SkillsUSA
MAINE

State Leadership and Skills Championships State Only Technical Standards 2020

High School - College State Only Contest Standards

Automotive Tool Identification

(State Only Contest)

Purpose

To evaluate student's knowledge of various tools used in the automotive trades and be able to correctly identify and correctly spell names of the tools.

First, refer to General Regulations, Page 9.

Clothing Requirement

For Men: According to auto standards……..

Eligibility

Open all SkillsUSA Automotive, Power Equipment, Marine, Motorcycle, Diesel students

Observer Rule

Observers will be allowed to view the test. No talking or gesturing with contestants or any disruptive noise will be permitted.

Equipment and Materials

1. Supplied by technical committee:
    a. Tables and chairs
    b. Test problems and instructions
    c. Scratch paper and pencils
2. Supplied by the contestant:
    a. All competitors must create a one-page résumé and submit a hard copy

Scope and Contest

1. Grading will be based on 2 possible points per correct answer with a deduction of 1 point for incorrect spelling.
2. Test will be based on power-point presentation of random tools or physical display of random tools.
3. Test will identify common tools used in various areas of the automotive Trades.(Automotive, Power Equipment, Marine, Motorcycle, Diesel)
4. Students will have 30 seconds per slide to identify **up to** 100 items from a power-point presentation or physical display of actual tools.

Carpentry Knowledge Test

(State Only Contest)

Purpose

To evaluate the contestant's understanding and ability to solve problems commonly found in the carpentry trades.

Clothing Requirement

For Men: White polo shirt, black dress slacks, black socks, and black shoes.

For Women: White polo shirt, black dress slacks or skirt, black sheer or skin-tone hose or black socks, and black shoes.

Eligibility

Open all SkillsUSA Members

Observer Rule

Observers will be allowed to view the test

Equipment and Materials

1. Supplied by technical committee:
    a. Tables and chairs
    b. Test problems and instructions
    c. Scratch paper and pencils
2. Supplied by the contestant:
    a. All competitors must create a one-page résumé and submit a hard copy

Scope and Contest

A written knowledge test will be required. A sound knowledge of safety, using and maintaining hand tools, using and maintaining power tools, interpreting plans and elevations from blueprints, material handling, concrete and reinforcing materials and forms, floor – wall – ceiling systems, roof framing, exterior finishes, drywall installation, stair systems, installation of windows and doors, and professional skills.

Contest Guidelines

1. The written knowledge test comprises 50 questions.
2. The written knowledge test will provide the student the opportunity to demonstrate his or her problem-solving skills, not just carpentry knowledge.
3. Students have two hours to complete the questions and check their answers.
4. Hand-held calculators may be used.
5. This is a computer based test.
6. No bonus will be given for early completion of the exam.

Class A Pre-Trip Vehicle Inspection

(State Only Contest)

Purpose

To evaluate the contestant's understanding and ability to perform a pre-trip inspection.

Clothing Requirement

Official SkillsUSA light blue work shirt and navy pants; black, brown or tan leather work shoes; and safety glasses with side shields or goggles. (Prescription glasses can be used only if they are equipped with side shields. If not, they must be covered with goggles.)

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 800-401-1560 or 703-956-3723.
Note: Contestants must wear their official contest clothing to the contest orientation meeting.

Eligibility

Open all SkillsUSA Members

Equipment and Materials

1. Supplied by technical committee:
    a. Class A Truck
2. Supplied by the contestant:
    a. Safety Vest
    b. Safety Glasses
    c. Hard Hat
    d. Gloves
    e. Flash light
    f. Tire gauge
    g. Tire inspection club

Scope and Contest

Contest Guidelines

Class B Pre-Trip Vehicle Inspection

(State Only Contest)

Purpose

To evaluate the contestant's understanding and ability to perform a pre-trip inspection.

Clothing Requirement

Official SkillsUSA light blue work shirt and navy pants; black, brown or tan leather work shoes; and safety glasses with side shields or goggles. (Prescription glasses can be used only if they are equipped with side shields. If not, they must be covered with goggles.)

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 800-401-1560 or 703-956-3723.
Note: Contestants must wear their official contest clothing to the contest orientation meeting.

Eligibility

Open all SkillsUSA Members

Equipment and Materials

1. Supplied by technical committee:
    a. Class A Truck
2. Supplied by the contestant:
    a. Safety Vest
    b. Safety Glasses
    c. Hard Hat
    d. Gloves
    e. Flash light
    f. Tire gauge
    g. Tire inspection club

Scope and Contest

Contest Guidelines

Collision Repair Tool Identification

(State Only Contest)

Purpose

To evaluate student's knowledge of various tools used in the automotive trades and be able to correctly identify and correctly spell names of the tools.

First, refer to General Regulations, Page 9.

Clothing Requirement

For Men: According to auto standards……..

Eligibility

Open all SkillsUSA Automotive, Power Equipment, Marine, Motorcycle, Diesel students

Observer Rule

Observers will be allowed to view the test. No talking or gesturing with contestants or any disruptive noise will be permitted.

Equipment and Materials

3. Supplied by technical committee:
    a. Tables and chairs
    b. Test problems and instructions
    c. Scratch paper and pencils
4. Supplied by the contestant:
    a. All competitors must create a one-page résumé and submit a hard copy

Scope and Contest

5. Grading will be based on 2 possible points per correct answer with a deduction of 1 point for incorrect spelling.
6. Test will be based on power-point presentation of random tools or physical display of random tools.
7. Test will identify common tools used in various areas of the automotive Trades.(Automotive, Power Equipment, Marine, Motorcycle, Diesel)

Students will have 30 seconds per slide to identify up to 100 items from a power-point presentation or physical display of actual tools.

Criminal Justice Quiz Bowl

(State Only Contest)

PURPOSE:
To test the knowledge of selected team members on their academic knowledge in the areas of criminal law and criminal procedure; their familiarity with current events in criminal justice; and their knowledge of the SkillsUSA Leadership Handbook.

ELIGIBILITY:
Open to a team of 5 current SkillsUSA members.

OBSERVER RULE:
Observers will be allowed to watch rounds in accordance with Rules 5 and 6, so long as space is available. No talking or gesturing will be permitted. The moderator may remove individual observers and/or close the contest to observers entirely for cause.

CLOTHING REQUIREMENTS:
For Men:

Official red blazer or jacket, black dress slacks, white dress shirt, plain black tie with no pattern or SkillsUSA black tie, black socks, and black shoes.

For Women:

Official red blazer or jacket, black dress slacks or skirt, businesslike white collarless blouse or white blouse with small, plain collar which may not extend onto the lapels of the blazer, sheer black or skin-tone hose, and black shoes.

EQUIPMENT AND MATERIALS:

1. Supplied by the Technical Committee:
   (a) One table for each team with 5 chairs at each table
   (b) One table for the Quiz Bowl apparatus with 2 chairs for the moderator and the apparatus operator/timekeeper
   (c) One table for team check-in and scorekeeping with 3 chairs for staff
   (d) Observer chairs
   (e) Score sheets, pencils, and calculators for scorekeepers
   (f) Paper and pencils for team members
   (g) Copies of source documents from which questions and answers were drawn

2. Personnel required:
   (a) Moderator
   (b) Quiz Bowl apparatus operator/timekeeper
   (c) A minimum of 2 scorekeepers

AWARDS:
Gold, Silver, and Bronze medals will be awarded for 1st, 2nd, and 3rd place. The winner of this contest does not advance to the National SkillsUSA Leadership and Skills Conference.

RULES OF THE CONTEST:

1. A school may enter a single team composed of 5 registered SkillsUSA members, each of whom is or has been enrolled in a course in the Government and Public Safety Pathway during the current academic year. However, as long as the contest remains a "state only" competition, any registered SkillsUSA member may compete, regardless of program enrollment.

2. In order to compete, a team member must meet the Submission and Clothing Requirements as specified above. Any team member found ineligible to compete may remain in the competition room as an observer if space permits.

3. Prior to team check-in, the moderator and timekeeper will assign a team number to each team table. After a team has checked in for the contest, its members shall sit at the table bearing their team's number.

4. The contest shall consist of one or more preliminary rounds and/or one final round. A maximum of 8 teams may compete in a preliminary round. If more than 8 teams are registered, additional preliminary rounds will be added, and the teams will be divided as evenly as possible across the preliminary rounds. Teams will be assigned to a preliminary round in numerical order by team number.

5. In the event of multiple preliminary rounds, only the teams competing in each preliminary round and their affiliated observers will be allowed in the competition room. Teams competing in subsequent preliminary rounds and their affiliated observers will remain outside the competition room until their round is called.

6. The 3 highest-scoring teams in each preliminary round will advance to the final round, which will be open to all observers.

7. Each preliminary round and the final round will consist of 40 questions: 24 academic knowledge questions, 12 current events questions, and 4 Leadership Handbook questions. A random sequence generator will be used to establish the order in which the questions will be read. The same questions, in the same order, will be used for all preliminary rounds.

8. All academic knowledge questions shall be drawn from *Introduction to Criminal Justice*, 6th edition, by Robert M. Bohm and Keith N. Haley. Current events questions shall be drawn from one or more of the following sources:
   (a) The FBI Law Enforcement Bulletin, available at www.fbi.gov/stats-services/publications/law-enforcementbulletin, for the months of July-December of the calendar year preceding the contest

   (b) The Crime Report, Crime and Justice News tab, available at www.thecrimereport.org/news/crime-and-justice-news, for the 30 days preceding the contest
   (c) The "Top News" column on FoxNews.com's Crime & Courts page, at www.foxnews.com/us/crime/index.html, for the 30 days preceding the contest

9. There will be no true/false or multiple choice questions.

10. The moderator will read each question. Teams will have 5 seconds to respond by activating the buzzer. If no team responds within 5 seconds, the moderator will provide the correct answer and proceed to the next question.

11. The team which activates its buzzer first will be recognized to answer the question. One point will be awarded for a correct answer; ¼ point will be deducted for an incorrect answer. If the team answers the question before being recognized by the moderator, its answer will be treated as an incorrect answer; provided, however, that if its answer was substantively accurate, the question will be discarded and no other team will be allowed to answer it.

12. A team may activate its buzzer before the moderator finishes reading the question; however, the moderator will stop reading the question at that point and the team must answer based on what has been read to that point.

13. Once a team is recognized by the moderator, its members will have 5 seconds to confer before the team must respond. Any team member may give the team's answer. However, only one team member may give the team's answer to a particular question, and only its first answer will be considered.

14. If a team answers a question incorrectly, the other teams may buzz in immediately. If no team activates its buzzer, the moderator will begin reading the question again, and the other teams may respond in accordance with Rules 10-14.

15. Only team members may challenge the moderator's decision as to whether a question has been answered correctly. Any challenge must be raised before the next question is read. If a challenge is raised, the coach of the team making the challenge will be allowed to review the source document from which the question and answer were drawn.

16. If the moderator or an observer inadvertently answers a question, the question will be discarded, and the moderator will proceed to the next question.

17. Teams may not use notes or reference materials during competition rounds. Blank paper and pencils will be provided by contest staff and will be collected at the end of each round.

18. The moderator and scorekeepers will verify team scores after every 20 questions, and the moderator will announce team scores at the end of each round for the teams which competed during that round. The preliminary round scores of the teams advancing to the final round will not carry forward into the final round.

19. In the event of a tie preventing the moderator from identifying the 3 highest-scoring teams in a preliminary round or the medalists in the final round, the moderator will conduct a tiebreaker round, consisting of 5 questions from United States Supreme Court trivia. During a tiebreaker round, Rules 10-14 will apply; provided, however, that the penalty for an incorrect answer shall be one point. If the tiebreaker round does not resolve the tie, the teams' average scores on the PDP test will be used to determine the higher-ranking team. In determining a team's average score on the PDP test, the individual score of every registered team member will be included, even if that member was determined to be ineligible to compete under Rule 2.

Electrical Construction Wiring Knowledge Test

(State Only Contest)

Purpose

To evaluate the contestant's understanding and ability to solve problems commonly found in the electrical trades.

Clothing Requirement

For Men: White polo shirt, black dress slacks, black socks, and black shoes.

For Women: White polo shirt, black dress slacks or skirt, black sheer or skin-tone hose or black socks, and black shoes.

Eligibility

Open all SkillsUSA Members

Observer Rule

Observers will be allowed to view the test

Equipment and Materials

1. Supplied by technical committee:
    a. Tables and chairs
    b. Test problems and instructions
    c. Scratch paper and pencils
2. Supplied by the contestant:
    a. All competitors must create a one-page résumé and submit a hard copy

Scope and Contest

A written knowledge test will be required. A sound knowledge of safety, NEC Standards, and basic equipment used will be tested. Areas could include, but are not limited to switch and outlet boxes, PVC and EMT conduit, rough in and install of electrical devices, and trade specific information and standards.

Contest Guidelines

1. The written knowledge test comprises 50 questions.
2. The written knowledge test will provide the student the opportunity to demonstrate his or her problem-solving skills, not just electrical knowledge.
3. Students have two hours to complete the questions and check their answers.
4. This is a computer based test.
5. No bonus will be given for early completion of the exam.

Employability Knowledge Test

(State Only Contest)

Purpose

To evaluate the contestant's understanding and ability to solve problems commonly found in as part of their employability skills.

Clothing Requirement

For Men: White polo shirt, black dress slacks, black socks, and black shoes.

For Women: White polo shirt, black dress slacks or skirt, black sheer or skin-tone hose or black socks, and black shoes.

Eligibility

Open all SkillsUSA Members

Observer Rule

Observers will be allowed to view the test. No talking or gesturing with contestants or any disruptive noise will be permitted.

Equipment and Materials

1. Supplied by technical committee:
    a. Tables and chairs
    b. Test problems and instructions
    c. Scratch paper and pencils
2. Supplied by the contestant:
    a. All competitors must create a one-page résumé and submit a hard copy

Scope and Contest

A written knowledge test will be required. A sound knowledge communication skills, effective customer relations, career development skills, workplace skills, etiquette and interpersonal skills, diversity and team work skills.

Contest Guidelines

1. The written knowledge test comprises 50 questions.
2. The written knowledge test will provide the student the opportunity to demonstrate his or her problem-solving, team work, work ethics skills.
3. Students have two hours to complete the questions and check their answers.
4. Hand-held calculators may be used.
5. This is a computer based test.
6. No bonus will be given for early completion of the exam.

Heating

(State Only Contest)

Purpose

To evaluate contestants' preparation for employment and recognize outstanding students for excellence and professionalism in heating.

Clothing Requirement

Official SkillsUSA khaki work shirt and pants; black, brown or tan leather work shoes; and safety glasses with side shields or goggles. (Prescription glasses can be used only if they are equipped with side shields. If not, they must be covered with goggles.)

Eligibility

Open all SkillsUSA students enrolled in programs with heating as the occupational objective.

Observer Rule

Observers will be allowed to view the test. No talking or gesturing with contestants or any disruptive noise will be permitted.

Equipment and Materials

Scope and Contest

Heavy Equipment Operation

(State Only Contest)

Purpose

To evaluate student's ability to operate heavy construction equipment with skill and precision.

Clothing Requirement

Light blue work shirt and navy pants; black, brown or tan leather work shoes; and safety glasses with side shields or goggles. (Prescription glasses can be used only if they are equipped with side shields. If not, they must be covered with goggles.)

Eligibility

Open all SkillsUSA Heavy Equipment and Diesel Technology students

Observer Rule

Observers will be allowed to view the test. No talking or gesturing with contestants or any disruptive noise will be permitted.

Equipment and Materials

1. Supplied by technical committee:
    a. Excavators
    b. Cones and balls
2. Supplied by the contestant:
    a. PPE clothing

Scope and Contest

Student will be able to operate heavy construction equipment with skill and precision. They will demonstrate backhoe skills which require the operator to scoop up small objects which may include golf balls, basket balls or large items such as boards and pipes.

Outdoor Leadership

(State Only Contest)

Purpose

To provide students an opportunity to showcase technical skills and leadership traits acquired in a controlled environment. Competencies will be aligned to industry standards and best practices.

Clothing Requirement

Official SkillsUSA light blue work shirt and navy pants; black, brown or tan leather work shoes; and safety glasses with side shields or goggles. (Prescription glasses can be used only if they are equipped with side shields. If not, they must be covered with goggles.)

Eligibility

Open all SkillsUSA Members

Equipment and Materials

1. Supplied by technical committee:
    a. Maps
    b. Fire Pit
    c. Spare Compasses
2. Supplied by the contestant:
    a. Compass
    b. Ruler
    c. Calculator
    d. Survival Kit

Scope and Contest

The contest will be consistent with the Registered Maine Guide Exam. Contestants will demonstrate their ability to utilize map and compass skills, demonstrate general outdoor knowledge, and the ability to create a sustainable fire.

Knowledge Performance

The contest will include both hands-on and oral board examination.

Skills Performance

The contest will include 3 workstations. Workstations include: Map and Compass, General Knowledge Oral exam, and survival kit/sustainable fire construction.

Contest Guidelines

1. Contestants will have 20 minutes find magnetic front and back bearings accurate to +/- 3 degrees on 3 legs of a 7.5 minute series topographic map, and calculate distance accurate to 1/10 mile on 1 leg.
2. Contestants will sit for an oral exam on general outdoor knowledge.
3. Contestants will come with a pre-constructed survival kit limited to 10 items. Each contestant will present and explain to the judge each item they chose for their kit and why they chose that item. Once the judge is satisfied with the contestant's survival kit demonstration, the contestant will attempt to construct a sustainable fire using items from their survival kit.
4. 4. Contestants must choose only 1 of 2 possible ways to construct a sustainable fire.
    a. Matches: If contestant chooses to use matches, they are only allowed to use 1 match.
    b. Flint/Steel: If contestant chooses to use a flint/steel, they are only allowed 3 strikes of ferro rod.

Plumbing Knowledge Test

(State Only Contest)

Purpose

To evaluate the contestant's understanding and ability to solve problems commonly found in the plumbing trades.

Clothing Requirement

For Men: White polo shirt, black dress slacks, black socks, and black shoes.

For Women: White polo shirt, black dress slacks or skirt, black sheer or skin-tone hose or black socks, and black shoes.

Eligibility

Open all SkillsUSA Members

Observer Rule

Observers will be allowed to view the test

Equipment and Materials

1. Supplied by technical committee:
    a. Tables and chairs
    b. Test problems and instructions
    c. Scratch paper and pencils
2. Supplied by the contestant:
    a. All competitors must create a one-page résumé and submit a hard copy

Scope and Contest

A written knowledge test will be required. A sound knowledge of safety, installation, and basic equipment used will be tested. Areas could include, but are not limited blueprints, system rough in, service and repair, and trade specific information and standards.

Contest Guidelines

1. The written knowledge test comprises 50 questions.
2. The written knowledge test will provide the student the opportunity to demonstrate his or her problem-solving skills, not just plumbing knowledge.
3. Students have two hours to complete the questions and check their answers.
4. This is a computer based test.
5. No bonus will be given for early completion of the exam.

Precision Machining

(State Only Contest)

Purpose

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

CLOTHING REQUIREMENT

Official SkillsUSA khaki work shirt and pants; black, brown or tan leather work shoes; and safety glasses with side shields or goggles. (Prescription glasses can be used only if they are equipped with side shields. If not, they must be covered with goggles.)

Eligibility

Open all SkillsUSA students enrolled in programs with heating as the occupational objective.

Observer Rule

Observers will be allowed to view the test. No talking or gesturing with contestants or any disruptive noise will be permitted.

Equipment and Materials

Scope and Contest

Wedding Cake Decorating

(State Only Contest)

PURPOSE

To evaluate each contestant's preparation for employment and to recognize outstanding students for excellence and professionalism in Wedding Cake Decorating.

CLOTHING REQUIREMENT

Contestants:

White chef's coat, or color that school allows, with a chef's hat (paper or cloth), apron, and non-slip shoes.

Judges:

Proper business attire or chef-wear; hair must be constrained, keeping proper Serv-Safe principals in mind.

ELIGIBILITY

Open to all active SkillsUSA members enrolled in programs with Culinary Arts, Commercial Baking/Pastry Arts as an occupational objective.

Schools may send **ONE TEAM** of **2** in the secondary and/or post-secondary division

EQUIPMENT AND MATERIALS:

SUPPLIED BY THE TECHNICAL COMMITTEE:

- All information and supplies for judges
- Judges will supply 2 microwaves, limited stove space and some 4.5/6qt. mixers will be available which must be shared.
- Cake support system: 6" plastic plate, 9" plastic plate (each with coordinating cardboard plates), 14"drum (board)
- Assortment of food coloring

NOTE: A practice kit can be purchased to use for practice: $15.00/kit + s/h. (Can be used multiple times by washing components after each use). Please email Matt DuBois for purchase: matt.thebankery@gmail.com

SUPPLIED BY THE CONTESTANT:

- 6" Cake (two pieces minimum)
- 9" Cake (two pieces minimum)
- 12" Cake (two pieces minimum)
- Frosting and/or Fondant
- Gum Paste (if using applicable to students design)
- Gum Paste tool set, optional
- One or more pallet knife(s) or offset spatula(s)
- Bowl Scrapers
- Cake decorating Turntable
- Three or more pastry bags tips and scissors
- Any decorating tips you may use
- One or more rubber spatulas
- One serrated knife

- One rolling pin
- Silpat for fondant use
- side towels(s)
- cleaning towel(s)
- Mixing bowls for mixing colors
- One cake comb if needed
- Any colors needed to color butter cream
- 2 #2 pencils and sketch pad
- 4.5 or 6 qt mixer
- mini level
- bench knife or trapezoid frosting smoother
- Plastic gloves if working with fondant

The coordinators must approve the use of any hand tools or equipment not on this list in advance.
Matt DuBois/Michael Hunt @ The Bankery thebankery@gmail.com Attn: Mike/Matt

SCOPE OF THE CONTEST

A. The contest is geared toward a wedding cake design. The actual performance phase will be the construction and decorating of a 3-tiered wedding cake that could be used in an actual wedding ceremony.

B. ***The contest will start with a group consultation with a potential bride to determine color scheme and theme (classic, rustic, modern etc.) of the wedding. Actual design and creative work is up to each team.***

C. Students must build a three tiered batter based cake. The cakes must be 6 inch, 9 inch, and 12 inch. One of the layers can be separated but does not need to be. Cakes must be trimmed and shaped on site.

D. Nothing inedible is allowed other than tier separators and wire for flowers (or other gum paste items) as long as decorative items are edible.

E. Teams will start in a timely manner and after the consultation, with sanitation in mind. Making sure work stations are clean and sanitary before starting the competition. This includes proper Serv-Safe principals of sanitation while working.

F. Students will not be allowed to talk to his/her instructor once the competition begins, they may however consult with the judges and their partner.

G. The students must have cake built and displayed after 4 hours. ***Once the design is complete, the cake will be moved to a display table as part of judging to see how the cake can be transported.*** Teams must call attention to the judges when ready to move the finished cake. Final judging will be immediately after. Anyone not completed will be allowed to continue for an addition 30 min. for a 10 point deduction.

H. Students may use food coloring if they desire. Please remember color is judged on appropriateness and tastefulness of use.

I. Contestants will demonstrate their ability to perform jobs and skills based on the following list of competencies:
    - Blueprint or Drawing of Cake design as well as a time table of the day's assembly and execution of the plan. Teams will be assessed on how well they interpreted the consultation information, not necessarily how well you can sketch.
    - Use of standard commercial tools, utensils, and equipment.
    - Sanitation, safety, hygiene practices.
    - Basic frosting and cake decorating

J. Contestants will be responsible for bringing all their supplies needed to perform the task given. Judges will supply a proper space with power for mixers, etc.

K. Clean as you go. Sanitation is an evaluative criterion used throughout the competition. Keep your work area and all tools, utensils, and equipment clean and sanitary. Each contestant is also expected to assist with the overall clean-up of the competition area at its conclusion. Failure to do so will result in a deduction from your sanitation score.

L. During the contest, both contestants must have a hand in the assembly of the cake. Competitors must work, without assistance from judges, teachers, fellow students or observers.

M. Judging basis: (See Rubric for full detail of judging guidelines)

1. General Skills
   - Safety
   - Sanitation
   - Production efficiency
   - Use of equipment
   - Personal hygiene and grooming
   - Communication skills
   - Resume & blueprint of design

2. Final Product
   - Icing or Covering
   - Design
   - Technique
   - Stability of the cake
   - Originality and Creativity

Middle School State Only Contest Standards

$C0_2$ Dragster

(Middle School – State Only Contest)

PURPOSE

To evaluate students' ability to design and construct a $C0_2$ cartridge powered vehicle within specifications and understanding of metric measurement.

GENERAL REGULATIONS

People entering this contest must follow all rules listed below as well as the **"General Regulations"** of the Maine SkillsUSA Championships.

CLOTHING REQUIREMENT

For men: White polo shirt with black dress slacks, black socks and black shoes.
For women: White polo shirt with black dress slacks, black socks and black shoes.

ELIGIBILITY

This contest is an individual competitor event and open to active SkillsUSA members. A limit of **four** students from each school may enter.

This is a state-only contest. *There is no corresponding national contest. Winning this contest does not qualify the participant to attend the National Leadership and Skills Contest.*

OBSERVER RULE

Observers are not allowed in the judging area prior to the race. Observation of the race is encouraged, however, observers who interfere with either the race or the judging process will be required to leave the race area.

EQUIPMENT AND MATERIALS

1. Supplied by the technical committee:
    a. Racing track
    b. Timing System
2. Supplied by the contestant:
    a. Metric Dragster – Balsa
    https://www.pitsco.com/Shop/Dragsters/CO2-Powered/Metric-Dragster-Kits
    b. CO2 Cartridge
    https://www.pitsco.com/Shop/Dragsters/CO2-Powered/CO2-Cartridges
    c. Metric Dragster Go/No Go Gauge
    https://www.pitsco.com/Metric-Dragster-Go-No-Go-Gauge

CONTEST PROCEDURES

1. Chapters may have no more than four entries.
2. Cars not conforming to the specifications set forth in the rules will be disqualified. If time and circumstances allow, disqualified cars may be run to allow their builders to compare performance with the qualified entrants. Disqualified cars will not be eligible for any prizes or awards.
3. Co2 Car judging criteria are:
    a. Construction-Craftsmanship- geometry, uniformity & symmetry
    b. Design-appearance & finish sanding and no file or machine blemishes
    c. Time standing of race
    d. **NOTE:** The judge's decision will be final.
4. Each contestant will provide **Three** (8-gram) CO_2 cartridge "engines."

SCOPE OF THE CONTEST

The contest will consist of three parts - design/drawing, compliance with specifications, and race performance.

1. Design/Drawing

a. Every entry must be submitted with a drawing of the completed dragster. A two-view (top and side views) drawing with dimensions shall be made either full scale on 11" x 17" paper or half-scale on 8 1 /2" x 11" paper. A three-view (top, side, and end views) drawing is acceptable, but will not change point allocations.
b. Standard engineering procedures/practices should be followed.
c. Drawings may be made using a CADD system, ink or graphite.
d. Originals or blueprint copies will be accepted.
e. Title block will include a space to enter the contestant number which will be assigned during your SkillsUSA chapter's registration. Record your contestant number (assigned upon registration) in this block prior to turn-in of your car and drawing. (See Figure 1 for example of sheet layout).

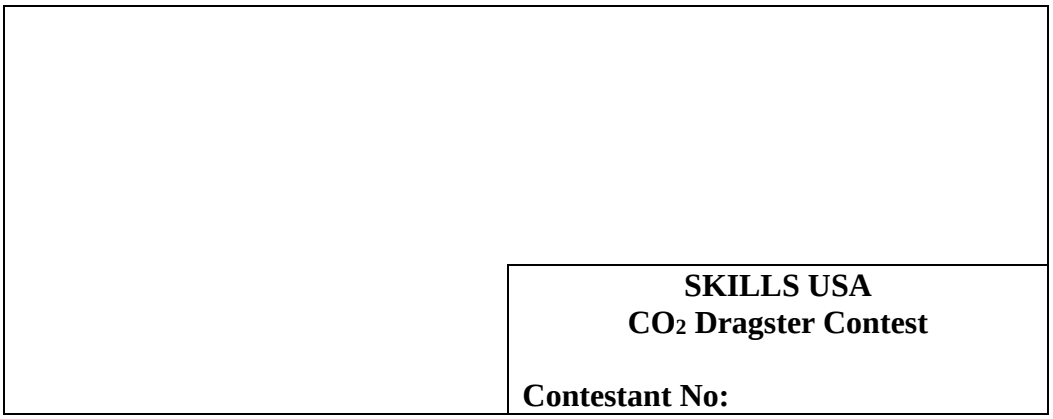


Figure 1

2. Specifications - Body Blank and Dragster

a. Body Blank (balsa wood is recommended) Minimum Specifications

1. Length - 305 mm
2. Front height - 20 mm
3. Rear height - 70 mm
4. Bottom to center line of power plant chamber - 32 mm
5. Body width - 42 mm
6. Power plant chamber - centered side-to-side
7. Power plant chamber - 20 mm diameter, 51 mm depth, and drilled parallel to bottom surface. A minimum of 3 mm thickness around entire power plant housing must be maintained on all dragsters for safety purposes.
8. The body of the dragster shall be one piece all-wood construction. No parts - such as body strengtheners, fenders, plastic canopy, exhausts, or air foils - may be glued, attached to, or enclosed within the dragster. **No glue may be added to the dragster**. Air foils, fenders and other appearance items may be designed and engineered into the original body blank. Bearings and lubricants may be used in construction.

b. Dragster Specifications - The finished dragster must meet all the following:

	Limitations	
Area of Specification	**Minimum**	**Maximum**
a. Axles (diameter)	3 mm	3 mm
b. Axles (length)	42 mm	70 mm
c. Axles Bearing (diameter)	3.5 mm	4.5 mm
d. Axle hole (diameter)	3.5 mm	4.5 mm
e. Axle hole (position above body bottom)	5 mm	10 mm
f. Axle hole (position form either end of body)	9 mm	100 mm
h. Dragster body (length)	200 mm	310 mm
i. Dragster body (height at rear with wheels)		75 mm
j. Dragster body (complete vehicle without CO2)*	50 g	170 g
k. Dragster body (width of axles at body - front - 51mm and back – 1mm)**	35 mm	42 mm
l. Total body width across wheels		90 mm
m. Power plant - depth of hole	50 mm	52 mm
n. Power plant housing thickness (around entire housing)	3 mm	
o. Power plant housing (diameter)	19 mm	20 mm
p Power plant low point – measured with wheels on - from the race surface to the bottom of the power plant hole diameter.	26 mm	40 mm
q. Power plant center line (from body bottom)	31 mm	35 mm
r. Screw eye (eyelet inside diameter)	3 mm	5 mm
s. Screw eyes (2 on center line of bottom, distance apart)	150 mm	270 mm
t. Wheels, front - 2 on the same axle (diameter)	32 mm	37 mm
u. Wheels, front (width where wheel contacts race surface)	2 mm	5 mm
v. Wheels, rear (diameter)	30 mm	40 mm
w. Wheels, rear (width where wheel contacts race surface)	15 mm	18 mm

x. Wheel base	105 mm	270 mm
y. Height of the cartridge hole (floor to centerline hole)	33 mm	43 mm

*** Assembled without C02 cartridge**
****Measured across the body at the bottom outside edge of the axle hole.**

NOTE: Dragsters will be disqualified which fail to meet the specifications listed above.

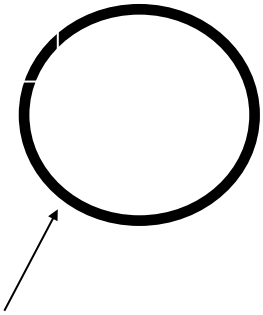
c. Wheels must be made entirely from plastic. The outside surface of the wheels must not be modified. Flash from the injection molding process may be removed.
d. Specifications are taken from the current "Pitsco - Metric Dragster" go/no-go gauge. For guidance in the design and construction of the CO_2 dragster and for complete rules, drawing specifications, and a go/no-go gauge contact Pitsco at (800) 835-0686.

3. Racing

a. Cars will be run through a bracketing and elimination system or an electronically timed system. The exact system used will depend on the number of entrants, the number of tracks available, and the time available to complete the races. The technical committee will make this decision.
b. No repair or maintenance on entries will be allowed after entries have been secured by the judges.
c. Any entry damaged during the race will be evaluated by the technical committee chair to determine whether or not it will be allowed to race again.
d. In the event that a dragster is damaged by conference personnel, the technical committee chair will make a ruling as to whether or not the dragster may be repaired by the student who entered it. This is the only reason a STUDENT would be allowed to touch his or her dragster after registration.
e. Undamaged wheels which come off during the contest may be replaced as determined by the technical committee chair. Damaged wheels may not be replaced.
f. The dragster must have live axles (Axle must turn with wheels). The car shall start the race on all four wheels.
g. The dragster will complete the race with all 4 wheels.
h. The dragster will have 2 screw eyelets (specs. p & q) on the body to race.

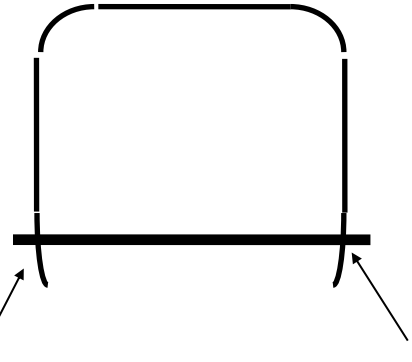
5. CO_2 dragster kits, specification "Go/No-go Gauges", and "Metric Dragster" rule books may be purchased from PITSCO, Box 1328, Pittsburg, KS 66762 or call (800) 835-0686.

Wheel



Wheel surface may not be modified.

Dragster body cut away view



Arrows illustrate the points where the dragster body width will be measured. Across the bottom of the axle holes (at axle).

MAINE SKILLSUSA CHAMPIONSHIPS
CO_2 Dragster Contest Rating Sheet

Contestant/Car Number:_____

ITEMS EVALUATED	Points Possible	Points Earned	REMARKS
Co2 Car Specifications a □ b □ c □ d □ e □ f □ h □ i □ j □ k □ l □ m □ n □ o □ p □ q □ r □ s □ t □ u □ v □ w □ x □ y □ **NOTE:** 7 random specifications will be measured on every car, if 1 of the 7 is not meet co2 car will be disqualified.	**20**		
Co2 Car Drawing • Line Quality (2 points) = _____ • Point-to-Point (2 points) = _____ • Accuracy (2 points) = _____ □ Full Scale □ Half Scale • Scale (2 points) = _____ • Title Block Info (3 points) = _____ • Dimensions (4 points) = _____	**15**		
CO2 Car Construction Craftsmanship- geometry, uniformity & symmetry	**10**		
Co2 Car Design Design-appearance & finish sanding and no file or machine blemishes	**10**		
Contestant Attire	**5**		
Race Results	**40**		
TOTAL	**100**		

FINAL PLACE:_____

Job Interview

(Middle School – State Only)

PURPOSE To evaluate contestants' understanding of employment procedures they will face in applying for positions in the occupational areas for which they are training. First, download and review the General Regulations at: http://updates.skillsusa.org.

ELIGIBILITY Open to active SkillsUSA members.

CLOTHING REQUIREMENT Class A: SkillsUSA Official Attire

For men: Official SkillsUSA blazer or jacket, black dress slacks, white dress shirt, plain black tie with no pattern (or SkillsUSA black tie), black socks, black shoes.

For women: Official SkillsUSA blazer or jacket; black dress skirt (knee-length) or black slacks; plain business-like white, collarless blouse (or white blouse with small, plain collar that may not extend onto the lapels of the blazer); black sheer or skin-tone hose; black shoes.

OBSERVER RULE No observers will be permitted to view the contest.

EQUIPMENT AND MATERIALS

1. Supplied by the technical committee:
    a. Employment application forms
    b. Timer
2. Supplied by the contestant:
    a. Six copies of a one-page, typewritten personal résumé (one set of three for the preliminary contest and the remaining set of three for the finals). No other material may be submitted by the contestant.
    b. Pen for completing application form

SCOPE OF THE CONTEST

Skills Performance This contest evaluates the understanding of employment procedures that a student will face in applying for positions in the occupational area for which he or she is training. The contest consists of three parts. The first is the receptionist's preliminary evaluation. The second portion is the completion of an employment application, and the third portion is an in-depth interview.

Contest Guidelines

1. Contestants shall apply for positions in keeping with their occupational objectives. In completing the personal résumé and employment application, contestants will use their own name, address, school, employment and occupational information. All information must be as accurate as possible.
2. The receptionist will serve as a judge.
3. When called from the assembly area, the contestant will approach the receptionist as though applying for a job in the occupational area consistent with the contestant's training program. Contestants will be given an employment application to complete within 30 minutes in the receptionist's presence.

4. Contestants will complete the application by printing in ink. The receptionist will note the time the contestant is handed the application and the time the completed application is returned. One point will be deducted for each minute or fraction thereof over the 30-minute time limit (maximum deduction of 10 points). Information such as the following may be asked on the application:
    a. Employment desired
    b. Education
    c. Membership in civic, community or school organizations
    d. Former employers and work experience
    e. References
5. The receptionist will receive the completed application along with three copies of a one-page, typewritten résumé prepared in advance and supplied by the contestants. The following information must be contained in the one-page résumé:
    a. Name, address and phone number
    b. Career objective
    c. Education and training
    d. Work experience beginning with present employment listing specific responsibilities
    e. Professional memberships, major accomplishments, awards earned
    f. References are to be on a separate page, not on the one-page résumé
6. After the receptionist evaluates the application, a technical committee member will present three copies of the personal résumé to the interviewing committee (judges).
7. After the judges review the personal résumé, a technical committee member will direct the contestant to the judges for the interview.
8. The interview with the judges will be approximately 10 minutes. This will allow adequate time for four to six questions.
9. All contestants in an interview group will be asked identical questions. Such questions might include the following but will be determined by the judges:
    a. What are your occupational objectives?
    b. What do you like most about this occupation?
    c. What are your hobbies?
    d. What would you like to be doing five years from now? Ten years?
    e. Why do you want to work for our company?
    f. What two accomplishments have given you the most satisfaction?
    g. What are your extracurricular activities?
    h. How would you describe your ideal job?
    i. What do you think determines a person's progress within a company?
    j. What do you consider to be your outstanding job-related personal characteristics or strengths?
    k. What qualifications and characteristics do you have that make you feel you'll succeed in your work?
10. Judges are encouraged to use their own interview techniques and should keep the focus of the interview on the selected questions.

Promotional Bulletin Board

(Middle School – State Only)

PURPOSE To encourage local SkillsUSA chapters to promote the organization, career and technical education, and related occupational information through a promotional bulletin board. First, download and review the General Regulations at: http://updates.skillsusa.org.

ELIGIBILITY (TEAM OF 3) Two bulletin boards from each state association may be entered in the contest — one in the high-school and one in the college/ postsecondary competition.

CLOTHING REQUIREMENT Class A: SkillsUSA Official Attire

For men: Official SkillsUSA blazer or jacket, black dress slacks, white dress shirt, plain black tie with no pattern (or SkillsUSA black tie), black socks, black shoes.

For women: Official SkillsUSA blazer or jacket; black dress skirt (knee-length) or black slacks; plain business-like white, collarless blouse (or white blouse with small, plain collar that may not extend onto the lapels of the blazer); black sheer or skin-tone hose; black shoes.

OBSERVER RULE Observers will not be present during the actual judging. Promotional bulletin boards may be viewed on Thursday during the week of the SkillsUSA Championships.

EQUIPMENT AND MATERIALS 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 10-point penalty. Note: Your contest may also require a hard copy of your résumé as part of the actual contest.

SCOPE OF THE CONTEST

Skill Performance The contest requires the development of a promotional bulletin board using the SkillsUSA national theme, and it may also include promotion of local SkillsUSA chapter activities or technical, skilled and service occupations, including health occupations. Skill also will be evaluated through an interview. Contest Guidelines

1. SkillsUSA headquarters establishes the theme for the Promotional Bulletin Board contest and announces it to the state associations by Sept. 1 for the following school year. To verify the correct national theme, go to: www.skillsusa.org/competitions/skillsusachampionships/theme/.
    a. The bulletin board must carry out the established theme.
    b. The bulletin board must be related to SkillsUSA.
    c. The bulletin board may include promotion of local SkillsUSA chapter activities.
    d. All career and technical education students who are SkillsUSA members are eligible to compete in the Promotional Bulletin Board contest.
2. Bulletin Board Design and Workmanship
    a. Display materials used must be studentprepared, including design and cutting of interchangeable pieces. A 50-point penalty will be assessed for failure to comply.
    b. Review and follow basic guidelines for use of the SkillsUSA logo. Use of the official logo is optional. However, the verbiage "SkillsUSA: Champions at Work, [Current Theme]" is required and may be text only. Note: See website www.SkillsUSABrandCenter.org and honor the space requirements.

c. If the SkillsUSA logo is used, a penalty of 10 points will be assessed for failure to comply with all SkillsUSA logo. guidelines and regulations. d. Follow U.S. copyright rules and regulations.

3. Intent of the Promotional Bulletin Board
    a. The bulletin board is a tool to convey ideas, ideals or activities related to SkillsUSA.
    b. Interchangeable parts are required. The bulletin board should be designed to easily accommodate changes by using interchangable parts to reflect activities and messages or draw attention to a function. Note: An interchangable part is one that is removed from the board and replaced with another element.
    c. The bulletin board is not intended to be a wall hanging or poster board.
4. Bulletin Board Size — The total size of the bulletin board may be smaller than, but may not exceed, the following dimensions:
    a. 4 feet wide by 4 feet high by 2 inches thick (including the thickness of the board) Note: If an element is attached to the board and opens or unfolds, the depth of the element will be included in the thickness measurement (2" max) and will incur penalty points appropriately.
    b. A penalty of five points per 1⁄8" over size will be assessed.
5. Mounting Board and Support
    a. The quality of the board on which the display is mounted will not be judged.
    b. A mounting board is required.
    c. All areas of the mounting board must be covered with a paper product front and back.
    d. A 10-point penalty will be assessed if any area of the mounting board is exposed.
    e. Entries must be self-supporting. A 10- point penalty will be assessed for failure to comply.
    f. The supporting device will not be included in the measurement and cost figures.
    g. The supporting device must be designed and constructed to be durable and allow for safe exhibit of the board and display materials. A 10-point penalty will be assessed for failure to comply.
    h. The bulletin board and mounting board must be fastened securely to the supporting device. A 10-point penalty will be assessed for failure to comply.
6. Bulletin Board Frame
    a. A frame is not required but may be used if desired. Note: Additional information placed on the frame, such as engraving the theme, makes the frame part of the board and will be measured as such.
    b. A frame cannot exceed 21⁄2" in width. A 10-point penalty will be assessed for failure to comply.
    c. A frame can be made from any material. 7. Bulletin Board Materials a. Any material(s) used to attach parts to the board must not be visible on the face of the board. A 10-point penalty will be assessed for failure to comply.
7. Bulletin Board Materials
    a. Any material(s) used to attach parts to the board must not be visible on the face of the board. A 10-point penalty will be assessed for failure to comply
    b. Approved materials on the bulletin board used as background and to convey the message will be limited to the following paper products:
        1. Construction paper
        2. Poster board
        3. Foam core/Gatorboard
        4. Cardboard

5. Mat board
6. High gloss photo paper printed on a large format printer/plotter. Note: Highly adhesive vinyl, car-wrap material, or any non-paper products that have been printed or cut on a large-format printer/plotter are not approved products for the board.
7. Media printed on a large format printer/plotter. Note: All photos may be laminated; other surfaces may be painted or colored

c. No other materials will be permitted. A 50-point penalty will be assessed for failure to comply. Note: Glitter or foil, whether incorporated in paper or paint, is not to be used on any part of the board. Remember, this is a bulletin board, not a poster. Further vinyl, car-wrap material or any nonpaper products that have been printed or cut on a largeformat printer/plotter are not approved products for the board.
d. No audiovisual equipment, electrical, mechanical, automatic or manual moving parts are to be used. A 10-point penalty will be assessed for failure to comply.
e. If an interactive component (e.g., QR code, software link, etc.) is showcased or demonstrated during the presentation, it is acceptable to use an electronic device appropriately.
f. Student-taken photographs are allowed.
g. The chapter name, school, city or state may be used without penalty.

8. Cost of Materials
   a. A maximum of $300 (purchased, donated or borrowed) may be spent on the entire display and backing board (frame and support costs excluded). A 10-point penalty for each $5 over $300 will be assessed.
   b. A quote of the "fair market price" of the printing and/or other materials used on the board must be included in the notebook. All donated or borrowed materials must be included in the $300. Note: Fair market value is the cost of having work done or obtained commercially — not the cost of work done or obtained through a school.
9. Résumé (50 points possible/5 percent of overall score)
   a. Overall appearance and professionalism
   b. Accuracy in spelling, punctuation and capitalization (10 points)
   c. Complete contact information: name, address, phone, email (5 points)
   d. Career objective (5 points)
   e. Education (5 points)
   f. Technical skills (10 points) Note: Technical skills should include such things as trade-related skills, certifications, software training, etc.
   g. Employment (5 points)
   h. Honors/awards/memberships (5 points)
   i. References: available upon request (5 points) Note: Student should not supply the names and contact information for references. The words, "References: Available upon request" should be listed on the résumé.
   j. A 5-point penalty will be assessed if résumé exceeds one page.
10. Bulletin Board Evaluation (400 points/40 percent of overall score)
    a. Gains attention
       1. Focuses attention on important items (20 points)
       2. Pulls the eye to specific areas (20 points)
       3. Color and contrast command attention (20 points)
       4. Balance creates interest (20 points)

5. Shapes, lines, spaces and colors create an interesting and readable bulletin board. All text should be legible for the viewing audience. (20 points)

b. Development of theme
    1. Theme of bulletin board is the official theme established by the SkillsUSA headquarters (25 points) Note: The theme includes the SkillsUSA slogan, i.e., SkillsUSA: Champions at Work, followed by annual verbiage from national headquarters
    2. Meaning and message of the bulletin board are apparent immediately. All imagery and text support the theme and concept (60 points).
    3. Graphic elements, lettering and illustrations allow quick and clear comprehension of the bulletin board theme (25 points).
    4. Lettering is related in scale and character to the spirit of the theme (25 points).
    5. A 5-point penalty will be assessed for error in grammar, spelling and punctuation.

c. Quality of work
    1. Artwork is of consistent style and proportion (15 points).
    2. Computer-generated type, art or photos are sharp/smooth (nonpixilated) and photos are properly exposed, well-cropped and suitably sized (30 points).
    3. Edges of cutout pieces are clean and smooth (15 points).
    4. Interchangeable parts are stiff and self-supporting with no paper curl (15 points).
    5. Tiled or layered pieces are properly aligned (10 points).

d. Imagination, creativity and originality
    1. Bulletin board shows originality (20 points).
    2. Bulletin board is creative, in good taste and attractive (20 points).
    3. Differences in color, line and shapes depict good design and imagination (20 points).
    4. Illustrations, lettering and background harmonize and show innovation (20 points).

11. Interview Component (40 percent of overall score)
    a. One student shall be prepared to participate in the interview component.
    b. The interview component will consist of two parts: a presentation and a question-and-answer session.

12. Presentation
    a. Notecards may not be used. A 50-point penalty will be assessed if contestant uses notecards.
    b. Students will demonstrate interchangeable parts and use the notebook along with the bulletin board to enhance the presentation (40 points). Note: If an interactive component (e.g., QR code, software link, etc.) is showcased or demonstrated during the presentation, it is acceptable to use an electronic device appropriately.
    c. Student will describe the bulletin board and how it conforms to the theme (35 points).
    d. Student will explain the process the chapter followed to determine the scope and design of the bulletin board (30 points).

e. Student will state the purpose and educational value of the bulletin board (30 points). Note: What did the students learn while working on the board? What can viewers learn from the bulletin board?
f. Student will discuss the chapter members' participation in the construction of the bulletin board (30 points).
g. Student will tell where and how the bulletin board will be used after the competition (30 points).
h. Student will discuss the benefits of the bulletin board to the chapter members (30 points).
i. Student's speaking skills to include variances of pitch, tempo, volume and enthusiasm will be judged (30 points).
j. Student's stage presence, including poise, eye contact, gestures, confident appearance and attitude will be judged (30 points).
k. Student's mechanics as in diction, grammar, pronunciation and enunciation will be judged (25 points).
l. Student's conclusion to presentation (30 points)
m. Time frame for presentation is five to seven minutes.
n. Time penalty: 5 points for each fraction of 30 seconds under five minutes or over seven minutes will be assessed.

13. Question/Answer Session (quality of student's response to questions from judges)
    a. Student will deliver answers that are appropriate, organized and reflect logic and clarity (30 points).
    b. Student's answers reflect knowledge and involvement in the promotional bulletin board project (30 points). 14. Notebook Requirements (15 percent of overall score)
        a. The notebook must be placed with the bulletin board prior to judging. Failure to do so will result in the notebook not being judged and no points awarded.
    c. Notebook must be a 1-inch SkillsUSA three-ring binder (10 points).
    d. Notebook must contain pictures and supporting evidence (20 points). Note: Photos may be blended with other areas of the book but must have a caption describing the photo.
    e. Notebook must include a brief description of the purpose (20 points).
    f. Notebook must state educational value (20 points). Note: What did the students learn while working on the board? What can viewers learn from the bulletin board?
    g. Notebook must describe the development and construction of the bulletin board (20 points).
    h. Notebook must be limited to 10 pages (20 surfaces) or less (10 points).
    i. Verification letter
        1. A letter certifying that the bulletin board was designed and constructed by students will be the first page of the notebook. The letter should be printed on school letterhead (10 points).
        2. The letter must identify the school, city and state (5 points).
        3. The letter must identify the local advisor (5 points).
        4. The letter must identify the student who will be interviewed (5 points).
        5. The letter must state the division (high school or college/ postsecondary – 5 points).
        6. The letter must be signed by a local administrator, with full name and title included (10 points).

7. Failure to supply the required information will penalize the entry as outlined.

j. Notebook Outline: Follow this page order to organize the notebook

1. Verification letter
2. Purpose
3. Educational value
4. Development/Construction
5. Fair market value/Itemized list of expenses Note: Expenses should reflect the fair market value of commercial work, such as large-format printing. For example: A background is printed in the classroom on a large format printer. The cost for the school to print is $5 per square foot. However, the commercial cost is $12 per square foot. The list should reflect the FMV of $12 per square foot.
6. Supporting evidence

Mobile Robotics

(Middle School – State Only)

PURPOSE To evaluate each contestant's preparation for employment and to recognize outstanding students for excellence and professionalism in the field of robotics. First, download and review the General Regulations at: http://updates.skillsusa.org.

ELIGIBILITY (TEAM OF 2) Open to active SkillsUSA members enrolled in programs that integrates robotics, engineering or preengineering techniques as an integral component of the instructional program.

CLOTHING REQUIREMENT Class E: Contest specific — Business Casual
For men: Official SkillsUSA white polo shirt, black dress slacks, black socks, black leather shoes.

For women: Official SkillsUSA white polo shirt with black dress skirt (knee-length) or black slacks; black socks or black or skin-tone seamless hose; black leather dress shoes.

EQUIPMENT AND MATERIALS

1. Supplied by the technical committee:
    a. All
    b. e
    c. Twnecessary information for judges and technical committee
    d. One standard 120-volt electrical outlet
    e. One standard 6' conference tablo chairs
    f. Description of robotic challenge
    g. Junior Mobile Robotics Teams will receive VEX IQ Robotic equipment for building their robot at NLSC. Post-Secondary and Secondary Teams must bring their own robots.
2. Supplied by the contestant:
    a. Computer with programming software installed and licensed
    b. Programming cable or other connection devices
    c. Engineering notebook
    d. 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 10-point penalty.
    e. Post-Secondary and Secondary Teams: Fully built mobile robot as specified in the current SkillsUSA Mobile Robotics Technology game manual. Robot must be capable of being re-programmed and minor physical design modifications
    f. Any non-powered hand tools necessary to modify their robot as needed.

Note: Your contest may also require a hard copy of your résumé as part of the actual contest. Check the Contest Guidelines and/or the updates page on the SkillsUSA website at http://updates.skillsusa.org.

SCOPE OF THE CONTEST
Teams are given a task they are asked to solve using a mobile robotic system. Post-Secondary and Secondary Teams will come prepared with a fully built robot capable of being reprogrammed quickly to adapt to modifications of the game presented to the teams during Orientation. Middle School Mobile Robotic Teams will be given new VEX IQ kits to assemble their robot during the competition.

The contest will test the ability to document, construct, program and exhibit their solution to industry-based judges. Teams will be given two interviews, the first for their overall design process, and the second for their programming solution to the problem.

Knowledge Performance
The contest will include the SkillsUSA Framework Essential Element Assessment. This will be given during Orientation.

Skill Performance
The contest will include activities that simulate situations encountered by robotic programmers and support professionals.

Contest Guidelines

1. Teams must be comprised of two members.
2. Teams are given a task that they will solve using a mobile robotic.
3. Each team will have 10 minutes to present its engineering design process to the judges.
4. Each team will have 10-minutes to present its programming code to the judges.
5. Teams can only use an engineering notebook during the contest as a reference tool in the construction and programming of their robot
6. The engineering notebook is a tool for students to document their designs prior to the competition. It can include pictures, printed out sections of code, detailed assembly instructions, etc. All pages must be bound and numbered.
7. Each team will be given points for CAD drawings of their robot. These drawings should be included in the engineering notebook.
8. Robot(s) can only be constructed by the materials specified in the SkillsUSA Mobile Robotics Technology game manual.
9. Teams will have six scored chances to solve the mobile robotic challenge three chances for Programming Skills and three chances for Driving Skills. The highest score in each Skill will be recorded and submitted for judging.
10. Contestants are required to adhere to industry safety standards using the hardware and software provided.
11. All team members are responsible for double-checking each other's work and quality control.
12. All engineering notebooks, and résumés must be turned in to the judges at
13. Orientation. Notebooks will be returned no later than the start of the debriefing session
14. All team members and advisors are required to attend the debriefing session after the competition has concluded.

State T-Shirt Design

(Middle School – State Only)

PURPOSE To evaluate a contestant's creative, technical and oral presentation skills and recognize outstanding students for excellence and professionalism. First, download and review the General Regulations at: http://updates.skillsusa.org.

ELIGIBILITY Open to active SkillsUSA members enrolled in career and technical programs.

CLOTHING REQUIREMENT Class A: SkillsUSA Official Attire

For men: Official SkillsUSA blazer or jacket, black dress slacks, white dress shirt, plain black tie with no pattern (or SkillsUSA black tie), black socks, black shoes

For women: Official SkillsUSA blazer or jacket; black dress skirt (knee-length) or black slacks; plain businesslike white, collarless blouse (or white blouse with small, plain collar that may not extend onto the lapels of the blazer); black sheer or skin-tone hose; black shoes

EQUIPMENT AND MATERIALS

1. Supplied by the technical committee:
    a. Time keeper and judges
    b. All necessary information for the judges and technical committee
    c. Data projector
2. Supplied by the contestant:
    a. Rendering of the T-shirt design
    b. Supporting materials for the interview portion of the contest
    c. 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 10-point penalty.

SCOPE OF THE CONTEST The contest consists of two parts:

1. Evaluation of the T-shirt design
2. Oral presentation and question-and-answer session. All contestants will be asked the same questions determined by the judges before the start of the contest.

Skill Performance 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. Contest Guidelines

1. All entries must be rendered in color (full color or up to four color).
2. Preferably, entries will be created in a design software package such as Illustrator, Photoshop or Freehand. Entries may also be hand-drawn, painted or rendered in colored pencils or markers.
3. Artwork submission is 8"x11". The artwork should be a comprehensive design that is essentially "camera ready." There is no opportunity to "tweak" the design after it has been submitted at the contest orientation meeting.
4. The SkillsUSA emblem or SkillsUSA logo (or elements of either) should not appear on the design.
5. All copyright laws must be followed in the creation of the design

6. T-shirt design submissions must be turned in at the contest orientation meeting.
7. Advisors need to check all designs prior to submission to ensure strict compliance with all rules.
8. The T-shirt designer must specify the color of the shirt that the artwork will be screened onto and where artwork will be placed.
9. In addition to the T-shirt background color, the designer may use up to four colors in his or her artwork. These colors are "spot colors" and may not be blended or shaded.
10. The following text must appear on the -shirt design: "SkillsUSA (STATE NAME)" followed by the appropriate year.
11. Students will participate in an interview during the competition. They should be prepared to discuss the overall process and how they came up with their design and color scheme. They should bring all of their preliminary work (sketches, layouts, etc.) with them to the interview.
12. Contestants will present a five- to seven minute presentation regarding their design. Talking points should include:
    a. How he or she came up with the design
    b. The process used in developing their design
    c. The design's unique qualities
    d. Why other students/advisors would want to wear it.

Woodworking Display

(Middle School – State Only)

PURPOSE

To display woodworking projects that have been completed during the current school year.

GENERAL REGULATIONS

People entering this contest must follow all rules listed below as well as the **"General Regulations"** of the Maine SkillsUSA Championships.

CLOTHING REQUIREMENT

For men: White polo shirt with black dress slacks, black socks and black shoes.
For women: White polo shirt with black dress slacks, black socks and black shoes.

ELIGIBILITY

This contest is an individual competitor event and open to active SkillsUSA members.

SCOPE OF CONTEST

1) Contestants will be identified by number only.
2) A 3x5 Card must be attached to the project for easy identification.

> **(Sample Display Card)**
>
> **Project Description: All season bird house**
> **Contestant #: 1234**
> **Estimated Project Value: $65**

3) Display must also have a notebook located on or next it (see #7 below for specific criteria).
4) No student or school name should be on any drawings or documentation. Contestant number should be placed in the upper right hand corner of all documents.
5) The project value (what you realistically think it could be sold for), should also be located under the contestant's number in the upper right hand corner.
6) If contestant information is not legible, the project will not be judged.
7) The contestant must include a three ring binder containing the following:
   a) Process Documentation, including:
      i) Total# of hours spent designing, planning and manufacturing your project.
      ii) Bill of materials, including dimensions and total cost
      iii) Plan of procedure
      iv) Design Sketches and drawings.

   The notebook must be limited to 10 pages (20 surfaces) and must be included with the project. Process photos are encouraged.

MAINE SKILLSUSA CHAMPIONSHIPS
Woodworking Display Rating Sheet

Contestant Number: _____ Judge Name:_____

ITEMS EVALUATED	POSSIBLE POINTS	POINTS GIVEN	COMMENTS
Originality	10		
Degree of difficulty	10		
Notebook	25		
• Total number hours			
• Material cost			
• Materials list			
• Plan of procedure			
• Design sketches / Drawings			
Overall quality of Construction	10		
Accuracy of Joinery	10		
Quality of Finish	10		
Interview / Q&A	25		
TOTAL POINTS	100		