





CAREER PATHWAYS SHOWCASE — INDUSTRIAL AND ENGINEERING TECHNOLOGY



SkillsUSA Championships Technical Standards

PURPOSE

To encourage career and technical education students to develop a project that will benefit their school, industry, or community with a focus on their career preparation program. Competitors will then develop a display to use in their community to explain the project, their studies, and its benefits.

Teams must be entered in the appropriate career pathway based on the course enrollment of the students (not on the content of the project). The following career clusters are represented in this competition:

Architecture and Construction: Designing, planning, managing, building and maintaining physical structures, including roadways and bridges and industrial, commercial and residential facilities and buildings.

Manufacturing: Planning, managing and performing the processing of materials into intermediate or final products and related professional and technical and support activities such as production planning and control, maintenance and manufacturing/process engineering.

Science, Technology, Engineering and Mathematics: Planning, managing and providing scientific research and professional and technical services (e.g., physical science, social service, engineering) including laboratory and testing services and research and development services.

Transportation Distribution and Logistics: Planning, management and movement of people, materials and goods by road, pipeline, air, rail and water and related professional and technical support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.

ELIGIBILITY (TEAM OF THREE)

A team consisting of three (3) students enrolled in the same recognized Career Pathways state-approved career and technical education program. The Career Pathways program must be part of an organized chapter of SkillsUSA. Students must be current, active members of SkillsUSA. Each state may send one high school and one college/postsecondary team. A full team must be registered. Teams of fewer than three members will be penalized one-third or two-thirds of the possible points, based on the number of team members missing.

CLOTHING REQUIREMENTS

Class A: SkillsUSA Official Attire

- Official SkillsUSA red blazer or official SkillsUSA red jacket
- Button-up, collared, white dress shirt (accompanied by a plain, solid black tie or SkillsUSA black tie), white shirt (collarless or small-collared) or white turtleneck, with any collar not to extend into the lapel area of the blazer, sweater, windbreaker or jacket
- Black dress slacks or black dress skirt (knee-length at minimum)
- Black closed-toe dress shoes

Note: The official SkillsUSA windbreaker, sweater and black Carhartt jacket are no longer available for purchase in the SkillsUSA Store. However, these clothing items are grandfathered in as previous official SkillsUSA clothing and can be worn in SkillsUSA competitions as directed in this document.

Note: Wearing socks or hose is no longer required. If worn, socks must be black dress socks and hose must be either black or skin-tone and seamless/nonpattern.

These regulations refer to clothing items that are pictured and described at www.skillsusastore.org. If you have questions about clothing or other logo items, call 1-888-501-2183.

Note: Competitors must wear their official competition clothing to the competition orientation meeting. Teams will be judged in official attire at the competitor briefing.

EQUIPMENT AND MATERIALS

- 1. Supplied by the technical committee:
 - a. One approximate 7'x10"-wide X 7'x10"-deep space supplied with one table (two chairs may be available). Each team will be provided the same size space.
- 2. Supplied by the competitors:
 - a. Project for display
 - **Note:** All display components must fit through doors and up steps, as forklifts and carts are not available. (Due to facility rules heavy lift equipment could be restricted to prevent damage to floors.) It is the responsibility of the team, not the event organizers, to deliver all display components to the show floor and remove them at the end of the competition.

- b. If applicable 20' extension cord and a multi-outlet power strip. Note: Power outlets are limited and will only be available as needed to operate a display feature.
- c. All competitors must create a one-page resume. See "Resume Requirement" below for guidelines.

DISPLAY REQUIREMENTS

- 1. The display must fit within the assigned space, leaving room in the booth for the competitors to perform their demonstration.
- 2. Prohibited display components include but are not limited to hazardous or flammable materials, compressed gas, live animals, and biohazardous materials.
- 3. Displays that generate excessive noise are discouraged and may result in a penalty assessment.
- 4. Local schools/consortia are responsible for all equipment to be used, including delivery and installation in the booth area. Teams must bring their own extension cords, power strips, tablecloths and all other needed supplies.
- 5. All display components must fit through doors and up steps, as forklifts and carts are not available. It is the responsibility of the team, not the event organizers, to deliver all display components to the show floor and remove them at the end of the competition.
- 6. After the official competitor briefing by the technical committee, competitors will have approximately three hours to completely install their display. No access to the competition site is allowed before that time. Advisors are not to enter the setup area except for moving in the display. Advisors are encouraged to supervise their teams but are not allowed to assist with the setup of the display. On the day of judging, students will have up to 30 minutes prior to official competition start time for final display preparations.
- 7. All displays must remain set up, attended by at least one student-team member and open to the public all day Thursday. All displays will be closed to the public on Wednesday during judging of the competition. Teardown will be announced by the technical committee. Early teardown or leaving the booth unattended at any time prior to teardown may result in a penalty assessment.

RESUME REQUIREMENT

Competitors must create a one-page resume to submit online. SkillsUSA South Carolina competitors should submit their resume by the deadline published on the competition updates page of our website. Failure to submit a resume will result in a 10-point penalty.

Your resume must be saved as a PDF file type using file name format of "Last Name_First Name." For example, "Amanda Smith" would save her resume as Smith_Amanda. If you need assistance with saving your file as a PDF, visit the Adobe website for more information.

Note: Check the Competition Guidelines and/or the updates page on the state website.

PROHIBITED DEVICES

Cellphones, electronic watches, and/or other electronic devices not approved by a competition's national technical committee are *NOT* allowed in the competition area. Please follow the guidelines in each technical standard for approved exceptions. Technical committee members may also approve exceptions onsite during the SkillsUSA Championships if deemed appropriate.

Penalties for Prohibited Devices

If a competitor's electronic device makes noise or if the competitor is seen using it at any time during the competition, an official report will be documented for review by the director of the SkillsUSA Championships. If confirmed that the competitor used the device in a manner which compromised the integrity of the competition, the competitor's scores may be removed.

SCOPE OF THE COMPETITION

The student teams will use their Career Pathway as the basis of a project that will benefit their class, school, community or industry. The project must highlight an aspect of their Career Cluster training. Upon completion of the project, the students will develop a display and use it within their community to explain their training and their project. This competition will judge mastery of their training, its application, the project's benefit to their community, and display and presentation techniques.

KNOWLEDGE PERFORMANCE

This competition does not require a skill-related written test. Competitors are required to take the SkillsUSA Professional Development Test.

COMPETITION GUIDELINES

- 1. A team consisting of three (3) students enrolled in the same recognized Career Pathways program must present the project; students may only be members of one team.
- 2. The project must be designed and constructed by students who were enrolled during the school year immediately preceding the National Leadership & Skills Conference.
- 3. Guidance by Career Cluster instructors, counselors, and career and academic teachers is encouraged.
- 4. Emphasis is placed on the project, the display and the presentations/demonstrations.
- 5. The project must be related to the program of study of the team members. Registration in the appropriate Career Pathway competition is based on the program of study or the course in which the student team members are/were enrolled.
- 6. Panels of judges, selected from business, labor, education and government, will evaluate projects.
- 7. As stated above, "Guidance by Career Pathway instructors, counselors, and career and academic teachers is encouraged" but advisors may not assist in the setup or presentation.

Project Requirements

- A. Time limit: The presentation/demonstration shall be at least four (4) minutes in length but not exceed eight (8) minutes. *Penalty:* five (5) points will be deducted for each 30 seconds or fraction thereof under four (4) minutes or over eight (8) minutes. Judges will ask questions for a period not to exceed two (2) minutes. Following judging, judges may return to debrief teams on their presentation.
- B. Maximum size of the display area is 7'x10"-wide X 7'x10"-deep. Display components may extend to 8' high. Projects exceeding these limits will be disqualified.
- C. Project Mobility: All projects must be self-contained. There will be no on-site technical support, internet hookup or backup equipment. Each team must be able to maneuver the project into the competition area. For large projects, modular makeup is recommended.

Judging Criteria

Each project will be judged according to its own merits and compliance with the listed criteria, as well as competitively within each Career Pathway. Participants should read the guidelines carefully and make sure the project presentation covers all the criteria.

- A. **Knowledge Attained (150 points):** Students should, through written and oral presentations, demonstrate the achievement of core knowledge related to their Career Pathway.
- B. **Demonstration/Evidence of Technical Skill (150 points):** Through demonstrations, photographs, products and other media, students should show evidence of technology skills appropriate for their career level and pathway.
- C. **Presentation Skills (200 points):** Students should demonstrate appropriate mastery of skills in communication, answering questions and explaining processes related to their projects. Each student team member must take an active role in the presentation/demonstration. Use of technology for the presentation is encouraged.
- D. **Integration of Business and Industry (150 points):** The project must demonstrate evidence of integration and/or cooperation with business and industry. This must include at least *one* of the following:
 - 1. Students working in the industry
 - 2. Business and industry partners providing assistance and guidance at the school
 - 3. Application of the project to an industry setting
- E. **Community Impact (150 points):** The project must reflect impact to the community, related business field or related field of study as determined by the Career Pathway.
- F. **Overall Effect (100 points):** Students project a businesslike and professional manner. Project and presentation are well-organized; students display knowledge of, and enthusiasm for, the project and its contribution to the community, business or related field of study. Displays must clearly convey the purpose (intent) of the project.
- G. SkillsUSA **Professional Development Test (100 points):** The team average score of the Professional Development test.
- H. Three medals (one gold, one silver and one bronze) will be given in each of the six identified SkillsUSA Career Pathway Showcase categories.

STANDARDS AND COMPETENCIES

CPSF 1.0 — Relate core knowledge gained through instructional program related to an identified Career Cluster

- 1.1. Provide written evidence of knowledge gained
- 1.2. Orally share knowledge gained in presentation and when questioned

CPSF 2.0 — Relate technical skills gained through instructional program related to an identified Career Pathway

- 2.1. Use media to provide evidence of skills attained
- 2.2. Use verbal illustrations and examples

CPSF 3.0 — Show effective presentation skills when conveying knowledge and technical skills attained

- 3.1. Answer questions about the project and technical skill
- 3.2. Communicate ideas central to the project and technical skill
- 3.3. Explain processes related to the project and technical skill
- 3.4. Involve all team members in presentation
- 3.5. Use multimedia in presentation to support key points and examples

CPSF 4.0 — Display evidence of integration and/or cooperation with business and industry

- 4.1. Document students' work experience in the industry
- 4.2. List business/industry partners providing assistance and guidance at the school
- 4.3. Explain the application of the project to an industry setting

CPSF 5.0 — Relate the value of the project to the community

- 5.1. Identify and state the value of the project to the community, related business field or field of study
- 5.2. Use verbal and written presentation elements to convey the project's value

CPSF 6.0 —Use professional skills required in a presentation situation

- 6.1. Use appropriate business and professional language
- 6.2. Show professionalism and enthusiasm
- 6.3. Show organization in project display and presentation

CPSF 7.0 — SkillsUSA Framework

The SkillsUSA Framework is used to pinpoint the Essential Elements found in Personal Skills, Workplace Skills, and Technical Skills Grounded in Academics. Students will be expected to display or explain how they used some of these Essential Elements. Please reference the graphic, as you may be scored on specific elements applied to your project. For more, visit: www.skillsusa.org/who-we-are/skillsusa-framework/.



COMMITTEE IDENTIFIED ACADEMIC SKILLS

Math Skills

Dependent upon the presentation topic

Science Skills

Dependent upon the presentation topic

Language Arts Skills

- Provide information in conversations and in group discussions
- Provide information in oral presentations
- Demonstrate use of such verbal communication skills as word choice, pitch, feeling, tone and voice
- Demonstrate use of such nonverbal communication skills as eye contact, posture and gestures using interviewing techniques to gain information
- Analyze mass media messages
- Demonstrate comprehension of a variety of informational texts
- Use text structures to aid comprehension
- Organize and synthesize information for use in written and oral presentations
- Demonstrate knowledge of appropriate reference materials
- Use print, electronic databases and online resources to access information in books and articles

CONNECTIONS TO NATIONAL STANDARDS

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

Math Standards

Measurement

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

Science Standards

- Understands the nature of scientific inquiry
- Understands the scientific enterprise

Source: McREL Compendium of National Science Standards. To view and search the compendium, visit: http://www2.mcrel.org/compendium/.

Language Arts Standards

• Students apply a wide range of strategies to comprehend, interpret, evaluate and appreciate texts. They draw on their prior experience, their interactions with other readers and writers, their knowledge of word meaning and of other texts, their word identification strategies and their understanding of textual features (e.g., sound-letter correspondence, sentence structure, context, graphics).

- 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 conduct research on issues and interests by generating ideas and questions and by posing problems. They gather, evaluate and synthesize data from a variety of sources (e.g., print and nonprint texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience.
- 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.