

SKILLSUSA UTAH 2018 CONTEST DESCRIPTIONS

3-D Visualization & Animation:

The world of 3D is rapidly expanding, and career opportunities exist in a wide range of fields – including architecture, games, product and industrial design, civil engineering, and film and television animation. This contest allows students to step into a real world 3D production environment where creative output must be accomplished within specific timeframes, resources and design constraints. This is a two-person team event and includes a preliminary written exam. Contestants must produce high quality images and an animated short subject using 3D computerized images. Students are evaluated on their technical knowledge, production skills and creative abilities – including visual development and storyboarding. They will also have the opportunity to interface with and get feedback from high-profile judges with successful careers in 3D visualization and animation.

Action Skills:

A five- to seven-minute demonstration of an occupational skill in an area in which a student is training. Contestants use examples, experiments, displays or practical operations to clearly explain their skills using contestant-prepared visual aids.

Advertising Design:

Tests technical skills and creative aptitude just as though contestants worked for an ad agency. In addition to a written test, competitors will recreate a given advertisement on the computer. Competitors are judged on their accuracy, proficiency with industry standard software and ability to meet the given deadline. Contestants also compete in a creative portion of the competition. The creative portion involves the application of creative thinking and development of a design problem. Layout, drawing and illustration skills are used, as well as their ability to create vibrant, effective designs using the computer.

Architectural Drafting:

Contestants will use their drafting skills to solve an Architectural problem. The problem includes a written test, a hand sketch, and drawings EITHER computer-generated or board drafted. If board drafting, please bring all necessary equipment. The contest tests the contestants' problem solving abilities, not simply their CAD skills.

Audio/Radio Production:

Students will produce (plan, write, voice, record, edit, render, etc.) a 5-minute radio production such as a PSA, NPR style soundscape, sound rich/NPR style news story, sound & interview only news story, etc. A 30-Second Ad Spot will be produced and inserted into the production. The complete production requires students to demonstrate their ability to plan a project that meets a specific prompt & runtime; gather, edit and mix a variety of audio sources; and finally, render the completed project to a specified audio file.

Automotive Refinishing Technology:

Contestant will demonstrate the ability to perform jobs and skills based on the task list outlined by the National Institute for Automotive Excellence (ASE) and the National Automotive Technicians Education Foundation (NATEF). The competition includes a series of workstations to assess skills in the following areas: surface preparation, spray gun operation, paint mixing, matching and applying, solving paint applications problems, determining finish defects, causes and cures and utilizing safety precautions. The competitor will also complete an interview, a written estimate and an ASE written exam. The overall appearance of the finished products, speed and proper safety practices will be judged.

Automotive Service Technology:

Contestants will demonstrate their ability to perform jobs and skills based on the task list outlined by the National Institute for Automotive Service Excellence (ASE) and the National Automotive Technicians Education Foundation (NATEF). Workstations consist of on-vehicle, simulations, bench and component testing and a written test. Contestants will be judged on technical competency, accuracy, quality, safety and ability to follow directions. There are thirteen skill stations including the written test.

Aviation Maintenance Technology:

Contestants perform 12 tasks that represent the types of maintenance they will handle in the aircraft industry. The contest scope is consistent with the airframe and powerplant mechanics certification guide published by the Federal Aviation Administration. Aviation maintenance is the only maintenance profession certified by the federal government.

Barbering:

This contest is to evaluate each contestant's preparation for employment and to recognize outstanding students for excellence and professionalism in the field of barbering. The contest is divided into four separate skill performance tests, one written examination and an oral communications competition. The contest will include a written knowledge test of 50, multiple choice questions assessing knowledge of Barbering. Contestant will have 45 minutes to complete the exam. The oral communication test will assess contestant's verbal presentation skills. The two different skills in Haircutting and Hair Styling. Creativity is assessed in the 3 different Men's Haircuts from a photograph.

Broadcast News Production:

The contest is comprised of four student members. Two students serve as the news anchor team, one student will serve as the team's director/technical director, and one student will serve as the floor director. Each team will have two hours to write and produce their rundown before assigned contest time. Teams will produce and complete a three-minute newscast as if it were live. Teams are evaluated on their broadcast writing ability, voice quality, diction, timing and pacing and performance techniques.

Cabinetmaking:

Requires the building of a small cabinet from materials and drawings supplied. Contestants are expected to read the drawings, layout and cut the parts using a table saw, laminate trimmer, hand drill, hinge boring machine and various hand tools. The parts must be accurately assembled, sanded and adjusted to tolerances specified by the judges.

Career Pathways Showcase: Arts & Communication, Health Services, or Human Services:

Student teams will use their course of study 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 contest will judge mastery of their training, its application, the project's benefit to their community, and display and presentation techniques.

Carpentry:

Contestants will frame walls using wood and or metal steel studs, cut and install rafters, gable end overhangs, fascia board and soffit installation, install sheathing and or exterior siding and trim. Demonstration of knowledge of stair construction is required. Contestants will be judged on accuracy, ability to read and interpret blueprints, workmanship, safety and the proper use of tools, equipment and materials.

Chapter Business Procedure:

Student teams of six members, will demonstrate their knowledge of parliamentary procedure in both a written exam and a team demonstration. The written exam will consist of 100 questions related to materials found in Robert's Rules of Order—Newly Revised. Order a copy here. Scores are averaged and included as part of the team's overall score. During the presentation, the team will demonstrate the running of a typical business meeting using a standard order of business. During the presentation, the team must properly insert into the order of business the secretary's minutes, treasurer's report and business items identified by the technical committee. In addition to the debate and transaction of the business items, teams will also properly demonstrate at least 6 different parliamentary procedure motions, including at least one of each of the following: main, privileged, subsidiary, incidental and motions that bring back issues to the floor. Minutes of the demonstration will be read by the secretary upon completion of the demonstration.

Chapter Display:

Selects the outstanding promotional exhibit designed and constructed by SkillsUSA student members. The display is built around and articulates a common theme established annually by SkillsUSA. The contest involves a team of no more than three students setting up the display and one student presenting information about the display in a presentation/interview with judges.

CNC Milling Specialist:

The purpose of this contest is to evaluate each contestant's preparation for employment in Computer Numeric Control Milling. In addition, recognize outstanding students for excellence and professionalism.

This contest will assess the ability to write CNC milling programs, interpret prints (including GDT), and measure/gage parts. Participants will also demonstrate theoretical knowledge of CNC machine configuration, setup and operations.

CNC Technician:

The purpose of this contest is to evaluate each contestant's preparation for employment in Computer Numeric Control Turning and Milling. In addition, recognize outstanding students for excellence and professionalism. This contest will assess the ability to write CNC turning and milling programs, interpret prints (including GDT), and measure/gage parts. Participants will also demonstrate theoretical knowledge of CNC machine configuration, setup and operations.

CNC Turning Specialist:

The purpose of this contest is to evaluate each contestant's preparation for employment in Computer Numeric Control Turning. In addition, recognize outstanding students for excellence and professionalism.

This contest will assess the ability to write CNC turning programs, interpret prints (including GDT), and measure/gage parts. Participants will also demonstrate theoretical knowledge of CNC machine configuration, setup and operations.

Collision Repair Technology:

Contestants demonstrate their ability to perform jobs and skills based on the task list outlined by the National Institute for Automotive Service Excellence (ASE) and the National Automotive Technicians Education Foundation (NATEF). The competition includes a series of workstations to assess skills in the following areas: metal straightening, welding, plastic repair and structural analysis. The overall appearance of the finished product, speed and proper safety practices are judged. There are written tests on estimating, structural analysis, and an ASE exam. The students are also interviewed by the judges.

Commercial Baking:

Contestants are challenged to meet production and quality standards expected by industry. The contest includes both a written examination and practical exercises. Contestants demonstrate their knowledge and skills through scaling, mixing, preparing and baking five products. The products include breads, rolls, cookies, pastry and pies. The student also must demonstrate their cake decorating skills. The contestant must work efficiently to produce quality products in a job-like setting.

Community Service:

The community service competition evaluates local chapter activities that benefit the community. SkillsUSA chapters present their best community service project for the year. Contestants are evaluated on a notebook which reports their chapter's community service project and on a live presentation, which is given to a panel of three judges.

Computer Programming:

Competition consists of project coding and output, a skill-related written test and an interview. The contestants will receive a packet that includes instructions to the written test and each of the two projects. Each project's specifications are written for Visual Basic, Java, C#, C++ and RPG. The projects will be saved on the Desktop in a folder called "SkillsUSA Contestant#_." All projects will be downloaded to a jump drive or diskette (whichever the student prefers) and transferred to a main station to be printed, both code and screen.

Cosmetology:

Students will demonstrate their skills in haircutting, hair styling and long hair design in four separate tests. All work is performed on mannequins so everyone begins with the same model and the same type of hair. Contestants will create one 90 degree women's haircut, one woman's and one man's cut from a finished photo. A display of creativity is seen in the long hair segment of the competition where these future salon professionals demonstrate their own design skills. A parade finale closes the contest with each contestant walking down the stage with their completed mannequins to present to the audience.

Crime Scene Investigation:

Contestants will be directed to the crime scene and briefed as to the situation. The contestants will, as a three-person team, process the crime scene. They will legally search for, properly collect and remove evidence of the crime. One member of the team will be required to lift a latent fingerprint from a pre-selected item of evidence. After the scene has been processed, the contestants will write their report, draw the crime scene sketch and mark their evidence.

Criminal Justice:

For students preparing to be police officers or to work in other areas of criminal justice. Typically, this contest will utilize both written examination and practical exercises to evaluate the contestants' abilities and knowledge of the field. The contestants are scored on their knowledge and application of U.S. Constitutional Law, written and verbal communications skills, and their ability to handle an entry-level law enforcement position.

Culinary Arts:

The competition will encompass both hot and cold food preparation and presentation. Contestants will demonstrate their knowledge and skills through the production of a four-course menu in a full day competition. The contestants will be rated on their organization, knife skills, cooking techniques, creative presentation, sanitation food safety techniques, and above all, the quality and flavor of their prepared items. The high school competitors will work from one menu with standardized recipes. The college/postsecondary students will work from a market basket format and write their own menu and recipes the night before the competition.

Customer Service:

Evaluates students' proficiency in providing customer service. The contest involves live, role-playing situations. Contestants demonstrate their ability to perform customer service in both written and oral forms including telephone and computer skills, communications, problem solving, conflict resolution and business etiquette.

Dental Assisting:

Contestants demonstrate procedures specified in the accreditation standards for Dental Assisting Education Programs of the Commission on Dental Accreditation. Students compete in chair-side assisting; preparation of dental materials; infection control; and emergency, laboratory and office procedures. Skills evaluated may include administrative, clinical or laboratory dental areas.

Diesel Equipment Technology:

Contestants cycle through fourteen stations testing and troubleshooting engines, electrical and electronics systems, power train systems including chassis, transmissions and carriers. Contestants also demonstrate skills in hydraulic systems, vehicle inspections, fundamental failure analysis, brake systems, air-conditioning systems and general shop skills. Contestants also perform a job interview skills and complete a written test.

Digital Cinema Production:

To evaluate each contestant's preparation for employment and to recognize outstanding students for excellence and professionalism in the cinematography/short film production. The contest will be divided into four portions: a written exam that will assess knowledge in industry standards, a storyboard assignment to be completed in teams of two people, an interview with 1 or more judges and a short video (4.5 to 5 minutes) that will be filmed and edited on site. (meaning all work must be done between contest briefing and designated turn in time) All footage must be acquired after the contest has begun and must be filmed within the areas specified by the field assignment.

Electrical Construction Wiring:

Contestants are required to complete a written test of questions formulated from the latest edition of the National Electric Code (NEC), a practical conduit bending exercise and hands-on installation of a conduit system, cabling system and wiring devices. Working from drawings and specification sheets, contestants are required to install an electrical system common in most residential and light commercial projects. Judging is based on general workmanship, accuracy of layout and installation, and adherence to the current NEC and standard industry safe practices.

Electronics Technology:

The contest is divided into five sections: customer service exam, written exam, soldering, breadboarding and troubleshooting. Contestants' will demonstrate their knowledge of analog and digital circuitry; ability to troubleshoot electronic circuits; ability to construct and test experimental circuits; and, ability to design and select circuit components. All aspects of the competition test contestants' abilities to use and calibrate electronic equipment, record and organize data, and demonstrate proper safety practices.

Engineering Technology:

A team of three students demonstrates their ability to design an innovative engineering project and present those ideas along with a display and live model. During the presentation, students are judged on their performance as a professional team, presentation of their project to a panel of judges from the engineering field, their storyboard presentation model, and the overall effect of the presentation.

Entrepreneurship:

A team event testing students' knowledge in starting their own businesses by developing business plans that identify needed products or services in a local market. Emphasis is placed on financial planning and practicality of product/service. Teams give oral presentations based upon their written plans and the team must successfully answer questions by a team of judges in response to typical problem encountered by entrepreneurs during their first year of business.

Esthetics:

The Esthetics competition evaluates the contestants' techniques and professionalism in the field of skin care. Students will be tested in four different areas: an oral skin consultation; a written exam covering the fundamentals of skin care; sanitation; skin analysis; a hands-on basic facial demonstration; and, a daytime and fantasy make-up application.

Extemporaneous Speaking:

Requires contestants to give a three- to five-minute speech on an assigned topic with five minutes of advance preparation. Contestants enter the preparation area one at a time where they are given a speech topic. They are judged on voice, mechanics, platform deportment, organization and effectiveness.

Fire Fighting:

The Fire Fighting contest evaluates the contestant's preparation for firefighting careers through hands-on skill demonstrations and both written and oral presentations. Areas tested include: safety; breathing apparatus; fire streams; ladders, ropes, knots and hoses; fire control; ventilation; emergency medical care and rescue; and protecting fire cause evidence. Contestants are evaluated using standards established by the National Fire Protection Association (NFPA).

First Aid/CPR:

Evaluates a contestant's ability to perform procedures or take appropriate action based on scenarios presented related to CPR (Adult/AED, 2 man system, child and infant CPR) first aid medical emergencies. There is also a written exam. All skills are judged on nationally accepted standards identified by The American Red Cross, The American Heart Association, The American Safety and Health Institute and The National Safety Council.

Graphic Communications:

Student competitors participate in an eight part contest which includes the following segments in alphabetical order:

Digital Press – using a Xerox Digital Press and or other available devices, the student will set up the machine for proper file transfer, creating a finished product that may consist of variable data and or inline finishing along with completing a short written test;

Digital Workflow – the student accesses files and follows instructions to perform preflight operations, reviewing and making corrections as needed for correct output; the students create a file using Adobe InDesign, PhotoShop, and Illustrator on an Apple computer, following instructions to create a file that matches a provided sample; students complete the area with correct output to a digital proof press;

Finishing – the student operates a Baumcut programmable cutter, properly trimming down a sheet to its finished size, set up a table top Baumfolder for a tri-fold and a half-fold and complete a short written test;

Offset Press Operations – using a Heidelberg Printmaster 46-2, the student will set up the feeder and delivery using an 11" X 17" 8pt sheet. Using the RSP system to demonstrate packaging by die cutting a pre printed 4-color offset sheet to complete an actual usable product.

Oral Professional Assessment – the student participates in an interview exercise;

Production Planning – the student will solve a production estimating problem relating to the cost justification of printing a job on a digital press versus an offset press. This area of the contest will be in conjunction with the Digital Press contest;

Technical Knowledge Test – the student completes a general technical knowledge test developed using competencies from the introduction to graphic Communications accreditation area of PRINT-ED.

Graphic Imaging Sublimation:

Purpose: To rate a contestant's preparation for employment and to recognize outstanding contestants for excellence and professionalism in the field of graphic imaging. Contestants are tested on their ability to design and print a tile mosaic and then transfer the design to ceramic tile; contestants also decorate coffee and latte mugs, mousepads, and license plates with pre-printed sublimation transfers.

Eligibility: Open to all active SkillsUSA members enrolled in technical education programs that teach graphic communications skills.

Health Knowledge Bowl:

Tests teams of four students on their collective knowledge of health occupations. Teams are judged on speed and accuracy answering questions in nine categories: (1) Academic Foundations; (2) Communication; (3) Systems; (4) Employability Skills; (5) Legal Responsibility; (6) Ethics; (7) Safety Practices; (8) Teamwork; and, (9) Health Maintenance.

HVACR:

The contest includes a series of testing stations designed to assess skills identified by industry HVAC standards. Industry equipment used during the workstations portion of the contest may include but is not limited to: ice machines, refrigerated display cases, small package HVAC units, furnaces and split-system air conditioning and/or heat pump units and geothermal units.

Industrial Motor Control:

Students demonstrate their knowledge of electrical principles, equipment and industry codes and standards as it relates to the design and installation of motor control systems. Students demonstrate their skills and abilities in applying that knowledge by properly installing motor control equipment and associated enclosures, raceways, pilot devices and circuitry in accordance with accepted industry practice and National Electric Code requirements.

Information Technology Service:

Students identify and correct end-user computing issues and must demonstrate ability to: configure and secure SOHO networks, configure network interfaces, manage client side virtual machines, navigate and modify Windows registry, deploy an operating system to a workstation, use remote assistance software and troubleshooting tools, identify virus and malware origins, understanding of basic security concepts, work with mobile devices, proficiently use commands in Windows, PowerShell, and Linux. Interpersonal skills include interaction with corporate co-workers, IT Consultants and, Consumers.

In addition, the contestants are proctored a Comp TIA Certification exam. Their score on this exam is used as the basis for the written portion of the contest.

Internetworking:

The contest focuses on testing the networking knowledge and hands-on ability of the competitors. The online written portion tests the student's complete knowledge of internetworking concepts. The hands-on component demonstrates the abilities of the contestant to make cables, troubleshoot network systems, configure routers, switches and servers, and to deliver customer service in a technical assistant center environment. The contestants will find errors in WAN and LAN networks; do a full network configuration using routers, switches, and servers; talk a technician through an error they are having on their network; and take an online, certification type test. The national contest is based on the most current CCNA certification. In today's job market system administration skills are needed, therefore server skills that will be scored include, but are not limited to: DNS, Active Directory, and DHCP. For more information including last-minute updates on the national competition, be sure to follow our Facebook page at: <https://www.facebook.com/SkillsUSA.Internetworking>

Job Interview:

Divided into three phases: completion of employment applications; preliminary interviews with receptionist; and, in-depth interviews. Contestants are evaluated on their understanding of employment procedures faced in applying for positions in the occupational areas for which they are training.

Job Skill Demonstration A:

Contestants demonstrate and explain an entry-level skill used in the occupational area for which they are training. Competitors in Job Skill A must demonstrate a career objective in an occupational area that is included in one of the contest areas of the SkillsUSA Championships.

Job Skill Demonstration Open:

Contestants demonstrate and explain an entry-level skill used in the occupational area for which they are training or outside of their training program. Any technical skill may be demonstrated.

Mechatronics:

Requires contestants to understand the new industrial discipline of "mechatronics," the ability to understand complex systems that integrate various elements in the mechanical, fluid power, and controls domain, combined with the ability to work in a team environment with people of different areas of expertise. Mechatronic specialists must therefore have well development skills in pneumatic technology, electrical and electronics systems, mechanical systems and general automation techniques and practices, including systematic troubleshooting methods. This competition consists of three events designed to measure the skills required in the modern automated manufacturing environment. Contestants will be required to assemble, adjust and test an automated machine system, troubleshoot and repair a faulty machine system and take a comprehensive written test. The contest elements have been designed to be as realistic as possible, closely resembling the tasks and activities of modern automation professionals. High school teams of two will compete in a construction phase and a troubleshooting phase. In addition, there will be an individual oral interview.

College/postsecondary teams are required to provide their own PLC that will be used in the construction phase.

Medical Assistant:

Contestants are tested on their skills in the clinical and administrative setting. They are judged on speed, the use of correct safety measures and their ability to interact personally with a patient. The students are also judged on general office skills, communication skills, patient education, knowledge of anatomy and physiology, terminology, instrument identification and equipment, as well as on a variety of clinic procedures and techniques. Contestants need to be able to assess a situation in a short period of time and perform a skill required for that situation within the given time limit. Spelling counts for all testing and documentation.

Medical Math:

Contestants demonstrate their knowledge of general math concepts used in the healthcare fields. They complete a written test that may include the use of ratio/proportion, dosage calculation, metric and household equivalents, Roman numerals, abbreviations, and general math including percentages, among other medical math-related problems.

Medical Terminology:

To evaluate the knowledge of medical terminology and abbreviations of an individual preparing for employment in the health occupations fields.

Mobile Robotics Technology:

The contest will test the ability to perform, exhibit and compile skills and knowledge from the following list of competencies determined by the SkillsUSA Mobile Robotic technical committee. It will evaluate each contestant's preparation for employment in the field of robotics with emphasis on the team approach to problem solving in a work environment.

Motorcycle Service Technology:

Contestants perform tasks representative of those encountered in a dealership's service department. Technical skills include performing scheduled maintenance tasks; use of service, electrical diagnostic and parts manuals; electrical diagnostics; precision measurement; brake service; chassis/suspension service; fuel delivery system inspection and repair; transmission and drive systems; powertrain systems; on Harley-Davidson motorcycles. Judges will look for clean and organized work habits; correct use of reference materials; the ability to follow directions; and good technical skills.

Nail Care:

The purpose of this contest is to evaluate each contestant's preparation for employment and to recognize outstanding students' excellence and professionalism in the field of nail technology. The contest consists of 6 separate segments; oral communication skills, acrylic application, tips applied and overlaid with a light-cured gel, nail polish application, nail art pedicuring and a written exam. The written exam tests basic knowledge of proper sanitation, chemical safety, salon procedures, etc. The practical applications evaluate the contestant's ability to perform the most common nail services in the salon today.

Nurse Assisting:

Students will demonstrate knowledge and skill in performing personal care, encouraging patient independence, assisting with ambulation, and performing other routine tasks, including standard infection control procedures used in basic nurse assisting. Students will demonstrate knowledge and abilities in CPR, and the measurement of vital signs. Contestants will be familiar with basic anatomy, communications skills, legal/ethical issues and employment skills.

Opening & Closing Ceremonies:

A teamwork and oral presentation contest that evaluates team's' understanding of the symbolic representation of the colors and assembled parts of the SkillsUSA emblem. Each team includes seven registered members in the roles of president, vice president, parliamentarian, reporter, treasurer, secretary and historian. The contest is a demonstration of the SkillsUSA Opening and Closing Ceremonies conducted according to the script and description as printed in the SkillsUSA Championships Technical Standards.

Photography:

Contestants demonstrate their ability to use digital SLR's, image editing software (Adobe Photoshop) and professional studio lighting. Students perform on-site photography, portrait studio lighting & posing, process and print digital photos and submit two 11x14 or 16x20 mounted & matted photographs in advance of the contest to be judged and displayed at the competition. Contestants are evaluated on their mastery of entry-level job skills.

Pin Design:

Students present their state-winning pin along with their artwork and participate in an oral presentation regarding all aspects of their creation of the design. He/she will explain how the pin represents the state, its unique qualities and why another SkillsUSA student or adult member would want to wear it.

Plumbing:

Contestants “rough-in” hot and cold water lines with copper tubing and “rough-in” sanitary drainage, waste and vent lines with cast iron and PVC plastic for a water closet, a lavatory, a washer box and a floor drain. Water pipes are pressure tested on completed projects. Professional plumbers and pipefitters judge the contestants on the basis of accuracy, workmanship, proper selection and use of tools and supplies, and proper safety procedures.

Power Equipment Technology:

Tests the student’s skills in all areas of this technology. They must know and understand both 2 & 4 cycle engines. They should know and understand the related theories that go along with the types of engines that they will come across in the industry. They should also understand drive trains, hydraulic, as well as wiring schematics. Contestants will need to be versed in customer service. As they rotate through the various stations they are judged and scored on both physical and oral skills. They are further tested with their ability to read and follow the job tasks that are given.

Practical Nursing:

Contestants will demonstrate their ability to perform procedures/skills consistent with Practical Nursing competencies as determined by State Boards of Nursing. Contestants are judged on their knowledge of medical terminology, body structure and function, nutrition, medications and nursing care. They must also demonstrate their abilities to perform job skills such as: administration of oral, subcutaneous and nasogastric medications; physical assessment; insertion of a nasogastric tube; sterile dressing change and cardiopulmonary resuscitation. At each workstation they are judged on accuracy of their skill, organization, communication and safety.

Prepared Speech:

Requires students to deliver a speech five to seven minutes in length on a common theme established by National SkillsUSA early in the school year. Contestants are evaluated on their ability to present thoughts relating to a central theme clearly and effectively, and on voice, mechanics, and platform deportment.

Promotional Bulletin Board:

Judges bulletin board displays created by SkillsUSA chapters based on the annual SkillsUSA theme. The bulletin boards promote SkillsUSA, career and technical education in general, and related occupational information. An accompanying notebook documents the development and construction of the bulletin board. An oral presentation explains the process, purpose and educational value.

Quiz Bowl:

The Quiz Bowl tests a team of 5 competitors’ ability to quickly respond to questions covering the areas of academic knowledge, professional development and current events. The participants respond to a question by activating a buzzer system. The teams receive one point for a correct answer and lose a point for each incorrect answer. The active rounds (preliminary and finals) are 100 questions each.

Related Technical Math:

On a written test, contestants demonstrate skills required to solve mathematical problems commonly found in the skilled trades and professional and technical occupations. Skills demonstrated include addition, subtraction, multiplication and division of whole numbers, fractions and decimals; applied word problems; percentages; ratio proportions; averages; area; volume; metric measures and traditional (Imperial) measures and trigonometry.

Restaurant Service:

Contestants are tested on skills required in the “front of the house” of a fine restaurant. The focus is on guest service and guest relations in the dining room including: table set up; greeting guests; reservations procedures; presentation of menus; description of food, drinks, soups and specials of the day; taking orders; serving each course and clearing the table after each course; and preparation and presentation of the check and closing remarks. Contestants are judged on personal appearance, tableside manner, professionalism, ease with guests, courtesy, general knowledge and technical and verbal skills.

Robotics and Automation Technology:

Challenges two-person teams to demonstrate operation of a five-axis servo-robot along with a set of sensors and motorized devices to resolve a simulated production process problem. Teams set up and demonstrate operation of a robotic workcell from a word problem. Contestants are required to create a flow chart and sequence of operation. Teams are also judged on efficiency, speed and teamwork.

Screen Printing Technology:

Contestants are tested on their ability to prepare screens, register a multi-color design on a manual four color one station rotary press, and print a multi-color design on a manual six color four station rotary press. Contestants also complete a written technical knowledge test and participate in an oral professional assessment.

T-Shirt Design:

The contest is designed to assess the ability of the competitor to design and produce a drawing of that design, as well as give a presentation regarding all aspects of his or her creation of the design.

Team Works:

Teams of four students will be required to build a construction project, over three days, that will demonstrate their ability to work together as a Team. Each Team will be required to understand the project elements based on a detailed blue print and special instructions presented at the pre-competition orientation. Each Team must write an project completion “action plan” and will present their “action plan” as one of the “key” elements of the competition (all Team members must participate during the presentation). During the “construction project”, the Team will demonstrate their ability to work together as a Team by using their carpentry, electrical, plumbing and masonry skills. Judging is based on the Team’s presentation skills, ability to construct the project per “competition specified” building codes, jobsite safety and cleanliness, organized and correct ordering of materials from the competition material depot, proper use and accountability of tools and equipment and the rate of completion of the project for the Team. Teamworks is not only a Skills USA competition, but a way of learning, for each Team member, to help maximize their skills for their future.

Technical Computer Applications:

Contestants will be expected to demonstrate installation, configuration and use of Windows, Mac OSX and Linux Professional Operating Systems and one or more integrated office suite packages including email, word processing, spreadsheet applications, database applications, web page development, money management applications, presentations applications, internet browser applications, etc. The use of Open source software such as OpenOffice will be preferable. Microsoft Office and other integrated office suites could be used. The utilization of instant messaging, collaboration and social networking software will be required during the contest. Contestants will be expected to perform in teams while demonstrating individual technical skills. The contest will include an oral presentation demonstrating the student’s ability to communicate with others, a hands-on skills demonstration, and a one hour time allotted written examination.

Technical Drafting:

This contest evaluates contestant’s preparation for employment and recognizes outstanding students for excellence and professionalism in the field of technical drafting. The contest will focus on the solution of industry-developed problems by applying appropriate technical drafting skills and tools including computer-aided drafting (CAD).

Telecommunications Cabling:

For students interested in voice and data network cabling and installation. Industry indicates that 80 percent of the problems in computer networks, security systems installations and others are caused by cabling issues not the computers, servers, switches, etc. This competition tests to worldwide industry standards related to cabling for data and voice connections, physical and logical networks and signal transmission. Contestants demonstrate skills in fiber and copper cable termination, pulling and mounting cable, patch panel installation and termination, installing jacks, cable testing and troubleshooting, and providing customer service. Both CAT 5/6e and fiber optics cable are represented. The contest stresses safety in all activities.

Television Video Production:

Teams of two contestants are required to plan and shoot a video (generally 30 seconds or one minute in length) on location to convey the “theme” of the event. Editing is done in the contest area with special emphasis on professional production of the video by industry standards, quality of audio and video, and adequate conveyance of the “theme” to the viewer.

Web Design:

Teams will complete a series of challenges focusing on website usability and accessibility, with at least one challenge related to scripting. Each challenge must be documented, clearly demonstrating the skills as outlined in the SkillsUSA Championships Technical Standards 2015–16.

Welding:

Competitors receive contest drawings and a set of welding procedure specifications. All drawings, welding symbols, and welding terms conform to the latest edition of the American Welding Society standards. Through a series of stations, contestants are tested on various aspects of welding: measuring weld replicas, using weld measuring gauges; laying out a plate and using oxy-acetylene equipment to cut several holes that are checked for accuracy and quality; Gas Metal Arc Welding (GMAW) on steel making welds in various positions using short circuiting transfers; Flux Cored Arc Welding (FCAW) using a shielding gas, making welds in various positions and, using a combination machine capable of providing the correct welding current for shielded metal arc (SMAW) and gas tungsten arc welding (GTAW). Competitors complete the steel project and weld an aluminum project in various positions using a variety of filler metals.

Welding Fabrication:

A team competition that requires three students from each school to use their welding and fabrication skills to build a designed project from the given material. Each team is required to be skilled in the following welding and cutting processes: SMAW, GTAW, GMAW, FCAW and OFC. The students are also required to be proficient in using the common tools of a workshop. A theme-based project will be constructed by the students based on the prints drawn by each team.

Welding Sculpture:

Contestants demonstrate their ability to design and produce a sculpture of that design, as well as give a presentation regarding all aspects of his/her creation of the design. Previously welded sculptures created for regional and state competitions will be displayed for the national competition. A notebook is required displaying evidence of original work. Each participant is interviewed regarding aspects of design and creation of the piece. There will be no live welding on site.