The display cannot exceed the maximum size of 36" tall x 36" wide x 36" long. At orientation, students will place a box with said dimensions over their display to verify the project meets the size requirement. (Oversize projects will be disqualified).
7. Movement is allowed but not required. Moving parts do not affect the size parameters or integrity of the piece or create a safety hazard.
8. The project shall stand alone. No presentation pieces are permitted.

Notebooks

Each competitor is required to submit a three- ring, 1-inch loose-leaf binder. Pages must be limited to 50 (100 surfaces).

Divider pages do not count toward the maximum number of pages allowed. The notebook should include:

1. Title Page – including competitors name, school, city, state, training program, project name and photo of project.
2. Table of Contents – A tabbed table of contents with page numbers.
3. Section 1: Introduction
 - a. Introduction Statement – Introduction a brief description and processes used to develop the display.
 - b. Integrity Verification Letter – a letter must be signed by the school administrator certifying that the project was designed and constructed by the student. The letter should identify the school, city, state and local advisor. The letter must identify the student to be interviewed and division (middle school, high school or college/postsecondary).
 - c. Report of Hours – Total # of hours spent designing, planning and manufacturing your project.
 - d. Bill of Materials – A listing of all materials used, including dimensions and total material cost
4. Section 2: Process Documentation
 - a. Design sketches and/or drawings – If using stock plans, judges expect to see additional drawings or sketches of details.
 - b. Plan of procedure – This should include detailed descriptions of the step taken in order to complete the project.
 - c. Photos of project development – A minimum of five photos, and no more than 15 should be included.
5. Section 3: Professional Preparedness
 - a. Resume and Career Objectives – Prepare a current resume. The student should include a written statement describing their career objective and plans to achieve that objective and competencies that have been mastered.
 - b. Certifications and Credentials – Provide copies of certifications/ credentials as relevant to preparation for the field.
 - c. References – Letters of reference from teachers, mentors, supervisors, employers or others who can verify the student's skill ability (limit of three).
 - d. Awards and Recognition – Include copies of certificates, documentation on leadership activities, news articles and supporting materials to serve as proof of the competitor's achievements. Reflect the highest level of achievement.
 - e. Work Sample Documentation – Summary of worksite experiences pertaining to teaching and learning. Students should distinguish project documentation that is a result of school-based learning versus work-based learning. Work experience can be supported with photographs as appropriate.
 - f. Community Service – List of activities conducted that provided a benefit to the community.
 - g. Membership and Affiliations – List of organizations and community groups that the competitor is actively involved.

Interview

The student will participate in a three- to five- minute interview. Questions from the judges will be related (but not limited) to design, creation, inspiration, materials, processes, and workmanship. Questions will be determined by the judges prior to the interview and will be the same for all competitors.

Clothing Requirements

Class E: Contest Specific — Business Casual

- Official SkillsUSA white polo shirt.
- Black dress slacks (accompanied by black dress socks or black or skin-tone seamless hose) or black dress skirt (knee-length, accompanied by black or skin-tone seamless hose).
- Black leather closed-toe dress shoes.

Equipment and Materials

1. Supplied by the technical committee:

- a. All necessary information for the judges and technical committee
- b. One 4-foot table

2. Supplied by the competitor:

- a. All competitors must create a one-page resume and submit the resume at the competition orientation
- b. Student-designed and produced display project.
- c. Notebook to serve as professional portfolio (see description above).

Committee Identified Academic Skills

The technical committee has identified that the following academic skills are embedded in this competition.

Math Skills

- Use fractions to solve practical problems.
- Use proportions and ratios to solve practical problems.
- Simplify numerical expressions.
- Solve practical problems involving percentages.
- Measure angles.
- Find area and perimeter of two-dimensional objects.
- Apply transformations (rotate or turn, reflect or flip, translate or slide, and dilate or scale) to geometric figures.
- Construct three-dimensional models.
- Apply Pythagorean Theorem.
- Solve practical problems involving complementary, supplementary and congruent angles.

- Use measures of interior and exterior angles of polygons to solve problems.
- Find arc length and the area of a sector.

Science Skills

None Identified

Language Arts Skills

- Provide information in conversations/group discussions.
- Provide information in oral presentations.
- Demonstrate use of such nonverbal communication skills as eye contact, posture and gestures using interviewing techniques to gain information.

Connections to National Standards

State-level academic curriculum specialists identified the following connections to national academic standards.

Math Standards

- Numbers and operations.
- Algebra.
- Geometry.
- Measurement.
- Data analysis and probability.
- Problem solving.
- Communication.
- Connections.
- Representation.

Source: *NCTM Principles and Standards for School Mathematics*. For more information, visit: <http://www.nctm.org>.

Science Skills

None Identified

Source: *McREL compendium of national science standards*. To view and search the compendium, visit: www2.mcrel.org/compendium/browse.asp.

Language Arts Standards

- Students adjust their use of spoken, written and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes.
- Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes.
- Students apply knowledge of language structure, language conventions (e.g., spelling and punctuation), media techniques, figurative language and genre to create, critique and discuss print and nonprint texts.
- Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge. Students use spoken, written and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion and the exchange of information).

Source: IRA/NCTE Standards for the English Language Arts. To view the standards, visit: www.ncte.org/standards.