2017 STATE TECHNICAL STANDARDS

FOR USE AT THE 2017
MASSACHUSETTS SKILLSUSA CHAMPIONSHIPS

SkillsUSA
MASSACHUSETTS

CONTACT INFORMATION

Host Sites:

Blackstone Valley Technical High School
65 Pleasant Street
Upton, MA. 01568
508-529-7758

Joseph P. Keefe Technical HS
750 Winter Street
Framingham, MA 01702
(508) 879-5400
Host Site for Graphic Communications, Screen Print Technology, Graphic Imaging Sublimation (limited Demonstration and Painting & Design Technology

Site Coordinator:

Thomas Belland
Vocational Coordinator
Blackstone Valley Technical High School
65 Pleasant Street
Upton, MA. 01568

508-529-7758
Email: tbelland@valleytech.k12.ma.us

SkillsUSA Championships Director:

John Brochu, Director
SkillsUSA Championships
JP Keefe Technical High School
750 Winter Street
Framingham, MA 01702

508-416-2255
Email: jpbrochu@jpkeefehs.org

Executive Director:

Karen E. Ward, CSD
SkillsUSA Massachusetts
250 Foundry Street
South Easton, MA 02375

508-230-1273
Email: kward@maskillsusa.org

Computer Operation Director/Registration:

Carol Olsen
Cape Cod Technical HS
351 Pleasant Lake Avenue
Harwich, MA 02645

508-432-4500
Email: colsen@capetech.us

SPECIAL NOTICE

THE FOLLOWING CONTESTS WILL USE NATIONAL RULES. YOU CAN FIND THE REQUIREMENTS AND TECHNICAL STANDARDS FOR THE FOLLOWING CONTESTS IN THE NATIONAL SKILLSUSA CHAMPIONSHIPS TECHNICAL STANDARDS 2017-2018:

- ACTION SKILLS
- AMERICAN SPIRIT AWARD
- CAREER PATHWAYS SHOWCASE
- CHAPTER BUSINESS PROCEDURE
- CHAPTER DISPLAY
- COMMUNITY SERVICE
- CUSTOMER SERVICE
- EMPLOYMENT APPLICATION SKILLS
- ENGINEERING TECHNOLOGY
- ENTREPRENEURSHIP

BUSINESS PLAN (6 COPIES) MUST BE SENT TO THE STATE OFFICE BY APRIL 7, 2017

- Esthetics (By Invitation)
- EXTEMPORANEOUS SPEECH
- HEALTH KNOWLEDGE BOWL
- Humanoid Robotics (By invitation)
- JOB INTERVIEW
- JOB SKILL DEMONSTRATION A
- JOB SKILL DEMONSTRATION (OPEN)
- OCCUPATIONAL HEALTH & SAFETY
- OPEN & CLOSING CEREMONIES
- OUTSTANDING CHAPTER
- MOBILE ROBOTICS TECHNOLOGY
- PREPARED SPEECH
- PRINCIPLES OF TECHNOLOGY
- PROMOTIONAL BULLETIN BOARD DISPLAY
- RELATED TECHNICAL MATH
- Urban Search & Rescue

2017-2018 SkillsUSA Championships Technical Standards

available on-line to all professional members

SPECIAL NOTE ABOUT RESUMES:

All contests will require competitors to bring a one-page, typewritten resume and submit to the state technical committees at the competition on Friday, April 28, 2017.

Résumés are not required for the briefing meetings on Thursday evening.

EMPLOYABILITY SKILLS TESTING

Employability Skills Testing for all Leadership Contestants Competing at the Best Western.

All contestants in Leadership, Demonstration Skill and Display Events (except Action Skills, Community Action Project and Employment Application Skills) and Related Technical Math whose competition takes place *at the Best Western Hotel* will take their Employability Skills Exams ***at the Best Western Hotel in Zachary's Restaurant***. There will be "rolling administration" of the test between 7:00 a.m and 10:00 a.m. ***During the briefing meetings, Series Directors will provide information on what time each group of contestants will take the test.***

IMPORTANT NOTES

1. Theme

The SkillsUSA competition theme for the 2016-17 year is:

SkillsUSA: Champions at Work - Preparing America's Skilled Workforce

The topic to be addressed by contestants in the Chapter Display, Prepared Speech, Promotional Bulletin Board and Digital Cinema (Television Video) Production competitions is how our theme, SkillsUSA: Champions at Work, addresses the SkillsUSA national program of work in the area of professional development.

Within this topic, contestants might illustrate or discuss any of the following:

- How is SkillsUSA an integral part of your career and technical education program so that it ensures you are prepared for America's skilled workforce?
- How has your involvement in SkillsUSA made you a more sought-after employee than your peers who aren't members?
- If a potential employer asked you which specific skills gained from SkillsUSA have made you better prepared for America's workforce, what would you say?
- If asked to create a member recruitment campaign around the fact that SkillsUSA is preparing America's skilled workforce, what would be your key points?
- Why is the SkillsUSA Framework of developing personal, workplace and technical skills central to the concept of preparing America's skilled workforce?
- Why is ensuring that the United States has a skilled workforce important for the global economy?
- What are the ramifications if the United States does not have a skilled workforce?
- In the next 10 years, what skills are needed to fill the job-market skills gap, and how do SkillsUSA members ensure they are prepared through their SkillsUSA involvement?
- How has your involvement in SkillsUSA ensured that you will be prepared to enter America's skilled workforce?
- What elements of SkillsUSA ensure that members are prepared to enter America's skilled workforce?
- What specific skill development is helping you fulfill the mission of SkillsUSA: to empower its members to become world-class workers, leaders and responsible American citizens?
- Which SkillsUSA programs ensure that members are developing the personal skills needed to be prepared when entering the workforce? Program examples may include those that improve the following: integrity, self-motivation, work ethic, professionalism and responsibility.
- Which SkillsUSA programs ensure that members are developing the workplace skills needed to be prepared when entering the workforce? Program examples may include those that improve the following skills: communication, decision making, teamwork, cultural sensitivity and leadership.
- Which SkillsUSA programs ensure that members are developing the technical skills needed to be prepared when entering the workforce? Program examples may include those that improve the following skills: technical literacy, job-specific tasks, service to the community, ongoing professional development and an awareness of safety and health issues.

2. Tee-shirt requirement: For every contest that has a clothing requirement specifying "SkillsUSA Massachusetts Tee shirt," the tee shirts will be distributed to chapter advisors during registration. Every participant at the conference will receive a conference tee shirt.

3. Insuring Success: Make sure every contestant reviews their contest(s); scope, tooling requirements, clothing requirements, etc., as there are penalties in place for non-compliance in every competition.

2017 Tee-shirt Design

BUILDING TRADES A

EVENTS:

INDUSTRIAL MOTOR CONTROLS
ELECTRICAL CONSTRUCTION WIRING
MAJOR APPLIANCE TECHNOLOGY
MASONRY

SERIES DIRECTOR:

Noel Lamothe

CONTACT INFORMATION:

TANTASQUA RHS
320B Brookfield Road
Fiskdale, MA 01518
(508) 347-7381

INDUSTRIAL MOTOR CONTROL CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Requirements and Scope of Contest

Scope of Contest:

National Skills – Industrial Motor Control

Contestants will be given job sheets with schematic diagrams and accompanying requirements for wiring an industrial motor control installation. All work must conform to the specifications of the latest edition of the National Electrical Code as of January prior to the SkillsUSA Championships. Contestants will demonstrate their ability to perform jobs or skills selected from the list of competencies as determined by the SkillsUSA Championships Technical Committee. These will include: safety, use of tools and equipment, calculations, trade information, install raceways and enclosures, install and connect switches, buttons and lights. You will also be required to complete wiring or ladder diagrams, troubleshoot a control fault using a multi meter, and a written test referencing the current NEC code.

State Skills – Industrial Motor Control

All aspects of the contest will focus around industrial motor control and include some of the aspects of the National Event. The project will use a variety of wiring methods and be mounted on a simulated finished wall. It may include a disconnect switch, a controller or starter, and various automatic or manual controls. These items may be connected to a trough using short offset nipples. The project will evaluate each contestant's preparation for employment and to recognize outstanding students for excellence and professionalism in the field of industrial motor controls.

Tool Requirements: **One-page type-written resume required for every contestant*

- ½" EMT bender
- Side cutters
- Pump pliers
- Knife
- Measuring tape
- Hacksaw
- Claw hammer
- Torpedo level
- Crimping tools
- Scratch Awl
- Diagonal pliers
- Long-nose pliers
- Wire strippers
- Assorted flat blade & Phillips
- Electrical tape and connectors
- Multimeter
- Fuse pullers
- Roto-splitter

Supplies for drawing ladder diagrams ***(pencil, straightedge, etc.)***
Calculator ***(NO electrical specific calculators)***
Latest edition of MA Code Book ***(NO code handbooks allowed)***
CORDLESS DRILLS WILL BE ALLOWED for the 2017 competition
(Note: NO electrical screwdrivers allowed)

Clothing Requirements:

- Work pants ***(NO jeans)***
- Leather work boots ***(NO sneakers)***
- Hard hat
- SkillsUSA Massachusetts T-Shirt
- Safety glasses
- NO cell phones allowed

MAJOR APPLIANCE TECHNOLOGY CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Scope of Contest:

Using eight appliances with a bugged failure, the students will be observed to see if they;

- Use customer relations skills to interact with a “customer”.
- Have and use all safety equipment.
- Show proper respect for the customer and the product and surroundings.
- Inspect the failed appliance using the facts they receive from us (the customer) validate the complaint.
- Determine probable cause, if any, and consider if electrical, mechanical or both has failed.
- Use a multi-meter to test for voltage, continuity and resistance.
- Use a wiring diagram to trace circuits.
- Use mechanical skills to access components for testing.
- Show proper use of basic hand tools.
- Use their senses to determine product failure.
- Return product to same condition as found.
- Explain failure and corrective actions to the “customer” in detail using proper verbiage.
- Review resume with a “hiring manager”.
- Score appropriately on diagnosis, times to service, explanation of failure and repair, resume.

Tool Requirements: *One-page type-written resume required for every contestant

Screwdrivers
Only socket needed will be 1/4"
VOM
1/4" & 5/16" nut driver
Small putty knife
Vice Grips
Voltage/ohm Meter or Amp Meter w/ohms
Wire cutters
Wire Stripper
Pliers Regular and needle nose

Clothing Requirements:

Work pants (No Jeans)
Work shoes ***(NO sneakers)***
Safety glasses
SkillsUSA Massachusetts T-shirt
NO cell phones allowed

MASONRY CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Scope of Contest:

National Skills - Masonry

While production is very important, quality workmanship is vital. The students will be expected to construct a composite brick & block project in a six-hour period that will test their ability to meet industry standards in quality. In addition to a written exam, the critical eye of journeyman judges will be the deciding factor in determining the winners. The contest project will include components of the most frequently used details in residential construction.

State Skills - Masonry

The contest will involve brick and block composite wall construction. Participants in this contest will be judged on their ability to follow correct masonry design and procedures. All contestants will be assessed on neatness, safety, production, manipulation, and adherence to masonry construction building standards. All contestants must dismantle their projects after the judges have finished scoring. All contestants must stay and clean the entire building site as required by the event manager. Any student not participating in site clean up will lose points on his/her final score.

Tool Requirements: *One-page type-written resume required for every contestant

- Tool bag
- Flat jointer ½"
- 4' Level
- Trowel
- 2' Level
- Brick hammer
- Modular rule
- Brick set
- Brick spacing rule
- Brush
- 2 - Line blocks with line
- Pencil
- 2 - Line pins
- 2' framing Square
- Convex jointer ½" x 5/8"

Clothing Requirements:

- Work pants (no jeans)
- Work boots (no sneakers)
- Hard hat
- SkillsUSA Massachusetts T-shirt
- Safety Glasses
- NO cell phones allowed

MASONRY SCORE SHEET

Skills USA Score Sheet	Points	Frameworks
Correct Design	10	2.A.2,3,5 - 2.G.2 - 2.I.1,2 - 2.L.1 - 2.O.2
Block Height	15	2.F.2
Level	15	2.C.6, 2.J.5,6
Plumb	15	2.C.6, 2.J.5,6
Range	15	2.C.6, 2.J.5,6
Brick Height	15	2.F.2
Level	15	2.C.6, 2.I.1,2
Plumb	15	2.C.6, 2.I.1,2
Range	15	2.C.6, 2.I.1,2
Modular Spacing	10	2.F.2
Square	10	2.L.3
Full and Uniform Joints	10	industry standard
Neatness	10	2.B.2
Production	10	work volume
Manipulation	15	proper tool use, masonry techniques
Joint Finish	10	2.K.1
Safety	15	1.B.4,10
Masonry Reinforcement	10	2.P.3
Total	**230**	

Clothing Penalty	0 to 10 pts.
Clean up Penalty	0 to 15 pts.

ELECTRICAL CONSTRUCTION WIRING CONTEST

Requirements and Scope of Contest

Scope of Contest:

National Skills – Electrical Construction Wiring

Contestants in residential wiring are tested on their ability to install wiring in a residence or light commercial installation, working from drawings and specifications sheets. Professional electricians judge the contestants on the basis of general workmanship, accuracy of layout and installation, adherence to National Electrical Code and safety. The test consists of two parts--conduit bending and the simulated wiring of two or more rooms of a typical residence. ***The wiring will be judged according to standard residential and commercial wiring practices, and the current edition of the National Electrical Code.***

State Skills – Electrical Construction Wiring

All aspects of the contest will center on residential or light commercial installations. The project will be wired in a simulated wall sections, either studs or finished wall. Students may be asked to trouble shoot an existing circuit using a multimeter and repair/replace problems with devices. The project may consist of the following methods: Romex, BX, EMT, Conduit, Wiremold, PVC, ENT, Bell Wire, Cat 5, and Cat 6 Cabling. Contestant projects will be judged on workmanship, accuracy, speed, adherence to the current Massachusetts Electrical Code, and other requirements as applied to the project.

Tool Requirements: *One-page type-written resume required for every contestant

- 1 - ½" EMT bender
- 1 -Corded Electrical drill 3/8" or ½" chuck
- 1 - 25' Extension cord
- 1 - Roto splits
- 1 - 3/4" - 7/8" Auger bit
- 1 - Empty nail apron
- 1 - Tool box w/lock
- 1 - Wire strippers
- 1 - Arc joint pliers
- 1 - Claw hammer
- Assorted wood chisels ¼" to 1"
- Assorted flat blade and Phillips screwdrivers
- ¾" Spade bit
- 1 - Key hole saw
- 1 - Scratch awl
- 1 - Diagonal pliers
- 1 - Side cutters
- 1 - Hacksaw
- 1 - Roll electrical tape
- 1 - 8' - 12' Measuring tape
- 1 - Electricians knife
- 1 - Torpedo level
- 1 - Needle nose pliers
- 1 – Multimeter
- 1 - Current Massachusetts Code Book *(NO Code handbooks allowed)*
- 1 - Scientific calculator *(NO electrical specific calculators)*
- *CORDLESS DRILLS WILL BE ALLOWED for the 2017 competition*

(Note: <u>NO</u> electrical screwdrivers, or wood blocks for measuring.)

Clothing Requirements:

- Work pants ***(NO jeans)***
- Leather work boots ***(NO sneakers)***
- Hard hat
- SkillsUSA Massachusetts T-shirt
- Safety glasses
- NO cell phones allowed

BUILDING TRADES B

EVENTS:

CABINETMAKING
CARPENTRY
HEATING, VENTILATION, AIR CONDITIONING & REF.
PLUMBING

SERIES DIRECTOR:

Ray Mahon

CONTACT INFORMATION:

BAY PATH RVTHS
57 MUGGETT HILL ROAD
CHARLTON, MA. 01507
508.248.5971
EMAIL: rmahon@baypath.net

CABINETMAKING CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Scope of Contest:

National Skills – Cabinetmaking

Contestants are required to build a small cabinet from materials and drawings supplied. They are expected to read the drawings, lay out and cut the parts, using a table saw, laminate trimmer, hand drill, hinge boring machine and various hand tools. The parts are to be accurately assembled, sanded and adjusted to tolerances as specified by the judges.

State Skills – Cabinetmaking

The event will include 10-12 of the following:

1. Mortise in a butt hinge
2. Layout and band saw a valance
3. Blind dado
4. Spline joint
5. Spline flat miter joint
6. Haunched mortise and tenon
7. Drawer Corner joint *(DBL DADO)*
8. Pocket hole
9. Pocket hole dado
10. Cope joint
11. Flat miter and doweled
12. Turn a round tapered leg
13. Drawer Front dovetail
14. Machine dovetail
15. Plastic laminating
16. Square tapered leg jig and leg *(4 sides)*
17. Layout and cut a cabriole leg
18. Layout rod
19. Mortise and tenon table leg and rail
20. Bridle joint
21. Set up a knife and collar on the shaper
22. Turn a leg with beads, coves, and half rounds
23. Through dovetail
24. Biscuit joinery
25. Cabinet carcass assembly
26. Assemble & install doors
27. Layout and install door & draw hardware
28. Assemble & install drawers
29. Mechanical draw slides

Tool Requirements: **One-page type-written resume required for every contestant*

Contestant tool check off form must be completed, signed and turned in with resume

Tape measure or rule
Utility knife with blades
Protractor
Dovetail saw
Back saw
Combination square
Set of dividers or compass
Coping saw with extra blade
Hammer
Plastic mallet
Set of wood chisels *(1/4", 3/8", ½", 3/4", 1") (Chisels must be ground and sharpened)*
Sliding T bevel
#1, #2, #3 Phillips screwdrivers
2 - pencils, sharpened
3/16, 1/4 slotted screwdrivers
Power drill 3/8 or ½ *(cordless or corded)*
Drill index 1/16 to 3/8 x 1/16
¼" collet router
Biscuit jointer
1 pt. Wood glue
1 qt. Nontoxic contact cement
Nail Set
Laminate tools flat mill file, plastic laminate roller, electric trimmer, flush cutter, bevel cutter,
2 – contact cement application brushes
Edge banding trimmer
6" machinist scale
Phillips screwdriver bit set for drill

Clothing Requirements:

SkillsUSA Massachusetts T-shirt
Work pants
Safety glasses - ***MUST BE WORN AT ALL TIMES***
Leather work boots
NO cell phones allowed

MEMORANDUM

TO: Cabinetmaking School Advisor

FROM: Cabinetmaking Event Manager

DATE: March 31, 2017

RE: Safety and Proficiency

Please complete this information for each contestant who intends to participate in the Cabinetmaking Contest. Each contestant must present to the Event Manager a completed version of this form on the morning of competition before the students will be allowed to compete.

This letter is to confirm that _____ is enrolled in the Cabinetmaking program at _____School and has satisfactorily passed all general and specific shop safety rules and has demonstrated proficiency on all parts, controls, safety tests on each of the following pieces of machinery *(check all as appropriate)*.

- ❒ Circular Saw
- ❒ Jointer
- ❒ Surface Planer
- ❒ Band Saw
- ❒ Shaper
- ❒ Chisel Mortiser
- ❒ Tennoner
- ❒ Drill Press
- ❒ Edge Sander
- ❒ Stoke Sander
- ❒ Hand Held Laminate Trimmer
- ❒ Disc Sander
- ❒ Spindle Sander
- ❒ Lathe
- ❒ Radial Arm Saw
- ❒ Router
- ❒ Portable Hand Saws
- ❒ Power Drill
- ❒ Other - Please List:

_____

_____

_____

Signed (Student)_____

Signed (Advisor)_____

Signed (Administrator)_____

This document, completed and containing all required signatures MUST be presented to the Event Manager on Friday, April 28, 2017 BEFORE being allowed to use machinery in the contest area.

CARPENTRY CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Scope of Contest:

The contestants are required to complete a project specifically designed to test overall carpentry skills, which include framing, exterior trim, and stair building. They are judged on the basis of accuracy, ability to read and interpret blueprints, workmanship, and the proper use of tools and equipment.

Tool Requirements: *One-page type-written resume required for every contestant

1 – 3’ OSHA approved step ladder
1 - Claw hammer, *(16-22 oz. smooth face)*
1 - Circular Saw
1 - Hand Saw
1 - 1 Tool Belt
1 - Flat Bar
1 - Combination square or speed square
1 - Framing square (stair stops optional)
1 - Set of wood chisels (1/4” -1”)
1 - Pair Tin snips
1 - Ruler or tape measure
1 - 25' Extension cord *(UL approved, grounded)*
1 - Keyhole saw
1 – Cordless Drill
(bits will be provided)

2 - Sharpened pencils
1 - Tool box
1 - Block plane
1 - Cats paw/Nail claw
1 - Phillips and flathead screwdriver
1 - Utility knife with extra blades
1 - Chalk line
Nail sets (1/32, 2/32 and 3/32
1 - 24" or 30" level
1 - Pair slip joint pliers
1 - Combination wood rasp and file

Clothing Requirements:

Work pants (no baggy/torn pants)
Leather work boots ***(NO sneakers)***
Safety glasses ***(worn at all times)***

Hard Hat
SkillsUSA Massachusetts T-shirt
NO cell phones allowed

AIR CONDITIONING & REFRIGERATION - HVACR CONTEST

Scope of Contest:

National Skills - Air Conditioning and Refrigeration

Contestants are tested on their ability to perform such jobs as troubleshooting, recommending service and repair, and brazing. They are judged on the basis of their use of tools and test equipment, speed, accuracy, and safety.

State Skills - Air Conditioning and Refrigeration

1. Soft soldering, brazing, flaring, and copper tubing procedures.
2. Diagnosing electrical problems in heating and cooling units.
3. Knowledge of refrigeration systems, associated components and operating characteristics.
4. Observance of refrigeration safety.

Tool Requirements: ****One-page type-written resume required for every contestant***

Pen/Pencil
Tape/ ruler
Flint spark lighter
Tubing Cutter
Reamer
10" adjustable wrench
Refrigerant manifold gauge set
Pliers (Water Pump)
Hammer (Ball Peen)
Tubing bender ¼"-3/8"
Lockout locks or tags
Reg. & Phillips screwdriver
Flaring block and yoke
1/4, 3/8, ½, 5/8 swaging tools
Refrigeration service valve ratchet
Simpson VOM MODEL 260 or similar
Safety glasses
Wire Stripper
Wire Cutter
Temperature and Pressure Chart
Gloves

B Type acetylene set-up with hose, handle and tips suitable for soft soldering and brazing
Please mark all torch kits so that they can be identified

ABSOLUTELY NO B TANKS OR TANKS OF ANY KIND SHOULD BE BROUGHT.
WE WILL PROVIDE THEM.

***** IMPORTANT NOTE*****

IF A SCHOOL IS SENDING MORE THAN ONE STUDENT AND THERE ARE PROBLEMS SECURING TOOLS FOR EACH PARTICIPANT (SUCH AS ACETYLENE TANK SET-UPS), THE JUDGES WILL TRY TO SCHEDULE STUDENTS FROM THAT SCHOOL SO THAT THEY ARE NOT DOING THE SAME TASK AT THE SAME TIME.

HOWEVER, THE JUDGES WILL TAKE NO RESPONSIBILITY FOR INCONVENIENCE, DELAYS, OR OTHER PROBLEMS THAT THIS COULD LEAD TO.

Clothing Requirements:

Work pants
Work shoes ***(Absolutely NO sneakers allowed)***
NO cell phones allowed
SkillsUSA Massachusetts T-shirt
Safety glasses
Hair must be kept up so as not to pose a safety hazard!

PLUMBING CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Scope of Contest:

National Skills - Plumbing

Using supplied materials, contestants are required to "rough in" water, drain and vent piping. Installations are judged on accuracy to specified measurements. The completed projects are pressure tested on the water pipes. Professional plumbers judge the contestants on the basis of accuracy, workmanship, proper selection and use of tools and supplies, and proper safety practices.

One-page type-written resume required for every contestant

Tool Requirements:

Toolbox with the tools needed to assemble PVC, copper tubing and a no hub project. Be sure to include the two different sizes of Torque Wrenches or nut driver for Huskey and Annaco 4000 clamps.

Toolbox with the tools needed to assemble PVC, copper tubing and a no hub project. Be sure to include the two different sizes of Torque Wrenches or nut driver for Huskey and Annaco 4000 clamps.

Reamer
Ruler/tape measure
Steel wool
Pencils
Huskey 3/8" Torque wrench
Chaulk
5/16" Torque wrench
Ridgid #15
Soap stone
PVC saw
Hack saw with spare blades
Water pump pliers
Claw Hammer
4 in 1 Screwdriver
10" Adjustable wrench
Straight tin snips
9" Torpedo level
10" and 12" pipe wrenches
Cordless drill
Utility knife
Scratcher
Clean rags

***Only the tools listed here will be allowed. Tools will be laid out prior to beginning the competition. More tools or less (missing) tools, minus 2 points per tool.

The Following Items Will Be Supplied:

Torches
Clip Board
Ratchet type cast iron cutters
Flux
Solder
PVC Glue
PVC Primer
Sand cloth
Scissors type cast iron cutter
Propane

Clothing Requirements:

Work pants
Work gloves
SkillsUSA Massachusetts T-shirt
Work boots ***(NO sneakers)***
Safety glasses
NO cell phones allowed

BUILDING TRADES C

EVENT:
TEAMWORKS

SERIES DIRECTOR:
KEN PACHECO

CONTACT INFORMATION:
Chief Operations Officer
Facilities & Operations
Fall River Public Schools
360 Elsbree Street
Fall River, MA 02721
EMAIL: kenpacheco@fallriverschools.org

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New England Concrete Masonry Association

PHCC of Massachusetts

TEAMWORKS CONTEST

The Team:

Teamwork is vital for every successful project. The competition will challenge each team to plan and execute a complex structure to completion. Each school will supply an adequate labor force to complete the assignment.

The Challenge:

Your task will be to build a structure per the plans and material supplied. You are to work as a team but each trade will be responsible for their own work. [For example: A plumber may hold a board for a carpenter but the carpenter must cut it and install it.]

The Plan:

"PLAN your work- then WORK your plan."

ON WEDNESDAY EVENING. APRIL 26, 2017 AT 6:30PM DINNER WILL BE PROVIDED COMPLIMENTS OF AMERESCO FOR ALL CONTESTANTS AND ADVISORS. The competition will **start at 8:00pm on Wednesday, April 26th with the interview & resume portion of the competition. The hands-on portion of the competition will begin at 8:30 am on Thursday, April 27th.** ON APRIL 27TH IN THE MORNING, ALL TEAMS SHOULD ARRIVE AT THE BEST WESTERN ROYAL PLAZA HOTEL AT 6:30 AM. FOR THE TEAMWORKS BREAKFAST. After breakfast, all teams will report to the tent where all the trades will meet and plan how they will identify the sequence of the project. Teams are required to be housed at their conference hotel on Wednesday evening. Please be sure the Chapter Advisor has made the notification to the state office, by April 7, 2017 of TeamWorks Advisors and Students who will stay on Wednesday night.

Caution:

This is an aggressive undertaking so time management is very important. Schedule your trades so they will be able to complete their tasks without interfering with others. Early construction of the initial trades should start during the planning time.

Assessment:

A team of judges will monitor and assess the projects. They will evaluate the quality of the work, the cohesiveness of the team and the completion of the project.

NOTEBOOKS OR REFERENCE MATERIAL WILL NOT BE ALLOWED IN THE WORK AREAS. ONLY CODE BOOKS ARE AUTHORIZED.

TEAMWORKS PLUMBING REQUIREMENTS

Tools Required: **One-page type-written resume required for every contestant*

- Standard plumbing tool box
- Right angle drill with required bits
- Sawzall
- 1 Qt. Cement
- 1 Qt. Cleaner
- 1 lead free solder
- 1 Roll of sand cloth
- 1 Plumbers putty
- Safety equipment as required
- Screw gun
- 2 Rolls Teflon Tape
- 1 Can of Pipe Dope - sealant
- 1 Flux with brushes
- 1 ½" Fitting brushes

PROPANE TANK WILL NOT BE SUPPLIED

TEAMS NEED TO BRING THEIR OWN! IT WILL NOT BE ALLOWED IN THE HOTELS SO IT MUST BE STORED AT THE JOB SITE!

In addition to the tools and equipment listed, the plumbing contestant in TeamWorks may also bring appropriate test equipment as listed below:

Test Equipment to be brought by contestant:
(3) – 3" test plugs
(1) – 4" test plugs
(1) – 1 ½" ABS or PVC x female adapter
(1) – 1 ½" x ½" black bushing
(1) – ½" x black tee
(1) – ½" IPS ball valve
(1) – ½" x ¼" black bushing
(1) – ¼" male x Schrader valve
(1) – 0-30 psi gauge
(1) – 0-300 psi gauge
(2) – 2" test plugs
(3) – 1 ½" test plugs

TEAMWORKS MASONRY REQUIREMENTS

Tools Required: ****One-page type-written resume required for every contestant***

- Standard masonry tool box
- Masonry saw *(skill saw with masonry blade)*
- Wheelbarrow
- Safety equipment as required
- Extension Cord
- Mortar pan

TEAMWORKS CARPENTRY REQUIREMENTS

Tools Required: ****One-page type-written resume required for every contestant***

- Standard carpentry toolbox with hand tools
- Saw horses
- Extension cords
- Sabre saw
- Safety equipment as required
- Skill saw
- Drywall screw gun
- Miter box

TEAMWORKS ELECTRICAL REQUIREMENTS

Tools Required: ****One-page type-written resume required for every contestant***

- Standard electrical toolbox
- Right angle drill with bits
- Extension cord
- Safety equipment as required
- Screw gun
- Metal Stud Punch (optional)

TEAMWORKS CLOTHING REQUIREMENTS

(Attention Team Members)

- Work pants
- Leather work boots ***(NO Sneakers)***
- Safety glasses
- Hard hat
- Work shirt ***(long sleeve)*** - weather
- Work jacket/sweatshirt - weather
- Skills USA Massachusetts T-shirt
- NO cell phone allowed

TEAMWORKS WILL TAKE PLACE OUTSIDE, IN A TENT, AT THE BEST WESTERN ROYAL PLAZA TRADE CENTER. BE PREPARED FOR ALL WEATHER CONDITIONS.

TeamWorks
JOB INTERVIEW

PURPOSE To evaluate the contestant's understanding of project interview procedures that they may face in applying for positions/project in the occupational areas for which they are training.

GENERAL REGULATIONS Contestant's entering this contest must follow all rules listed below as well as the· "General Regulations" of the Massachusetts Skills Championships. The "General Regulations" can be found in a separate file under that name. You will be held accountable for knowing and following all rules and guidelines of the Massachusetts Skills Championships.

CLOTHING REQUIREMENT FOR THE INTERVIEW: Business Casual

OBSERVER RULE No observers will be permitted to view the interviews in progress.

EQUIPMENT AND MATERIALS

1) Supplied by Interview Committee
    a) Blank Building Permit
2) Supplied by the contestant
    a) OSHA Job Safety Manual.
    b) An ink pen for completing the Building Permit.
    c) Three copies each of a one-page typewritten personal resume, to be presented during the interview.

SCOPE OF CONTEST

1) Contestants should prepare for the interview contest by developing the following skills:
    a) Demonstrate confident handshake, proper greeting and personal introduction.
    b) Know the aspects of making positive first impressions.
    c) Demonstrate good grooming in dress and personal hygiene.
    d) Demonstrate confidence and positive personal image.
    e) Develop listening skills and show sincere interest.
    f) Pronounce words in a clear and understandable manner.
    g) Know their personal qualities and how to "sell themselves".
    h) Know the sources of information about a prospective employer.
    i) Effectively vary voice in pitch, tone, tempo and volume.

2) Prepare a personal resume
    a) Answer questions and carry a conversation pertaining to resume and trade.

3) Prepare an OSHA Safety Plan.
    a) Answer questions and carry a conversation pertaining to this plan.

4) The interview will be divided into five phases:
    a) Introduction
    b) Work Presentation
    c) Resumes
    d) Questions
    e) Permit/Safety

1) The contestant must submit three (3) copies of the personal resume (limited to one page typewritten or word-processed). The following information must be contained in the resume:
    a. Name, any (fictitious) address, phone number and email may be added.
    b. Career objective.
    c. Education and training.
    d. Work experience beginning with present employment listing specific responsibilities.
    e. Memberships, major accomplishments, awards earned, etc.
2) When called from the holding area, the contestant will approach directly into the Interview Room as though applying for a job in the occupational area for which she or he is training.
3) Upon evaluation of the resume, the judges will present the rating sheet and the three copies of the personal resume back to team.
4) All contestants will be asked identical questions. Judges are encouraged to use their own interview techniques. Such questions might include the following but will be determined by the judges:
    a. Questions directly out of from the Massachusetts Building Code?
    b. Occupational Safety Questions?
    c. Questions from the National Electrical Code?
    d. Personal Short and Long range goals?
5) Contestants will be handed a building permit application at the conclusion of the interview.
6) Contestants will be required to fill out this permit once they return to their work zone. The building permit application MUST be completed with an ink pen prior to the commencement of any craftsmanship work. Once approved, a building permit will be issued to that team. The team is required to post this permit.

INTERVIEW TIME

7) Contestants will be required to manage their interview time per the posted schedule. Please locate the posted interview board for your teams' time. Remember points will be subtracted for tardiness.

INTERVIEW ROOM ARRANGEMENT

8) The Interview Room will be furnished with table(s) and chairs for the contestants and two or three judges from the interviewing committee.

INTERVIEW PROCESS

9) The Team Leader shall lead the team into the Interview Room and direct each member to his or her respective chair.
10) With all team members standing in front of chair, the Team Leader shall commence with the team introduction.
11) While standing and looking directly at the Judges, the Team Leader shall state the following (Example):
    a. Proper Salutation (Hello and Good Morning), my name is __ (first name only) and I am the team leader and I'm also the Electrician (specified trade) for Team# I will now ask the team members to introduce themselves and their trade.
    b. b. TEAM MEMBERS: Proper Salutation (Hello and Good Morning), my name is (first name only) and I'm the Plumber for Team# __ _
    c. c. (All members shall introduce themselves to the Judges as identified above).
    d. d. Upon completion of each individual introduction, each team member shall hand a copy of his or her resume to each Judge.

SkillsUSA Massachusetts
TEAMWORK JOB INTERVIEW RATING SHEET

- Introduction Points Earned Remarks
- Introduction/ Interview Time 20
- Proper Clothing 15
- Team Leadership 15

TOTAL 50

- Members Role(s) 20
- Proposed Team Work 15
- Trade Knowledge 15

TOTAL 50

- Resume and Prepared Remarks
- Completeness of Detail 20
- Neatness 15
- Volume 15

TOTAL 50

- Answer Accuracy 20
- Presentation (eye contact) 15
- Knowledge 15

TOTAL 50

- Completed Properly/Posted 20
- Safety Manual 15
- PPE (head, ears, eyes, feet) 15

TOTAL 50

- Introduction 50
- Work Presentation so
- Resume 50
- Questions 50
- Permit/Safety 50

TOTAL 250

SkillsUSA MASSACHUSETTS Training Purposes ONLY
Building Permit Application

I. APPLICANT I TEAM Number

II. TYPE AND USE OF BUILDING | Please indicate all that apply
PURPOSE FOR PERMIT New Building Addition Alteration Repair

USAGE CATEGORY | Residential | Business | Automotive | Industrial

ESTIMATED COST OF WORK PROPOSED UNDER THE PERMIT $_____
Describe briefly the nature of the work proposed to be completed under this permit application:

III. BUILDING CHARACTERISTICS | Please indicate all that apply

Frame | Masonry l Wood Structural Steel l other
Type of Heating Fuel I Construction Size X | Area

Are any of the following included in the work? Please indicate by circling all that apply
Electrical Plumbing Private Water Oil Storage Fire Suppression Air Conditioning
Public Water Heating Septic System Gas Fitting Fire Detection Hazard Abatement

IV: CONTRACTOR
Team Number Construction Supervisors License#
Home improvement Contractor Registration #

VII: ARCHITECT, ENGINEER OR DESIGNER
Name l Address ·
JoAnn Bentley Architect 209 Bedford Street Suite 404,_Fall River,_ MA 02720 Phone# I Facsimile # E mail
508-674-7600 508-674-7603 jbentleyarchitect@verizon.net

VIII: READ CAREFULLY BEFORE SIGNING:
The undersigned applicant certifies that he/she is the legal owner of the property OR has been authorized to act as an agent of the owner with their full knowledge and consent. The applicant certifies that they have read, examined and truthfully completed this application in its entirety, that the proposed work and submitted plans are subject to the provisions of the Massachusetts Building Code (780 CMR) and other applicable laws and ordinances of the city and state to which the work is being performed and that any permit issued as a result of this application will be subject to the statements contained in the application and all codes, laws and ordinances. This application was designed for
Skills USA project training purposes.

Name of Team Leader (print) l Signature of Team Leader
BUILDING INSPECTION SIGN-OFF SHEET
NOTE: Project should not proceed without the appropriate sign-offs. Flooring Systems Deck/Stairs-Walls, Plumbing Rough Electrical Rough

COMMERCIAL DESIGN A

EVENTS:

ADVERTISING DESIGN
DIGITAL CINEMA (Television Video) PRODUCTION
PHOTOGRAPHY

SERIES DIRECTOR:

BECKY LARSON

CONTACT INFORMATION:

BAY PATH RVTHS
57 MUGGETT HILL ROAD
CHARLTON, MA. 01507
508.248.5971
EMAIL: rlarson@baypath.net

ADVERTISING DESIGN CONTEST

Requirements and Scope of Contest

*One-page type-written resume required for every contestant

Scope of Contest:

Contestants are tested on their technical skills as well as their creative aptitude. To test their technical ability, the competitors complete a problem that tests many of the technical aspects they would encounter in the completion of a mechanical/color separation. This is done using traditional manual skills. The Competitors also complete a mechanical layout problem using a computer. The computer platform is Apple iMacs running OS X El Capitan 10.11.6. The creative portion of the contest involves the working out of an assignment through the development of a rough sketch, final sketches, drawing and illustration, and the final layout and development of a product.

Competitors will be tested for their artistic skills with emphasis on design, color sense, typography usage, and production skills. Particular focus will also be on accuracy and neatness, not necessarily speed. The Advertising Design Competition will consist of two areas: Mechanical and Layout Design. Judging will be based on any or all of the following:

1. Mechanical - completeness, accuracy and neatness
2. Design - Creativity, completeness, imagination and presentation
3. Apply basic drawing techniques to advertising design
4. Understand and apply color as used in advertising design
5. Prepare layouts
6. Design, specify and apply typography to design
7. Demonstrate two and three-dimensional concepts for advertising design
8. Prepare art and copy for reproduction
9. Specify printer's instructions for multi-color work, generate art, design and copy using electronic equipment and appropriate software
10. Mounting art on supplied board in a clean, neat, and visually appealing manner

Software: Adobe CC – which includes InDesign, Photoshop, and Illustrator.

IMPORTANT NOTE:

Competitors should be prepared to leave on the first bus available for Blackstone Valley RVTHS. Advertising Design competitors should enter the area for the ribbon-cutting ceremony. Competitors in this area will be called and allowed to leave early to begin their contests.

Tool Requirements:

Pencils and erasers
X-acto knife and blades
Scales and rulers - picas and inches
Colored pencils
Markers - colored
Paper
Adhesive(s) - one coat rubber cement, tape, glue stick, etc.

**One-page type-written resume required for every contestant*

Note: Additional materials are acceptable but not necessary. They may be brought to the contest at the discretion of the artist. All other materials will be supplied by the Committee.

Clothing Requirements:

Official SkillsUSA Dress *(reference National Technical Standards or the Leadership Handbook)* blazer *(optional)* or Businesslike attire. **NO cell phones allowed.**

PHOTOGRAPHY CONTEST

One-page type-written resumé required for every contestant

Part 1: Print Competition

Students are required **TO BRING WITH THEM** and submit **2 prints** that will be scored by a panel of professional judges. Particular attention will be given to:

a. The technical & artistic aspects of the image
b. The overall impact
c. Minimum 11x14 or 154 sq in. image area mounted to 16 x 20
d. Black or white matting

NOTE: This is a Photography competition and not Graphic Design. Any image presented that goes far beyond the capabilities of traditional film photography in terms of manipulation will loose points. In short, if you can produce the image using film, negative retouching & print spotting, then the image is acceptable. Over use of multiple images, text, liquify tool, etc., is not encouraged.

Important note:

Competitors should be prepared to leave on the first bus available for Blackstone Valley RVTHS. Photography competitors should enter the area for the ribbon-cutting ceremony. Competitors in this area will be called and allowed to leave early to begin their contests. This will allow the competitors the opportunity to return to the ribbon cutting to capture shots of the ribbon-cutting event.

Part 2: Field Assignment

(NOTE: Students supply Digital SLR & accessories)

Students will go on assignment and capture images that relate to a "theme". Students must demonstrate their ability to stay within the parameters with respect to:

a. Location
b. Theme
c. Time limit
d. Technical and artistic proficiency

(Field Assignment Time to completion: 1 hour)

Part 3: Portrait Studio (studio equipment supplied by SkillsUSA)

Students will be tested on their knowledge of the portrait studio including:

a. Lighting patterns (standard)
b. Lighting ratios
c. Understanding of hand-held light meters
d. Camera settings
e. Cropping

Part 4: Digital Editing

Students will be required to complete a digital image manipulation project.
Competitor are required to use their school or personal computer and version of Adobe Photoshop.

Part 5: Trouble Shooting Digital Images

Students must correctly identify common problems in the processing/printing of digital images (i.e. blooming, jpeg artifacts, noise, color fringing, etc.)

OVERALL POINT STRUCTURE

Part 1: Print Competition . . . . . (200 points)
Part 2: Field Assignment . . . . . (200 points)
Part 3: Portrait Studio . . . . . (200 points)
Part 4: Digital Editing . . . . . (200 points)
Part 5: Troubleshooting . . . . . (200 points)
TOTAL: 1000 points

CONTESTANTS REQUIRED ITEMS

1. One-page type-written resumé required for every contestant
2. Two prints for contest submission
3. Digital SLR,
4. Memory Cards (1GB min)
5. Extra camera batteries (charged)
6. On-camera Flash & light meters (helpful but not mandatory)
7. Camera's USB cable or Memory card adapter for downloading images to computer.
8. Computer loaded with school's available version of Adobe Photoshop
9. Jump Drive

CLOTHING REQURIEMENTS

Official SkillsUSA Dress (reference the National Technical Standards 2017-2014 or the SkillsUSA Leadership Handbook)

Blazer (optional) or Businesslike attire.
Failure to comply with the requirements will result in clothing or resumé penalty.
NO cell phones allowed.

2017-2018 SkillsUSA Championships Technical Standards
available on-line to all professional members

DIGITAL CINEMA (Television Video) PRODUCTION CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

CLOTHING REQUIREMENTS: Official SkillsUSA dress or professional business attire.

**One-page type-written resumé required for every contestant*

The contest will include a video assignment to be created on site by a team of two student members from the same school and same division. The assignment will consist of the following:

1. A video that conveys the following theme:
   SkillsUSA - Champions at Work, Preparing America's Skilled Workforce.
   Within this topic, contestants might illustrate or discuss any of the following:
   - Why is ensuring career success for every member of SkillsUSA important to the economic health and stability of our nation?
   - Describe how the mission of SkillsUSA — to empower its members to become world-class workers, leaders and responsible American citizens — guarantees career success.
   - How has the vision of career success changed over the decades?
   - Describe the skills and attitudes that business and industry are demanding of students for career success.
   - What elements of SkillsUSA ensure that members experience career success?
   - How has the definition of career success changed for the current generation of students from their grandparents' generation?
   - What does career success look like in the 21st century?
   - In the next 10 years, what skills are needed to fill the job-market skills gap, and how do SkillsUSA members ensure career success through their SkillsUSA involvement?
   - What are the connections that SkillsUSA has built to ensure career success for its members?
   - How has SkillsUSA adapted over the years to provide members with the skills needed for career success?
   - How has your involvement in SkillsUSA ensured that you will be connected to career success?
   - Career success involves much more than mere dollars; describe the elements of experiencing true career success.

2. **Contestants are to work on site to capture and edit a 60-second video production** (penalties will be assessed for video projects under/over 60 seconds)
3. The completed video production must convey an adequate representation of the subject or theme
4. Taping, **but not editing,** may begin upon arrival to Skills events on Thursday evening, **but no sooner.** Taping may continue until 1:00 Friday, on the day of the competition. Editing begins on Friday, the day of competition – **after the competition has begun.**

5. **All taping and editing will end promptly at 1:00 on Friday, the day of the competition.** Students are required to stay at the completion site for their interview**. Interview times will be posted and students should be ready and prepared for their scheduled times.**
6. Emphasis will be placed on professional production of the video by industry standards, quality of audio and video, and conveyance of theme to the viewer.
7. Competitors should be prepared to leave on the first bus available for Blackstone Valley RVTHS. Digital Media competitors should enter the area for the ribbon-cutting ceremony. Competitors in this area will be called and allowed to leave early to begin their contests. This will allow the competitors the opportunity to return to the ribbon cutting to capture vital footage of the ribbon-cutting event.

SUPPLIED BY THE STATE TECHNICAL COMMITTEE

• Classroom space with one outlet accessible for each team & one USB thumb drive per team

SUPPLIED BY THE CONTESTANTS

• *All competitors must submit a one-page resumé, failure to do so will result in a 50-point penalty*

• For each piece of music used, a written copyright permission letter from the copyright holder must be submitted with entry. A blanket letter from a music library may be used. Any entry containing music not properly licensed will result in point penalties.

• A camera and computer system capable of recording video and outputting video

Aspect Ratios: 4:3 (4x3) or 16:9 (16x9)

Frame Rates: 24fps, 29.97fps, or 30fps.

Scanning: Progressive or Interlaced

Resolution: 480 (SD) formats, and 720,1080 (HD) formats are acceptable up to 30fps.

• Videos will be exported as files and transferred to USB thumb drive media for submission.

• Audio and video must be in the same file; we cannot accept submissions with separate audio and video files.

• One nonlinear editing system (multiple computers are not allowed)

• Microphone (wired and/or wireless)

• Two or more batteries and power supply/charger for camera

• Certify that the equipment has been thoroughly inspected and is in safe working condition

• 20' AC extension cord with multiple outlet power strip

• Camera support system (tripod, monopod, shoulder mount, steadicam, etc. are all allowed)

• Headphone splitters, if desired, must be supplied by contestants

• Submissions must be one of the following: Quicktime (.mov) file, it must be compressed using either the H.264 or MPEG-2 codec H.264, MPEG-2

Digital Cinema (Television Video) Production Score Sheet

Criteria		Point Value
1. Script		100
1a.	Script organization	20
1b.	Script consistent tone	20
1c.	Script answers major questions	20
1d.	Script appropriate for audience	20
1e.	Script appropriate ending	20
2. Camera Technique		150
2a.	Camera's basic shots	25
2b.	Video variety of basic shots	25
2c.	Non-basic shots	25
2d.	Locations and props to "frame" shots	25
2e.	Camera lens was focused	25
2f.	Proper use of equipment	25
3. Editing		210
3a.	Edits are clean	30
3b.	Edit style and pacing is appropriate	30
3c.	Timing of the edits is appropriate	30
3d.	Edits avoid any continuity problems	30
3e.	B-Roll footage effectively integrated	30
3f.	Graphic elements are appropriate	30
3g.	Text titles are readable and used	30
4. Music / Sound		65
4a.	Audio levels are consistent	20
4b.	Music selections are appropriate	15
4c.	Music matches the edits	15
4d.	Music is mixed with narration	15

Score Sheet (continued)

Criteria	Point Value
5. Special Effects	65
5a. Special effects are appropriate	20
5b. Special effects add value	15
5c. Special effects are creative	15
5d. Special effects are integrated	15
6. Team Presentation	200
6a. Ability to work as a team	50
6b. Demonstrate problem solving	50
6c. Demonstrated professional attitude	50
6d. Spoke clearly, communicated well	50
7. Overall Impressions and Interview	210
7a. Effective integration of all elements	60
7b. Message was effectively communicated	50
7c. Video was creative, engaging	50
7d. Demonstrated it was their work	50
Total	1000

COMMERCIAL DESIGN B

EVENTS:

ADDITIVE MANUFACTURING
ARCHITECTURAL DRAFTING
TECHNICAL DRAFTING
3D VISUALIZATION & ANIMATION

SERIES DIRECTOR:

MARK LYONS
LYONS SHARE ENTERPRISE
10 FORREST RD
WESTFORD, MA 01886

CONTACT INFORMATION:

EMAIL: MLYONS@3HTI.COM

ADDITIVE MANUFACTURING

Purpose
To evaluate each team's preparation for employment and to recognize outstanding students for excellence and professionalism in the field of Digital and Additive Manufacturing.

Additive manufacturing embraces a wide range of materials and derivative processes building parts suitable for end-use service. The virtually unlimited design freedom enabled by additive manufacturing allows the creation of shapes and the integration of feature and function that previously required subassemblies. Employment opportunities for creative individuals are growing while industry adopts AM methods. Ready access to workstations and service providers makes the Internet a growing marketplace for public AM gadgets.

Clothing Requirements
Official SkillsUSA Dress *(reference National Technical Standards or the Leadership Handbook)* blazer *(optional)* or Business like attire.

Self-Presentation Requirements:
You must supply a competed resume outlining your education, experience and skill set within 1 double-sided page. Resumes will be judged on effectiveness and clarity.

Failure to comply with the requirements will result in clothing or resume penalty.
NO cell phones allowed.

If you have questions contact:

Mark Lyons
Lyons Share Enterprise
10 Forrest Rd.
Westford, MA 01886
EMAIL: Mark_Lyons2002@yahoo.com

Eligibility
Open to active SkillsUSA students if they are enrolled in Computer Aided Design Classes, design classes, manufacturing, etc.

Equipment and Materials

1. Supplied by the technical committee:
    a. All additive manufacturing equipment and material.
2. Supplied by the contestant:
    a. Each team must register a single VALID email address by sending an email FROM THAT ADDRESS to Mark Lyons at Mark_Lyons2002@yahoo.com.
    b. Contestants will then receive instructions on uploading their files.
    c. Computer system (laptop) with computer design system capable of rendering files in STL format.
    d. USB Drive for transferring STL file.
    e. Any tools required to provide finished part.

Scope of the Contest

Skill Performance
This contest will be a team oriented event. Teams will consist of two contestants from the same school in the same. This contest includes ***two elements*** to evaluate teams for employment in additive manufacturing fields.

Element One:
The first element, to prepare in advance of the competition, will be to design a functional prototype of car that will be used during the competition. The car will be placed on a 32 foot track from a height of 34 inches. The time will be recorded, and bonus points will be awarded to the cars that complete the course in the fastest time. (Note: the track to be used is an official Pinewood Derby race track).

The files must be submitted to the Event Manager (details will be provided to the official registered email address of each team) no later than Friday April 21. NOTE THIS IS THE FRIDAY OF VACATION WEEK. The deadline will not be extended under any circumstance!

Each team will keep an engineering notebook that will demonstrate the design history and intent of the original design.

Design considerations:

1. The car weight shall not exceed 5.0 ounces. The Event Managers scale shall be considered final.
2. The overall length of the car shall not exceed 7 inches.
3. The overall width of the car shall not exceed 2 ¾ inches.
4. The maximum height of the car cannot exceed 5 inches (Adjust this limit so that the cars will pass under your finish gate).
5. The car must have 1 ¾" clearance between the wheels.
6. The car must have 3/8" clearance underneath the body.
7. All parts must be submitted to be printed by the committee.
8. No other parts will be allowed.
9. Assembly will take place the day of the competition.

Build time must be no longer than 5 hours and 30 minutes. Login information for software to virtually estimate print time will be made available to registered contestants. Moving parts that rotate freely must be part of the design. The design will show the benefits of additive manufacturing by incorporating complex geometric shapes.

Process considerations:

1. Self-supporting angles are 45 degrees.
2. More support means longer build time because the machine takes time to switch from model to support on each layer.
3. Air gap for freedom of movement in parts >0.023".
4. How the file is oriented to be built will affect the amount of support material being built and the overall time of the build.
5. The processing software has 3 different internal fill patterns the will affect material usage and time of build.
6. See http://www.stratasys.com/3d-printers/technologies/fdm-technology/faqs for additional information about the printers.
7. Models will be printed on a Stratasys F370 (see specifications: http://www.stratasys.com/en/F123/3D-Printers

Element Two:

For the second element, COMPLETED ONSITE at the SkillsUSA competition, teams will receive a challenge to perform within a set timeframe involving a design change. Each team member will be required to participate in the design challenge to demonstrate design program competencies.
The printed design and design changes in software will be presented to the judges along with the engineering notebook updated with design change notes from the day of the competition.

ARCHITECTURAL DRAFTING CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

National Skills – 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.

State Skills – Architectural Drafting

Today's industry requires proficiency in both manual and electronic output of technical documents. It is therefore the scope and intent of the contest to test the student's proficiency in their electronic (CAD) skills, as well as their manual ability to produce a drawing (sketching).

NOTES:

1. **EACH CONTESTANT WILL BE REQUIRED TO SUBMIT A ONE -PAGE, TYPEWRITTEN RESMUE HARD COPY ONLY.**

2. **EACH COPETITOR IS RESPONSIBLE FOR BRINGING THEIR OWN COMPUTER EQUIPMENT WITH THEIR SOFTWARE OF CHOICE INSTALLED AND RUNNING.**

3. **IF THE COMPUTER OF CHOICE IS A WORKSTATION, THIS EQUIPMENT MUST BE SET UP ON THURSDAY APRIL 28.**

4. **ALL COMPUTERS WILL HAVE ADOBE PDF PRINTER DRIVER INSTALLED.**

5. **DO NOT BRING YOUR OWN PRINTER. ALL FILES WILL BE PRINTED TO PDF FORMAT AND HARD COPIES WILL BE MADE FROM THESE FILES.**

Tool Requirements: *One-page type-written resume required for every contestant
Computer and CAD software installed and running.
1 cubic foot of reference material
Graph paper
Architect's scale
Erasers
Hand held calculator
Pencils (mechanical)

Clothing Requirements:

Official SkillsUSA Dress *(reference National Technical Standards or the Leadership Handbook)* blazer *(optional)* or Businesslike attire.

Self Presentation Requirements:

You must supply a competed resume outlining your education, experience and skill set within 1 double-sided page. Resumes will be judged on effectiveness and clarity.

Failure to comply with the requirements will result in clothing or resume penalty.

NO cell phones allowed.

If you have any questions dealing with either the Technical or Architectural Drafting contest, please feel free to contact me. This is open to both Teachers and Contestants.

MARK LYONS
LYONS SHARE ENTERPRISE
10 FORREST RD
WESTFORD, MA 01886
EMAIL: MLYONS@3HTI.COM

TECHNICAL DRAFTING CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Scope of Contest:

National Skills – 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).

State Skills – Technical Drafting

Today's industry requires proficiency in both manual and electronic output of technical documents. It is therefore the scope and intent of the contest to test the student's proficiency in their electronic (CAD) skills, as well as their manual ability to produce a drawing (sketching).

NOTES:

1. **EACH CONTESTANT WILL BE REQUIRED TO SUBMIT A ONE -PAGE, TYPEWRITTEN RESMUE HARD COPY ONLY.**

2. **EACH COMPETITOR IS RESPONSIBLE FOR BRINGING THEIR OWN COMPUTER EQUIPMENT WITH THEIR SOFTWARE OF CHOICE INSTALLED AND RUNNING.**

3. **IF THE COMPUTER OF CHOICE IS A WORKSTATION, THIS EQUIPMENT MUST BE SET UP ON THURSDAY APRIL 27TH.**

4. **ALL COMPUTERS WILL HAVE ADOBE PDF PRINTER DRIVER INSTALLED.**

5. **DO NOT BRING YOUR OWN PRINTER. ALL FILES WILL BE PRINTED TO PDF FORMAT AND HARD COPIES WILL BE MADE FROM THESE FILES.**

Tool Requirements: ***One-page type-written resume required for every contestant***

Computer and CAD software installed and running
1 cubic foot of reference material
Graph paper
Engineer's scale
Erasers
Hand held calculator
Pencils (mechanical)

Clothing Requirements:

Official SkillsUSA Dress *(reference National Technical Standards or the Leadership Handbook)* blazer *(optional)* or Businesslike attire.

Self Presentation Requirements:

You must supply a competed resume outlining your education, experience and skill set within 1 double-sided page. Resumes will be judged on effectiveness and clarity.

Failure to comply with the requirements will result in clothing or resume penalty.

NO cell phones allowed.

If you have any questions dealing with either the Technical or Architectural Drafting contest, please feel free to contact me. This is open to both Teachers and Contestants.

MARK LYONS
LYONS SHARE ENTERPRISE
10 FORREST RD
WESTFORD, MA 01886
EMAIL: MLYONS@3HTI.COM

MEMORANDUM

TO: Competitors of the Architectural Drafting and Technical Drafting Contest
FROM: Mark Lyons, Series Director
DATE: March 31, 2017
Congratulations for making it through the District Contest!

IMPORTANT! Each competitor WILL be responsible for bringing their own computer equipment AND software. If you are bringing a workstation rather than a laptop, you must contact the series director and arrange to have it set up on THURSDAY April 28th during regular school hours.

Contestants may use any brand or type of personal computer from any source. Software must be pre-loaded and configured. Test the system carefully prior to competition. Make sure your computer is able to write to a USB storage device. **Be sure to test your computer to ensure it will print to a PDF**. Limited on-site technical assistance will be available on contest day.

NOTES:

1. **EACH CONTESTANT WILL BE REQUIRED TO SUBMIT A ONE -PAGE, TYPEWRITTEN RESMUE HARD COPY ONLY.**

2. **EACH COMPETITOR IS RESPONSIBLE FOR BRINGING THEIR OWN COMPUTER EQUIPMENT WITH THEIR SOFTWARE OF CHOICE INSTALLED AND RUNNING.**

3. **IF THE COMPUTER OF CHOICE IS A WORKSTATION, THIS EQUIPMENT MUST BE SET UP ON THURSDAY APRIL 27TH.**

4. **ALL COMPUTERS MUST HAVE A PDF PRINTER DRIVER INSTALLED.**

5. **DO NOT BRING YOUR OWN PRINTER. ALL FILES WILL BE PRINTED TO PDF FORMAT AND HARD COPIES WILL BE MADE FROM THESE FILES.**

If you have any questions regarding the Architectural or Technical Drafting contest, please feel free to contact me. This is open to both Teachers and Contestants.

MARK LYONS
LYONS SHARE ENTERPRISE
10 FORREST RD
WESTFORD, MA 01886
EMAIL: MLYONS@3HTI.COM

3D VISUALIZATION AND ANIMATION CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Scope of Contest:

Contestants are tested on their production skills as well as their technical understanding of 3D Visualization and Animation. Testing of production skills and quality is administered through a practical examination wherein the contestants will, from scratch: design, build, animate, texture, and render an object to be presented at the time of competition. Testing of technical acumen will be administered through a multiple-choice test.

Judging of the practical examination is based on the following criteria:

1. Planning, Storyboards, Methodology and Execution
2. Animation quality and Believable Motion
3. Rendering, Textures and Lighting
4. Design and modeling
5. Final Presentation

Contestants are required to plan an action sequence that must be storyboarded. Once the action sequence is defined contestants are required to then animate the pre-defined object to that storyboard sequence. The action sequence must consist of two parts: 1) a slow and visually fluid movement and 2) a fast and powerful movement.

Software, Hardware and Tool Requirements:

ATTENTION! ATTENTION! ATTENTION! ATTENTION! ATTENTION!

This year, our contest will not have a sponsor for workstations! All team MUST have their own workstations!!

Software Requirements:

1. 3D Software: *Here are examples of acceptable 3D Animation programs.*
    a. Maya, 3DS Max, LightWave, XSI, Houdini, Cinema 4D
    b. Contestants are permitted to use more than one of the above to complete tasks.
2. 2D Image Editing Software: Photoshop or Equivalent
3. Examples of acceptable image sequence compositing programs are Adobe After Effects, Adobe Premiere, or equivalent.

Hardware Requirements:

1. Contestants may use any brand or type of personal computer from any source. Software must be pre-loaded and configured. The computer hardware must meet or exceed the minimum recommended system requirements from the manufacturer of the software of choice. We strongly recommend that the minimum requirements are exceeded.
2. User may use the following components with their systems: Wacom tablet, double monitors and Cintiq Pens.
3. Each contestant is allowed only one power outlet from the wall. Be prepared to bring a power strip.
4. Your computer must be able to write to a USB storage device.
5. Test the system carefully prior to competition. Make sure you can save to a USB storage device. Limited on-site technical assistance will be available on contest day.

*Tool Requirements: *One-page type-written resume required for every contestant*

1. Pencils and erasers
2. Storyboard paper with NTSC CCIR 601 storyboard frames.
3. Contestants may bring published reference books and software manuals. Reference materials may not take up more than 1/2 cubic foot of space per team member (total of 1 cubic foot).

Clothing Requirements:

Official SkillsUSA Dress *(reference National Technical Standards or the Leadership Handbook)* blazer *(optional)* or Businesslike attire.

Self-Presentation Requirements:

You must supply a competed resume outlining your education, experience and skill set within 1 double-sided page. Resumes will be judged on effectiveness and clarity.

Failure to comply with the requirements will result in clothing or resume penalty.

NO cell phones allowed.

MEMORANDUM

TO: Competitors of the 3D Visualization and Animation Contest
FROM: Mark Lyons, Series Director
DATE: March 31, 2017

Congratulations for making it through the District Contest!

ATTENTION! ATTENTION! ATTENTION! ATTENTION! ATTENTION!

This year, our contest will not have a sponsor for workstations! All team MUST have their own workstations!!

We strongly recommend that the minimum requirements are exceeded.
NOTES:

1. **EACH CONTESTANT WILL BE REQUIRED TO SUBMIT A ONE -PAGE, TYPEWRITTEN RESMUE HARD COPY ONLY.**
2. **EACH COMPETITOR BRING THEIR OWN COMPUTERS**
3. **IF THE COMPUTER OF CHOICE IS A WORKSTATION, THIS EQUIPMENT MUST BE SET UP ON THURSDAY APRIL 28.**
4. **THE COMPETITION COMMITTEE WILL PROVIDE A CLEAN USB STORAGE DEVICE, TO BE USED ONLY WHEN SUBMITTING FINAL WORK.**

If you have any questions regarding the 3D Visualization and Animation contest, please feel free to contact me. This is open to both Teachers and Contestants.

MARK LYONS
LYONS SHARE ENTERPRISE
10 FORREST RD
WESTFORD, MA 01886
EMAIL: MLYONS@3HTI.COM

COMMERCIAL DESIGN C

EVENTS:

GRAPHIC COMMUNICATIONS (contest will be at Keefe Technical School)
GRAPHIC IMAGING SUBLIMATION (Limited Demonstration- contest will be at Keefe Technical School)
PAINTING & DESIGN TECHNOLOGY (contest will be at Keefe Technical School)
SCREEN PRINT TECHNOLOGY (contest will be at Keefe Technical School)

SERIES DIRECTOR:

RICK ALLAIN

CONTACT INFORMATION:

JP Keefe Technical High School
750 Winter Street
Framingham, MA 01702
rallain@jpkeefehs.org

GRAPHIC COMMUNICATIONS CONTEST

Requirements and Scope of Contest

Scope of Contest:

National Skills - Graphics Communication
The contest consists of four parts. The contestant is judged on the following: estimating; bindery operations; offset duplication; and final art using a desktop computer and software system.

State Skills - Graphic Communication
Contestants will demonstrate their ability to perform selected tasks from the following list of competencies. The Technical Committee may select any or all tasks from the following list.

1. Handle orders *(billing, estimation, work orders, etc.)*
2. Produce composition *(specify, set, and proof copy)*
3. Layout and composition *(rough layouts, finished copy and type specs)*
4. Operate a Duplicator and complete the required work
5. Calculate/Perform cutting and bindery operations

Tool Requirements: **One-page type-written resume required for every contestant*

Pencil with eraser
Blue pen
Ruler/line Gauge
Calculators may be used but not a requirement.

Clothing Requirements:

Suitable work pants ***(NO ripped or torn jeans)***
Safety shoes ***(No sneakers)***
Safety glasses
SkillsUSA Massachusetts T-shirt
NO cell phones or pagers allowed

Failure to comply with the requirements will result in a safety violation and the contestant may be removed from the contest or a clothing penalty.

Safety:
NO loose/long hair
NO loose clothing
NO jewelry ***(dangling earrings, necklaces, rings, watches***

Operating Equipment:
Heidelberg Printmaster 46-2
Challenge 305 Paper Cutter
Baumfolder 714
Apple IMac OSX
Adobe Suite Creative Cloud
Adobe Software: includes InDesign, Photoshop, and Illustrator

GRAPHIC IMAGING SUBLIMATION PRINTING CONTEST

Requirements and Scope of Contest

Scope of Contest:

The contest assesses knowledge and skills used by industries in the field of graphic imaging sublimation technology production processes.

National Skills - Graphics Communication

To evaluate each contestant's preparation for employment and to recognize outstanding students for excellence and professionalism as a sublimation technician in the field of graphic imaging.

State Skills - Graphic Communication

Contestants will demonstrate their ability to perform selected tasks from the following list. The Technical Committee may select any or all tasks from the following list.

1. The competition will assess student participants' knowledge and skills of graphic imaging sublimation at the testing stations listed below.
   (a) Design a digital image
   (b) Print transfer sheets using a sublimation printer.
   (c) Print a graphic on a Mug using a mug press.
   (d) Design and print a mouse pad.
   (e) Design and print on tiles.
   (f) Design and print on a polyester t-shirt.
   (g) Take a written technical knowledge test.

Tool Requirements: **One-page type-written resume required for every contestant*

Pencil with eraser
Blue pen
Ruler/line Gauge
Calculators may be used but not a requirement.

Clothing Requirements:

Suitable work pants ***(NO ripped or torn jeans)***
Safety shoes ***(No sneakers)***
Safety glasses
SkillsUSA Massachusetts T-shirt
NO cell phones or pagers allowed

Failure to comply with the requirements will result in a safety violation and the contestant may be removed from the contest or a clothing penalty.

Safety:

NO loose/long hair
NO loose clothing
NO jewelry ***(dangling earrings, necklaces, rings, watches)***

Operating Equipment:

Sawgrass Virtuoso SG400
George Knight DC16 digital combo
Adobe Software: CC includes InDesign, Photoshop, and Illustrator

SCREEN PRINT TECHNOLOGY CONTEST

Part 1: Screen Inspection

Students are required to examine three screens for defects
to determine if each screen is suitable for use:

- screen frame is free of damage
- screen is free of cuts, splits or punctures
- stencil is free of holes that could leak ink
- screen mesh is not clogged in the image area

Part 2: Screen Coating

Students are required to coat a screen with emulsion

- select and prepare emulsion
- coat screen with emulsion
- evaluate screen for acceptable tolerances
- place coated screen in a screen dryer

Part 3: Screen Exposure and Washout

Students are required to describe the steps to expose a screen and properly process the
Image to prepare for printing, which includes:

- inspect the black film positive (provided) for dirt and marks
- select a screen
- inspect and protect screen from excess light
- center the black film positive within screen frame
- secure the black film positive to the screen
- place screen and black film positive on an exposure unit
- expose screen
- remove black film positive

Part 4: Screen Blockout

Students are required to demonstrate proper blockout techniques

- apply and tape to cover the appropriate non-image areas
- inspect all non-image areas for complete blockout application

Part 5: Image Registration

Students are required to properly register screens (provided)

- place screens on the press and course register the image
- apply adhesive to shirt boards for proper adhesion
- check rag for proper adhesion
- inspect contact side of screens for excess ink, test screen off contact
- print test image on pelon to check for proper registration
- adjust registration as needed to align for proper registration
- print proof image on one shirt and dry each one

Part 6: Screen Reclaiming

Students are required to properly describe the steps to reclaim a screen

Part 7: Image Printing

Students are required to properly produce one printed shirts

- apply adhesive to shirt boards for proper adhesion
- check rag for proper adhesion
- inspect contact side of screens for excess ink, test screen off contact
- check ink supply on each screen
- print image on shirts and properly dry each one with the dryer

OVERALL POINT STRUCTURE

Parts 1-6:	Hands-On Demonstrations.	(600 points)
Part 7:	Image Printing.	(400 points)
TOTAL:		**1000 points**

Not all Parts 1-6 will be offered and points will be adjusted accordingly to total 1000 points.

CONTESTANTS REQUIRED ITEMS

1. One-page typewritten resumé required for every contestant
2. Safety Glasses with side guards, for screen reclaiming
3. Ear protection and latex gloves, for screen reclaiming
4. Ruler, permanent marker
5. Optional: Smock or apron, optical devices

CLOTHING REQURIEMENTS

Suitable work pants ***(NO ripped or torn jeans)***
Safety shoes ***(No sneakers)***
Safety glasses
SkillsUSA Massachusetts T-shirt
NO cell phones or pagers allowed

Failure to comply with the requirements will result in clothing or resumé penalty.
NO cell phones allowed.
NO cell phones allowed.

Painting and Design Technology

PURPOSE
To evaluate each contestant's preparation for employment and to recognize outstanding students for excellence and professionalism in the field of painting and design technology. First, refer to General Regulations, Page 9.

CLOTHING REQUIREMENT
Official SkillsUSA Massachusetts Tee-shirt and Painter's 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 to active SkillsUSA members enrolled in programs with painting and design technology as the occupational objective.

EQUIPMENT AND MATERIALS
1. Supplied by the technical committee:
Basic equipment of a painting and design laboratory
4' X 8" sheets of drywall
2" X 4" drywall frames
Wood trim
Wood baseboard
Wallcovering
Drywall screws
Joint compound
Spackle (compound)
Fine-grit sandpaper (100 - 120-grit silicon
Painter's putty
Paintable caulking
Roller covers with appropriate naps
Paper drywall tape
Primer
Ladders
Wall size
Sponge
5 Gallon Buckets
Paste
Paste Brush or roller
Sponge & bucket of clean water
Straight edge
Wall paint
Trim paint
Broom and dustpan

2. Supplied by the student
Safety glasses or goggles
Respirator or face mask
Ear protectors
Can opener
Hand sanding block
Screwdriver
Putty knife (carbide)
Drop cloths
Buckets
Rags
Hawk or mud pan
4" - 6" broad knife
10" joint knife or trowel
Caulking gun
Extension pole
Sanding pad
Brushes, 2-inch, and 1 ó-inch (optional)
Angled sash brushes, 1 ó-inch, and 2-inch

(optional-supplied by contestant)
Roller pan
7" Roller handle
Razor knife with snap off blade
Level
Smoothing brush or plastic smoother
Tape Measure
4" - 6" Putty knife and or straight edge
A pencil
m. Hard copy of résumé. (REQUIRED)
All competitors must create a one-page résumé and submit a hard copy to the technical committee chair on contest day. Failure to do so will result in a 10-point penalty.

SCOPE OF THE CONTEST

The contest will include a written knowledge test that assesses knowledge of painting and design including, but not limited to, drywall finishing, surface preparation, interior paint finishing, wallcovering, interior design, and sign design.

Skill Performance

The contest will assess accuracy, workmanship, And the proper use of tools and equipment. Contestants may be required to, baseboard moldings and window trim.

Contest Guidelines

1.The contest will assess the ability to perform jobs or skills selected from the following list of competencies as determined by the SkillsUSA Championships technical committee.

2. Contestants will be rated on personal appearance, the degree of work skills and speed used in the performance of the assigned task.

Competencies

P&D 1.0 — Demonstrate personal, shop and job site safety practices and procedures.
1.1 Demonstrate safe dress and use of relevant safety gear and personal protective equipment (PPE), including (where appropriate) wrist rests, adjustable workspaces and equipment, gloves, boots, earplugs, eye protection, and breathing apparatus.
1.2 Use appropriate safe body mechanics, including proper lifting techniques and ergonomics.
1.3 Demonstrate the safe use, storage, and maintenance of every piece of equipment in the lab, shop, and classroom.
1.4 Demonstrate proper workspace cleaning procedures.
1.5 Employ ladder safety practices and procedures.
P&D 2.0 — Pepare surfaces to receive finishes, and apply coatings and finishes to various surfaces.
2.1 Identify preparation tools & materials.
2.2 Identify surface substrates in construction.
2.3 Evaluate surface conditions of substrates.
2.4 Recognize and correct various coating failures.
2.5 Demonstrate proper use of tools and materials for protecting surfaces.
2.6 Demonstrate general preparations for various substrates.
2.7 Apply caulking, fillers, and patching materials to substrates.
2.8 Demonstrate finish application methods using brushes and rollers.
2.9 Demonstrate proper clean-up of adjacent surfaces.
2.10 Paint various architectural surfaces.
2.11 Demonstrate methods of clean-up and disposal of paints.
P&D 3.0 — Apply drywall Finish to a level 4 standard.
3.1 Explain concepts fundamental to drywall finishing.
3.2 Identify and describe drywall finishing tools.
3.3 Identify and describe materials used in drywall finishing.
3.4 Demonstrate practices related to drywall finishing.
3.5 Repair and patch damaged drywall.
Finish drywall using finishing tools.
P&D 4.0 — Use an understanding of interior design to create a presentation board
4.1 Draw an interior space to mathematically accurate scale (mechanically drawn or using computer aided design software) using correct architecture symbols and drafting skills.
4.2 Demonstrate space planning skills required to design a residential or commercial space using computer-aided interior design software.
4.3 Create a presentation board containing a floor plan, color schemes, textiles, and furniture samples.
P&D 5.0 — Prepare and apply Wallcoverings to wall surface.
5.1 Set up a work area with wallcoverings and the tools used to install them.
5.2 Apply wallcoverings using proper techniques.
P&D 6.0 — Create a sign layout, computer cut vinyl graphics and apply them to a sign surface.

6.1 Demonstrate computer based layout & design.
6.2 Create a sign layout using appropriate fonts and colors selection.
6.3 Apply vinyl lettering to various substrates
Committee Identified Academic Skills
The technical committee has identified that the following academic skills are embedded in this contest.
Math Skills
• Use fractions to solve practical problems
• Use proportions and ratios to solve practical problems
• Find surface area and perimeter of two dimensional objects
• Apply transformations (rotate or turn, reflect or flip, translate or slide, and dilate or scale) to geometric figures
• Construct two-dimensional layout
• Make comparisons, predictions and inferences about special design.
• Solve practical problems involving complementary, supplementary and congruent angles
• Solve problems involving symmetry and transformation
Science Skills
• Use knowledge of electromagnetic color spectrum and color wheel to develop harmonious color schemes.
• Demonstrate an understanding of chemical curing rates to sequence tasks.
• Use knowledge of computers, plotters and peripheral hardware.
Language Arts Skills
• Provide information in conversations and in group discussions
• Provide information in oral presentations
• Demonstrate use of such nonverbal communication skills as eye contact, posture and gestures using interviewing techniques to gain information
• Demonstrate comprehension of a variety of informational texts
• Use text structures to aid comprehension
• Identify words and phrases that signal an author's organizational pattern to aid comprehension
• Understand source, viewpoint, and purpose of texts
Connections to National Standards
State-level academic curriculum specialists identified the following connections to national academic standards.
Math Standards
• Numbers and operations
• Geometry
• Measurement
• Data analysis and probability
• Problem Solving
• Communication
• Connections
• Representation
Source: NCTM Principles and Standards for School
Mathematics. To view high school standards, visit:
standards.nctm.org/document/chapter7/index.htm.
Select "Standards" from menu. Science Standards
• Understands the sources and properties of Energy.
• Describe the characteristics of electromagnetic radiation and give examples of its impact on life and Earth's systems.
Source: McREL compendium of national science standards. To view and search the compendium, visit: www.mcrel.org/standards-benchmarks.
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Language Arts Standards
• Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes
• Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge
Source: IRA/NCTE Standards for the English Language Arts.

Freshman Events

EVENTS:

CAREER CHOICE COMMENTARY
EXPLORATORY PROJECT DEMONSTRATION
STICKER DESIGN

SERIES DIRECTOR:

CAROL HARTNETT

BLUE HILLS REGIONAL TECHNICAL SCHOOL
800 RANDOLPH STREET
CANTON, MASS. 02021-1398
PHONE 781-828-5800
EMAIL: chartnett@bluehills.org

CAREER CHOICE COMMENTARY CONTEST
Freshman Only

Purpose:
To evaluate each contestant's ability to prepare and present clearly and effectively a series of thoughts relating to his or her Freshman Exploratory experience.

Clothing Requirement: Official SkillsUSA Dress

Eligibility:
This contest is open to active SkillsUSA members currently enrolled in the Freshman Exploratory.

Observer Rule:
Observers will be allowed to hear the speeches in the presentation room provided space is available. No talking or gesturing will be permitted. No observers will be allowed in the assembly area. No member of the audience will be permitted to enter or leave the demonstration room while a contestant is speaking. Members of the audience will not be allowed to use cameras, video recorders or tape recorders.

Equipment and Materials:
Supplied by the technical committee:
a. Stopwatch
b. Time Cards
Supplied by the contestant:
a. Note cards (if desired by the contestant)
b. All competitors must create a one-page resume, typed and bring the resume with them to the contest.

Arrangement of Rooms:
The commentary presentation room will be furnished with a podium, two tables, each with chairs for judges, timekeeper and room monitor.

SCOPE OF CONTEST:

Knowledge Performance:

There is no written exam for this contest.

Skill Performance:
This contest assesses basic public speaking skills through the delivery of a **three to five minute commentary**.

Contest Guidelines:

1. The topic for the Career Choice Commentary is based on the Freshman Exploratory experience. Within this topic, contestants might illustrate or discuss any of the following:

- How the Exploratory program helped the contestant to evaluate and choose a trade area to pursue.
- How the Exploratory program taught the contestant to value different talents/skills and to appreciate the talents they have as well as the talents of others.
- How the Exploratory program experience promotes decision-making and problem solving by teaching students to process all perspectives in a respectful and productive manner.
- How the Exploratory program helped to broaden the awareness of the contestant to foster an open-minded approach to learning.
- How the contestant made the decision to pursue the particular trade they have chosen and how that decision aligns with their life goals.

2. The commentary will be three to five minutes in length**. Penalty**: five points will be deducted for each thirty seconds or fraction thereof under three minutes or for each thirty seconds or fraction thereof over five minutes.

3. Time will be started when the commentary begins. The timer will signal the speaker at three minutes, four minutes and four minutes thirty seconds.

4. **Visual aids & props are not permitted**.

5. **Note cards are permitted**.

6. The contestant will not mention his or her name, school or city.

7. Contestants must submit one typewritten copy of the commentary to the technical committee at the briefing meeting on Thursday evening. It should include school name, contestant's name, and commentary title.

Judging Guidelines:

1. The following criteria will be used to judge the commentary:
a. Opening – has a strong, clear opening
b. Voice – voice is well modulated and controlled and carries the rhythm of the speech
c. Platform deportment – speaker is poised and demonstrates good control of movement
d. Organization – commentary is well organized and the organization can be easily followed
e. Mechanics – proper grammar is used and diction is clear
f. Closing – closing provides a clear and solid conclusion and summary of the thoughts
g. Effectiveness – assigned topic is covered, is clear and achieved
h. Timing – commentary falls with the three to five minute contest requirement
i. Clothing – clothing meets the contest requirements.

EXPLORATORY PROJECT DEMONSTRATION CONTEST
Freshman Only

Purpose:
To evaluate each contestant's ability to demonstrate and explain the steps involved in creating the contestant's favorite project from the freshman Exploratory experience. ***The actual finished project from Exploratory must also be presented***.

Clothing Requirement:
Contestants may wear SkillsUSA Official Dress or official attire for the occupational area of the demonstration.

Eligibility:
This contest is open to active SkillsUSA members currently enrolled in the Freshman Exploratory. Exploratory may be completed before participating in the competition but contestant must still be in their Freshman year of their CTE experience.

Equipment and Materials:
Supplied by the technical committee:
a. Timekeeper
b. Performance space

Supplied by the contestant:
a. All materials and equipment needed for the demonstration to be completed two times, once for the preliminaries and again for the finals if required.
b. All competitors must create a one-page resume, typed and bring the resume with them to the contest.

SCOPE OF CONTEST:
Knowledge Performance: There is no written exam for this contest.
Skill Performance:
The contest requires the demonstration of the steps involved in creating their project sample. The contestant must bring the finished project with them, but may bring additional components to demonstrate the creation of the finished project. The demonstration shall be accompanied by a clear explanation of the project and why this particular project was chosen.

Contest Guidelines:

1. An actual technical skill must be performed as opposed to an illustrated talk.

2. Note cards and other reference materials **are permitted**.

3. Any Freshman exploratory project may be demonstrated.

4. The demonstration shall be **at least three minutes in length but shall not exceed five minutes**.

Penalty: Five points will be deducted for each 30 seconds under three minutes or fraction thereof over five minutes.

Contest Guidelines:

5. Time will be started when the demonstration begins. The timekeeper will signal the speaker at three minutes, four minutes, and four minutes thirty seconds.

6. Contestants will be allowed **5 minutes to set up** the demonstration and **five minutes to clear** the demonstration room. Five points will be deducted for each thirty seconds or fraction thereof over the five-minute allowance.

7. A performance space of 8'x12' will be provided, that contains a 30"x96" table and one duplex (two plug ins) 110-volt electrical outlet.

8. Any visual or auditory aids (signs, charts, transparencies, slides, diagrams, CD's) are to be prepared by contestants. Professionally prepared visuals and audio may not be used. No open flames; no combustible or hazardous chemical compounds, no fluids containing pathogens or toxic chemicals and no pressurized containers will be allowed.

9. The contestant will not mention his or her name, school or city.

10. The demonstration is an individual performance; however, assistants may be used to set up and dismantle the demonstration. Models or assistants may be used in the demonstration, but will not say or do anything that assists the demonstration other than to serve as a model as needed for a facial, clothing design demonstration, etc.

11. Basic safety practices related to the skill performed must be followed. Safety violations will be subject to penalties of one to ten points. Judges may interrupt the demonstration for serious violations.

STICKER DESIGN (FRESHMAN ONLY)

THE CONFERENCE PROGRAM WILL HAVE A STICKER TRADING GALLERY FOR PARTICIPNTS TO TRADE AND DISPLAY SCHOOL STICKERS. ALL STICKER DESIGN PARTICIPANT SCHOOLS SHOULD SUPPLY THEIR DELEGATION WITH STICKERS TO TRADE (ESPECIALLY DELEGATES) SCHOOLS NOT COMPETING IN STICKER DESIGN WILL ALSO BE ENCOURAGED TO BRING STICKERS!

PURPOSE
To evaluate a contestant's creative, technical and oral presentation skills and to recognize outstanding students for excellence and professionalism.

CLOTHING REQUIREMENT
For men: Official blazer, jacket or sweater; black dress slacks; white dress shirt; plain black tie with no pattern or SkillsUSA black tie; black socks and black shoes.
For women: Official blazer, jacket or sweater; black dress slacks or knee-length skirt with 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 seamless hose and black dress shoes.
These regulations refer to clothing items that are pictured and described at: https://www.maskillsusa.org/official-contest-uniforms

ELIGIBILITY
Open to active SkillsUSA members enrolled freshman exploratory programs.
EQUIPMENT AND MATERIALS
1. Supplied by the technical committee:
a. Timekeeper and judges
b. All necessary information for the judges and technical committee
c. Projector and screen
d. 8.5"x11" document/photo frame
2. Supplied by the contestant:
a. Rendering of sticker design
b. All competitors must create a one-page résumé and submit it at the contest site.
c. Means of presentation: Computer, tablet, notebook, poster or other media of your choice if desired to make your presentation to the judges. Contestant must supply his or her own adaptor connection for the projector. Digital presentation is not required.

SCOPE OF THE CONTEST
The contest consists of two parts:
1. Evaluation of the sticker design
2. Oral presentation and questions and answers session. All contestants will be asked the same questions, which judges will determine before the start of the contest.

KNOWLEDGE PERFORMANCE
There will be no skill-related written test.
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 two color).
2. Entries can be created in a design software package such as Illustrator, Photoshop or other comparable software. Entries may also be hand-drawn, painted or rendered in colored pencils or markers.
3. All entries should be submitted with two versions of the art on a single 8.5"x11" page.

The sticker design will be restricted to 2" (2 1/2" for oval) preformatted labels: Avery Labels - Product #80510 or similar, which gives contestants 3 options of sticker shape: Square, round, and oval. All sticker designs must be presented as one of the above 3 shapes and all stickers cannot exceed 2" maximum (2 1/2" at its largest dimension for oval)

Deductions will be taken for every 1⁄8" over or under 7" and every 1⁄16" over or under 2" (2 1/2" at its largest dimention for oval) on your artwork designs. Both designs should be identical. Wording on the sticker must reference the name of the school. Your contest number for the state conference must be placed on the back of your submitted artwork.

4. The SkillsUSA emblem or SkillsUSA logo should appear on the sticker.

5. All copyright laws must be followed in the creation of the design.

6. Contestants will deliver a three- to five minute presentation regarding their design.
Talking points should include:
a. How he or she came up with the design of the sticker
b. The process in which he or she designed the sticker
c. Why he or she feels it represents their school
d. What are its unique qualities
e. Why other students/advisors would want to have it
7. After your presentation, the judges will ask questions related to Sticker Design, and SkillsUSA at your school.
8. A space will be provided for you to make a poster (not used for judging) to promote your sticker design/school to the public, for viewing at the state conference. Your board should be a single poster board.

HEALTH OCCUPATIONS A

EVENTS:

HEALTH KNOWLEDGE BOWL
MEDICAL ASSISTANT
NURSE ASSISTANT
PRACTICAL NURSING

SERIES DIRECTOR:

TARA LANE

CONTACT INFORMATION:

Tri-County RTHS
147 Pond Street
Franklin, MA
PHONE: 781-864-6537
EMAIL: lane@tri-county.us

Health Knowledge Bowl
MEMORANDUM

TO: ***Health Occupations Knowledge Bowl Contest School Advisor***
FROM: ***Health Occupations Knowledge Bowl Contest Event Manager***
DATE: ***March 15, 2017***

This is a memo to all schools that will have a team competing in the Health Occupations Knowledge Bowl Contest at the State SkillsUSA Conference. Following are some clarifications to the **technical standards (2017-2018), which EVERY school's SkillsUSA advisor received.** Remember that this is a multidisciplinary health knowledge contest; so do not exclusively focus on your vocational shop.

1. Scope of the Contest: The state contest will reflect the standards adopted by the National Technical Committee. Please go the SKILLS USA web site and print up the contest description for HEALTH KNOWLEDGE BOWL. Scope of Contest information reads: "Core standards from the National Health Care Core Skill Standard Project make up the categories from which Questions are developed for the Health Knowledge Bowl contest."

2. Standards and Competencies: The categories from which questions will be developed have been clarified in the technical standards for 2017-2018. Please read. The content of the contest is under Standards and Competencies. Included in the BOWL 3.0 Standard is the Current Event topic. There will be four Current Event questions (2 per Half). Questions will be chosen from the **HEALTH SECTION** of the USA TODAY newspaper, dated from December 1, 2016 to April 15, 2017.

3. ***RESOURCE TEXT BOOKS:*** The only references used for determining the questions are: **USA TODAY (NEWSPAPER); DIVERSIFIED HEALTH OCCUPATIONS; HEALTH CAREERS TODAY; AND HEALTH CARE SCIENCE TECHNOLOGY; CAREER FOUNDATIONS (CURRENT EDITION TEXTBOOKS).**

For the State Contest, the postsecondary teams' questions will be the same questions as the secondary teams' questions. Although both secondary and post-secondary teams are completing simultaneously at the state level, please remember that there is one national slot for each education level.

4. Each contestant will be required to submit a one-page, typewritten résumé and submit it to the state technical committee. The résumé will be collected Friday at the competition site. There will be a point deduction of 5 points for each team member that does not submit a résumé. This point deduction will be taken off the total final score.

Each Team: is responsible to arrive with the required supplies: Thick Black markers, pencils, 75 sheets of white paper, and 30 sheets of colored paper for scrap. **Any team that does not have the required supplies will not be allowed to participate in the contest.**

5. CAREFULLY REVIEW THE "SCORING" SECTION OF THE NEW TECHNICAL STANDARDS (see below). Please be aware of the game rule that requires each team to identify a "captain". The captain will be the team member who stands with the teams answer.

SCORING

a. Each team will begin each quarter with 0 points.
b. A team may choose to answer the question or not answer the question.
c. If the team does not answer the question (signified by remaining seated) it will neither gain nor lose points.
d. If a team chooses to answer and is correct, it will be awarded 1 point. If a team chooses to answer and is incorrect, 1 point will be deducted.
e. The judges will make the scores visible to all teams before the start of each quarter.
f. Contestants may use calculators to assist with medical math questions.
g. Score discrepancies must be addressed by the team captain prior to the next question.
h. A written test will be administered during the contestant. This test will be completed as a team. The score from the written test will not be announced but will be added to the final total score.
i. The winning team is that team which has accumulated the highest total points (total score plus written test score, less clothing penalties).
j. In the event of a tie, the tie will be broken as follows:
    1. First tiebreaker: The team with the highest written test score.
    2. Second tiebreaker: The compiled score of team members on the Professional Development Program (PDP) test.

7. Clothing Requirements: For the State Contest, contestants need to be in a SkillsUSA Blazer, Windbreaker or sweater with accompanying official dress. Last year points were lost for inappropriate shirts and blouses, and for females not wearing appropriate stockings and shoes. Male contestants are required to wear a white dress shirt and tie, per national guidelines. Points will be deducted for attire that does not comply with the national standard. Each team member will be evaluated on the day of the contest. Please remember that for the National Contest contestants will need to wear the Official red blazer or windbreaker with accompanying official dress.

8. Judges: We will follow the national contest standard, 3 to 4 impartial judges will be utilized.

9. For new advisors there are sample questions on the national 2015 SKILLSUSA Championships "Contest Projects" CD-ROM…which was given to EVERY school's advisor.

10. Observer rules will be enforced according to national standards. No observers will be allowed to talk or gesture to the contestants. In accordance with the National standards no recording devices will be permitted to be used during the contest unless approved by the State management team. There will be no recording of questions or topics allowed during the contest, this includes note taking by anyone present. Cell phone and other electronic communication equipment use are prohibited within the ballroom where the contest will be held.

PRACTICAL NURSING CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Scope of Contest:
National Skills – Practical Nursing

Students competing in the Practical Nursing contest are required to demonstrate knowledge and skill in performing patient care procedures representative of the general areas of competence required in a practical nursing program, including CPR. These include the ability to use and identify equipment; manipulate medical materials in the taking of vital signs, patient assessment, infection control, sterile technique, medication administration, proper delegation and appropriate scope and practice.

State Skills -Practical Nursing

Contestants should be familiar with all the Standards and Competencies as mentioned in National Technical Standards 2017-2018 as follows:
PN 1.0 — Provide coordinated care to meet clients' individualized needs
PN 3.0 — Implement procedures that provide quality assurance
PN 4.0 — Provide goal-oriented patient care through the development of nursing care plans, communication within the healthcare team and individualized patient care
PN 5.0 — Create a safe environment for patients and coworkers to ensure safety to meet individualized client needs
PN 6.0 — Prepare a client for medical treatments and procedures including diagnostic tests, surgery and delivery
PN 9.0 — Observe and communicate changes in a client's medical status
PN 10.0 — Evaluate a patient's health state and provide emergency medical care to a patient when needed
PN 14.0 — Anticipate client's needs for pain management and educate client on pain coping methods
PN 15.0 — Provide patients with basic care such as monitoring patient health and ensuring patient comfort
PN 17.0 — Educate clients on adaptation and coping skills needed to deal with emotional and physical illness

Equipment/Tool Requirements:

- Small notebook Watch with second hand
- 2 pens - black ink only Bandage scissors
- Safety glasses No facial piercing allowed
- Current/Factual Resume *(see the SkillsUSA Professional Development Program – Level 3.1 for assistance)*

***STUDENTS SHOULD BE TRAINED IN BOTH CPR AND FIRST AID.**
FOR THE NATIONAL CONTEST YOU WILL HAVE TO BRING CURRENT CPR CARD FROM EITHER THE AMERICAN HEART ASSOCIATION OR AMERICAN RED CROSS AND A CURRENT FIRST AID CERTIFICATION CARD FROM EITHER THE AMERICAN RED CROSS OR NATIONAL SAFETY COUNCIL

Clothing Requirements:

White SCRUBS
(no other uniform will be allowed and no colored scrubs must be white)
Hair neatly arranged off the collar
NO nail polish-nails short and clean
NO heavy make-up
White color stockings
NO gum chewing
Clean all-white leather shoes (**NO canvas),** completely closed**, (NO open toe or open heel).**
Athletic style shoes that meet these criteria are acceptable.
NO jewelry except small stud earrings-one per ear *(optional)* and/or a plain wedding band

No cell phones allowed

MEDICAL ASSISTANT CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Scope of Contest:

National Skills - Medical Assisting

Professional medical assisting technicians judge contestants on the basis of general office skills, communication skills, identification of anatomy and instruments, and on a variety of clinical procedures and techniques. The contestants are asked to assess a situation in a short period of time and perform a skill required for that situation. They are judged on speed, the use of correct safety measures, and their ability to interact personally with a patient.

State Skills - Medical Assisting

Contestants should be familiar with all the Standards and Competencies as mentioned in National Technical Standards 2017-2018 as follows:
MA 1.0 — Perform general office procedures to accreditation and certification standards recognized by the American Medical Association
MA 4.0 — Perform general laboratory procedures to accreditation and certification standards recognized by the American Medical Association
MA 5.0 — Perform hematology procedures to accreditation and certification standards recognized by the American Medical Association
MA 6.0 — Perform electrocardiogram (EKG) procedures to accreditation and certification standards recognized by the American Medical Association
MA 8.0 — Perform clinical office procedures to accreditation and certification standards recognized by the American Medical Association Health Occupations: Core Knowledge and Skills reference 1. Academic Foundations 3. Safety Core. 4. Infection Control and Asepsis

Equipment/Tool Requirements*:*

- 2 pens-- black ink only Safety glasses/shields
- Watch with second hand
- Current/Factual Resume *(see the SkillsUSA Professional Development Program – Level 3.1 for assistance)*

Clothing Requirements:

- *White SCRUBS &* White color stockings/socks
    - *(no other uniform will be allowed and no colored scrubs must be white)*
- Hair neatly arranged off the collar
- **NO** nail polish-nails short and clean
- **NO** heavy make-up
- **NO** gum chewing
- Clean all-white leather shoes (**NO canvas),** completely enclosed**, (NO open toe or open heel),** Athletic style shoes that meet these criteria are acceptable.
- **NO** jewelry except small stud earrings--one per ear *(optional)* and/or a plain wedding band
- **NO** facial piercing
- **No cell phones allowed**
- **STUDENTS SHOULD BE TRAINED IN BOTH CPR AND FIRST AID. NO CARD NEEDED FOR THIS CONTEST**

NURSE ASSISTANT CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Scope of Contest:

National Skills - Nurse Assisting
Students competing in the nurse assisting contest are required to demonstrate knowledge and skill in performing patient care procedures representative of the general areas of competence required in nurse assisting, including CPR. All procedures must be performed using safety precautions and correct body mechanics. . All skills demonstrated will be based on nationally accepted accreditation and certification standards recognized by the American Medical Association Contestants, as part of the demonstration, should voluntarily express pertinent information. Examples may include the ability to use and identify equipment; manipulate medical materials in the taking vital signs, height, weight.

State Skills - Nursing Assistant
Contestants should be familiar with all the Standards and Competencies as mentioned in
National Technical Standards 2017-2018 as follows:
NA 4.0 — Explain infection control and methods of preventing the spread of infections
NA 5.0 — Perform nurse assistant skills/procedures including dressing, undressing and
bathing patients, Foley catheter care, providing hair and oral care, and transferring, turning and assisting patients with walking
NA 7.0 — Provide patient with basic nursing procedures and restorative care
NA 8.0 — Monitor patient's vital signs
NA 9.0 — Perform adult, child and infant CPR and first aid

Equipment/Tool Requirements:
Small notebook Watch with second hand
2 pens - blue or black ink Safety glasses
Current/Factual Resume *(see the SkillsUSA Professional Development Program – Level 3.1 for assistance)*
****STUDENTS SHOULD BE TRAINED IN BOTH CPR AND FIRST AID. BUT DO NOT NEED CARDS FOR STATE CONTEST. THEY WILL NEED TO SHOW CPR CARDS AT NATIONAL CONTEST**

Clothing Requirements:

- *White SCRUBS &* White color stockings/socks
    - *(no other uniform will be allowed and no colored scrubs must be white)*
- Hair neatly arranged off the collar
- **NO** nail polish-nails short and clean **NO** heavy make-up
- **NO** gum chewing
- Clean all-white leather shoes (**No canvas),** completely enclosed **(No open toe or open heel).** Athletic style shoes that meet these criteria are acceptable.
- **NO** jewelry except small stud earrings-one per ear *(optional),* a plain wedding band
- ***No cell phones allowed***

HEALTH OCCUPATIONS B

EVENTS:

BASIC HEALTH CARE
DENTAL ASSISTING
FIRST AID/CPR

SERIES DIRECTOR:

ERIN ROY

CONTACT INFORMATION:

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BASIC HEALTH CARE CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Scope of Contest:

National Skills / State Skills

The contest evaluates a contestant's beginning level of health occupations knowledge and skills and recognizes outstanding students for excellence and professionalism. The contestants' skills may be evaluated through a written test and/or a skill performance.

Scope:

Contestants will demonstrate their knowledge and ability to perform procedures or skills selected from the following list of competencies. These skills may be evaluated through a written test and/or a skill performance at ten *(10)* different stations.

1. Employment Skills – **each contestant must submit a one-page typewritten resume prepared in advance to be handed in at the competition site on Friday.** The following information **must** be contained in the one-page resume:
    a. Name, Address and Phone Number
    b. Career Objective
    c. Education and Training
    d. Work Experience *(beginning with present employment listing specific responsibilities)*
    e. Community/Volunteer Work
    f. Memberships, Major Accomplishments, Awards Earned
    g. References Upon Request

This station will consist of completing a job application and demonstrating interview skills. ***(Refer to the SkillsUSA Championships Technical Standards 2017-2018)***

Standards and Competencies

(Follow all competencies under each standard)

1. **Academic Foundations**- CARE 1.0 Apply academic knowledge of life sciences as related to the health care professions
2. **Safety**- CARE 6.0 Create a safe working environment.
3. **Career Opportunity Concepts**- CARE 3.0 Perceive major career opportunities and system available in health care.
4. **Communication Skills**- CARE 2.0 Express verbal and nonverbal communication skills
   CARE 4.0 Epitomize quality employment and teamwork skills
5. **Ethical/ Legal**- Care 5.0 Differentiate between law and ethics
6. **Infection Control / Advanced Asepsis**- CARE 6.0 Create a safe working environment

6.3- Practice infection control
6.4 Employ standard safety precautions/body substance isolation techniques
6.5 Demonstrate aseptic technique

7. **Measurements**- CARE 4.0 Epitomize quality employment and teamwork
   4.2.1 Measure and record thru 4.2.4 Time clock

8. **Emergency Care Component**: Perform basic adult, child, or infant CPR/ demonstrate emergency measures or treatments for choking, shock, bandages, splints and common medical emergencies. **Latest American Red Cross/American Heart Association CPR standards will be used.**

9. **Prepared Presentation** – each contestant will deliver a prepared 5-7 minute presentation.

a. The purpose of the presentation is to present a topic related to basic health care through demonstration, display and/or explanation. *(see Scope of the Contest Section Presentation Guidelines and Purpose in the **SkillsUSA Championships Technical Standards 2017-2018**)*

b. A presentation will be compact, no larger than 30" x 30" x 30". A 4' x 6' space and table will be available. Any visual aids *(signs, charts, transparencies, slides, diagrams)* are to be prepared by the contestants. No pressurized aerosol cans of any kind will be permitted, and no compressed air, gas, or flammable liquid may be used.

c. All employers' names and manufactures' trade names must be covered or removed.

d. The demonstration will neither promote nor advertise any commercial organization or product.

e. The title should designate the exact nature of the presentation. Catchy titles are not appropriate to the scientific and educational purpose of the presentation.

f. The prepared presentation does not include another person acting as a patient.

******Please Note******

1. All skills demonstrated will be based on nationally accepted accreditation and certification standards.
2. The latest American Red Cross/American Heart Association CPR standards will be used. Note: First Aid & CPR cards are not required for this event
3. Refer to the 2017-2018 National SkillsUSA Championships and Technical Standards Book for further explanations

Equipment/Tool Requirements:

Safety glasses — Watch with second hand
Pen (black ink) — Any equipment and supplies for oral table-top presentation
Current/Factual Resume (see the SkillsUSA Professional Development Program – Level 3.1 for assistance)

Clothing Requirements:

White SCRUBS ***(NO denim no other uniform)*** — Hair neatly arranged up and off the collar
Clean all-white leather shoes (**No canvas),** completely enclosed **(No open toe or open heel).** Athletic style shoes that meet these criteria are acceptable.
Nails short and clean ***(NO nail polish, gels or tips)*** — White Lab coat ***(optional)***
NO personal name/school ID on clothing — **NO** jewelry except watch with second hand
White stockings (females) / socks (male) — **NO** heavy perfume/makeup/cologne
NO gum chewing
NO cell phones or pagers allowed

Observer Rules:

- Observers will not be allowed to view the students during the competition.
- Talking or gesturing by the observers may result in disqualification of the contestant.
- Observers will not be permitted to communicate with contestants in the holding/assembly

DENTAL ASSISTING CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Purpose:

National Skills / State Skills
To evaluate each contestant's preparation for employment and to recognize outstanding students for excellence and professionalism in the field of dental assisting.

Scope of Contest/State Skills
The skills included in the contest will be selected from national competency categories and may involve total procedures or tasks that are part of the procedures. ***(Refer to SkillsUSA Championships Technical Standards 2017-2018 for complete listing)***

1. **Chair side Assisting**-DA 4.0 Apply chair side assisting procedures using guidelines specified in the ninth edition of the Task Analysis of Dental Assisting National board, Inc. (DANB) for examinations and as determined by the national SkillsUSA Heath Occupations Technical Committee
2. **Laboratory Procedures**-DA 5.0 Apply dental laboratory procedures utilizing various dental material using guidelines specified in the ninth edition of the Task Analysis of Dental Assisting National board, Inc. (DANB) for examinations and as determined by the national SkillsUSA Heath Occupations Technical Committee
3. **Patient Assessment Procedures**-DA 2.0 Assess the client's condition following good practices based on guidelines specified in the ninth edition of the Task Analysis of Dental Assisting National board, Inc. (DANB) for examinations and as determined by the national SkillsUSA Heath Occupations Technical Committee
4. **Dental Materials-**DA 5.0 Apply dental laboratory procedures utilizing various dental material using guidelines specified in the ninth edition of the Task Analysis of Dental Assisting National board, Inc. (DANB) for examinations and as determined by the national SkillsUSA Heath Occupations Technical Committee
5. **Office Management Procedures**-DA 1.0 Monitor and manage safety and infection control using procedures specified in the ninth edition of the Task Analysis of Dental Assisting National board, Inc. (DANB) for examinations and as determined by the national SkillsUSA Heath Occupations Technical Committee
6. **Radiography Procedures**-DA 1.0 specifically 1.7, 1.8,
7. **Employability** - **each contestant must submit a one-page typewritten resume prepared in advance to be handed in at the competition site on Friday.** The following information **must** be contained in the one-page resume:
    h. Name, Address and Phone Number
    i. Career Objective
    j. Education and Training
    k. Work Experience *(beginning with present employment listing specific responsibilities)*
    l. Community/Volunteer Work
    m. Memberships, Major Accomplishments, Awards Earned
    n. References Upon Request
8. **Infection Control**--DA 1.0 Monitor and manage safety and infection control using procedures specified in the ninth edition of the Task Analysis of Dental Assisting National board, Inc. (DANB) for examinations and as determined by the national SkillsUSA Heath Occupations Technical Committee
9. **Preventive Procedures**-DA 3.0 Apply preventative procedures using guidelines specified in the ninth edition of the Task Analysis of Dental Assisting National board, Inc. (DANB) for examinations and as determined by the national SkillsUSA Heath Occupations Technical Committee

Knowledge Performance:

The contest will include a written knowledge exam assessing knowledge of dental foundations, communication skills, safety, infection control and asepsis, employment skills and law/ethics.

Suggested Professional References Include:

Task Analysis for Dental Assisting National Boards Inc. (DANB) Examinations 9th Ed.
Modern Dental Assisting (Torres and Ehrlich)

Tool Requirements:

2 - #2 pencils *(1 red and 1 blue)*
Safety goggles
Watch with second hand
1 - Black pen

Current/Factual Resume (see the SkillsUSA Professional Development Program – Level 3.1 for assistance)

NOTE: FIRST AID/CPR CARDS ARE NOT REQUIRED FOR THIS EVENT

Latest American Red Cross/American Heart Association CPR standards will be used.

Clothing Requirements:

White SCRUBS ***(NO denim no other uniform)***
Hair neatly arranged up and off the collar
Clean all-white leather shoes (**No canvas),** completely enclosed **(No open toe or open heel).** Athletic style shoes that meet these criteria are acceptable.
Nails short and clean ***(NO nail polish, gels or tips)***
White Lab coat ***(optional)***
NO personal name/school ID on clothing
White stockings (females) / socks (males)
NO jewelry except watch with second hand
NO gum chewing
NO heavy perfume/makeup/cologne
NO cell phones or pagers allowed

Observer Rules:

- Observers will not be allowed to view the students during the competition.
- Talking or gesturing by the observers may result in disqualification of the contestant.
- Observers will not be permitted to communicate with contestants in the holding/assembly

FIRST AID/CPR CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Purpose:

National Skills / State Skills

To evaluate each contestant's ability to react positively in simulated demanding first aid intervention and to recognize excellence and professionalism in the career and technical student's first aid skills.

Scope of the Contest:

1. Contestants will demonstrate their ability to perform procedures or take appropriate action based on scenarios presented related to the following topic areas:

CPR 1.0 - Contestants will demonstrate competency to proficiently perform procedures or take appropriate action based on scenarios presented related to the following topic **areas:**

CPR 2.0 - CPR with AED for adult

2.1 Demonstrate skills in performing CPR with AED (only college/postsecondary will demonstrate AED skills)

CPR 3.0 - CPR for child

3.1 Demonstrate skills in performing CPR for child

CPR 4.0 - CPR for infant

4.1 Demonstrate skills in performing CPR for infant

CPR 5.0 - Choking victim: conscious/unconscious adult

5.1 Demonstrate skills in performing choking emergencies for conscious/unconscious adult

CPR 6.0 - Choking victim: conscious/unconscious child

6.1 Demonstrate skills in performing choking emergencies for conscious/unconscious child

CPR 7.0 - Choking victim: conscious/unconscious infant

7.1 Demonstrate skills in performing choking emergencies for conscious/unconscious infant

CPR 8.0 - Sudden illness: seizures/diabetics

8.1 Demonstrate skills in performing interventions and care for seizures/diabetic emergencies

CPR 9.0 - Injuries to muscles, bones and joints (i.e., dislocations; fractures; sprains and strains; head, neck and back injuries)

9.1 Demonstrate care dealing with muscle, bone and joint injuries

CPR 10.0 - Bleeding/wound care

10.1 Demonstrate care/control dealing with bleeding/wound care

CPR 11.0 - Burn care

11.1 Demonstrate care for first-, second-, and third-degree burns

2. All skills demonstrated will be based on nationally accepted standards as identified by the American Red Cross for first aid emergencies and the American Red Cross/American Heart Association for CPR and the National Safety Council. ***Latest American Red Cross/American Heart Association CPR standards will be used.***
3. Contestants will take a written test that will constitute no more than 20% of the total score. Based on the American Red Cross and American Heart Association manuals.
4. **Employability** - **each contestant must submit a one-page typewritten resume prepared in advance to be handed in at the competition site on Friday.** The following information **must** be contained in the one-page resume:

    a. Name, Address and Phone Number
    b. Career Objective
    c. Education and Training
    d. Work Experience *(beginning with present employment listing specific responsibilities)*
    e. Community/Volunteer Work
    f. Memberships, Major Accomplishments, Awards Earned
    g. References Upon Request

Tool Requirements:

Safety glasses

Current/Factual Resume (see the SkillsUSA Professional Development Program – Level 3.1 for assistance)

****STUDENTS SHOULD BE TRAINED IN BOTH CPR AND FIRST AID.**

FOR THE CONTEST YOU WILL HAVE TO BRING CURRENT CPR CARD FROM EITHER THE AMERICAN HEART ASSOCIATION OR AMERICAN RED CROSS AND A CURRENT FIRST AID CERTIFICATION CARD FROM EITHER THE AMERICAN RED CROSS OR NATIONAL SAFETY COUNCIL

Clothing Requirements:

White SCRUBS ***(NO denim no other uniform)*** Hair neatly arranged up and off the collar

Clean all-white leather shoes (**No canvas),** completely enclosed **(No open toe or open heel).** Athletic style shoes that meet these criteria are acceptable.

Nails short and clean ***(NO nail polish, gels or tips)*** White Lab coat ***(optional)***

NO personal name/school ID on clothing White stockings (females) / socks (males)

NO jewelry except watch with second hand **NO** gum chewing

NO heavy perfume/makeup/cologne **NO** cell phones or pagers allowed

Observer Rules:

- Observers will be allowed to view the scenarios as the contestants participate provided there is space available.
- Talking or gesturing by the observers may result in disqualification of the contestant.
- Observers will not be permitted to communicate with contestants in the holding/assembly area.
- Refer to General Regulations, 2017-2018 SkillsUSA Championships Technical Standards regarding photography rules.

HEALTH OCCUPATIONS C

EVENTS:

EARLY CHILDHOOD EDUCATION
HEALTH OCCUPATIONS PROFESSIONAL PORTFOLIO
MEDICAL MATH
MEDICAL TERMINOLOGY

SERIES DIRECTOR:

DEBORAH BRIGHTMAN

CONTACT INFORMATION:

GREATER NEW BEDFORD
REGIONAL TECHNICAL SCHOOL
1121 ASHLEY BOULEVARD
NEW BEDFORD, MASS. 02745
PHONE 508-998-3321
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Early Childhood Education

Purpose:

National/State Skills
To evaluate a contestant's ability to plan and present age appropriate activities for pre-school age children relating to a specific theme and demonstrate a general knowledge of quality early childhood education.

Scope of Contest: State Skills Major Project/Activity: (650 points)
Math Lesson: This lesson is designed for preschooler's ages 4 to 5 years old.
Contestants will choose from one of these Math lessons to present to a class of preschoolers.

. The 4 math lessons choices are:

- **Number recognition (1-10)**
- **Shape recognition (square, rectangle, triangle, circle, and rhombus.)**
- **Addition and subtraction**
- **Sorting and categorizing**

A felt board will be provided for the contestants on competition day, if they wish to use it.
The contestant will write a lesson plan for this lesson.

Lesson Plan: (250points)
The lesson plan should be detailed so that any person can easily read it and present the lesson.

All props for this lesson must be made at the competition. Nothing is to be pre-made
Presentation:
The presentation must be **5 to 7 minutes** before a panel of 3 judges.
(If under 5 minutes or over 7 minutes there is a penalty of -50 points.

Resume:
A one page-typed written **resume required** for every contestant to be **turned in at the orientation.**
(There will be a -50 point penalty if no resume is turned in.)

Clothing:
There is a clothing penalty of -50 points if the contestant is not in compliance with Skills USA clothing requirements.

Scoring:
The **Presentation** will be worth **650 points**, the **Lesson Plan** will be worth **250 points** and there will be a quiz on **Pre-school knowledge** consisting of **10 multiple choice** or **true or false questions worth 100 points.**

The Massachusetts Guidelines (The Green Book) will be provided to the contestants on competition day.

Skills USA Clothing Requirements:

For Women:

- Black dress slacks
- White shirt or blouse (not see through)
- Skills USA jacket, windbreaker, or sweater
- Black socks, or skin-tone seamless hose
- Plain black flat leather shoes (not sneakers)
- No gum chewing
- No heavy make-up
- Small stud earrings- one per ear (optional)
- No nail polish, tips, or gel-----nails short and clean
- No school ID or name on clothing
- No cell phones or pagers allowed

For Men:

- Plain black shoes for males (Not Sneakers)
- White button down shirt
- Black dress pants
- Black belt
- Black socks
- No gum chewing
- No cell phones or pagers allowed
- Black tie
- Skills USA jacket, windbreaker, or sweater
- No school ID or name on clothing
- Nails short and clean

Skill USA Competition 2017
Early Childhood Education
Supply List

Students will bring supplies needed to create their lessons.
Such items as:

- Crayons
- Markers
- Glue sticks
- Glue gun
- Elmer's glue
- Scissors
- Felt
- Pipe cleaners
- Wiggly eyes
- Construction paper

Misc. any other arts and craft supplies that they might want to use in creating your lesson.
No patterns, or templates are to be used. Just your own creativity.

Skills USA Competition 2017
Early Childhood Education
Lesson Plan Outline

Contestant #_____

1. Goal: (Be Specific)

_____
_____
_____
_____
_____
_____

2. Objectives: (Be Specific)

_____
_____
_____
_____
_____

3. Materials needed:

_____
_____
_____
_____
_____

4. Introduction/Motivation:

_____
_____
_____

5. Presentation: Explain it in specific details so that another person would be able to do this lesson following your lesson plan.

_____
_____
_____
_____
_____
_____

6. Closure/Review:

_____
_____
_____
_____

Massachusetts
Guidelines for Preschool Learning Experiences
(The Green Book)

Skills USA Competition 2017
Early Childhood Education
Rating Sheet

Presentation of lesson: 650pts

Personal Qualities Skills	(250) pts.
Presentation technique Skills	(200) pts.
Originality/creativity Skills	(100) pts.
Lesson Material	(100) pts.

Presentation Lesson Plan: (250) Points

Lesson Plan:

Printing, spelling, neatness	(50) pts
Age appropriate teaching methods	(50) pts.
Age appropriate goals	(50) pts.
Does the procedure and use of materials support goals and content area	(50) pts.
Five areas of lesson plan completed correctly	(50) pts.

Quiz: (100) pts.

Time Penalty: over or under **minus 50 pts.**
Resume: not turned in **minus 50pts.**
Clothing penalty: **minus 50 pts.**

HEALTH OCCUPATIONS PROFESSIONAL PORTFOLIO CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Purpose:
National Skills/State Skills
To recognize students for their successful development of a professional portfolio and evaluate the ability of an individual to present himself/herself to an employer using effective communication skills.

Eligibility:
Open to active Skills USA members enrolled in a health occupation program.

Scope of Contest:
National Skills/State Skills
The contest will consist of two parts: (1) A notebook and (2) Live presentation by the contestant.

1. **Notebook:** Each contestant is required to submit an official SkillsUSA three-ring, 1-inch loose-leaf binder available from the current SkillsUSA Supply service Catalog. Photographs, news articles, illustrations and other informative material may be included to support and enhance written evidence of the contestant's participation in activities as described in the notebook. Pages must be limited to 25 (50 surfaces).
2. **Notebook:** must include the following, presented in progressive order, and typed **(hand written pages are not acceptable).**
3. **General order of setup of Notebook:**
    a. **Title Page-**include name of contestant, name of school, grade, training program, and a picture of the contestant.
    b. **Table of contents** with page numbers.
    c. **Components of an Employment Portfolio:** organizations, professional appearance**, (No handwritten or colored pages), White or beige pages.**

CONTENT:
Section I: *Resume and Career Objectives*: 40pts.
Prepare a current resume. Students should include a written statement describing his/her career objectives, plans to achieve that objective, and competencies that have been met. (*See PDP, Level 3.1 for assistance in developing your resume).*

Section II: *References:* 40pts
Letters of reference from teachers, mentor, supervisors, employers, and others who verify student's skill ability (*Limit: three references)*.
Section III: *Awards and Recognitions'*: 40pts.
Include copies of certificates, documentation of leadership activities, news articles and supportive material to serve as proof of your achievements. Reflect the highest level of achievement.

Section IV: *Work Sample Documentations:* 200pts.
Summary of work site experiences pertaining to health occupations. Students should distinguish project documentation that is a result of school-based learning and/or work-based learning. Can be supported with photographs that are reflective of the learning.

Section V: Community Service: 40pts.
List of activities conducted that provided a benefit to the community. Concentration should be on excellence and professionalism in the area of service.
A. School based
B. In the community outside of school.

Section VI: Membership and Affiliations: 40pts.
List of organizations and community groups in which the student is actively involved.
Total of 400pts for notebook

Presentation section:

a. **Oral Presentation**: students should be prepared to make a 5-7 minute presentation of their portfolio to the judges. **Oral Presentation 200pts.**
b. **Visual presentations must be brought to contest on a "flash "/"jump" drive.** Contestants are to use the equipment supplied by the host school. **Visual presentation 100pts.**
c. **Responses to questions:** Contestants should anticipate questions from the judges. **Responses to questions 50pts.**
d. **Closing remarks**: **50pts.**

Section total 400pts.

Judging: Notebooks will be submitted on **Thursday night at the contestant briefing.** (**Late notebooks may be accepted by Event Manager but will be subject to point deductions**). The notebooks will be returned to the contestant at the end of the live presentation. Contestants will be required to report to the contest area at a designated time with all equipment for their presentation. Students will be required to stay until dismissed by the judges.

Clothing Requirements:

Black pants, (women, may also wear: skirt or Capri pants)
(NO Jeans, denim material, or any color)
White Shirt (for women: blouse/shirt)
SkillsUSA jacket, sweater, or windbreaker
Tan or Beige stockings (for women) - Black socks with pants for men
Black shoes-plain black flats or plain black shoes with a heel no higher than 2”
Plain black shoes for men
NO heavy make-up
Small stud earrings-one per ear (optional)
NO gum chewing
NO nail polish, tips, or gel-nails short and clean
NO cell phones allowed
NO school ID or name on clothing

(Refer to the 2017-2018 National Technical Standards for updates on requirements to the portfolio)

2017-2018 SkillsUSA Championships Technical Standards

available on-line to all professional members

MEDICAL MATH CONTEST

Purpose:

To evaluate the students' ability to understand and solve mathematical problems commonly used in the various health care settings.

Clothing Requirement:

For Men: Skills USA official attire: Official red blazer, windbreaker-style jacket or sweater, black dress slacks, white dress shirt; plain black tie with no pattern or Skills USA black tie; black socks and black shoes.
For Women: Skills USA official red blazer, windbreaker style jacket or sweater; black dress slacks or skirt with businesslike white, collarless blouse or white blouse with small , plain black sheer or skin-tone hose and black shoes.

Equipment and Materials:

1. **Supplied by the technical committee:**
   a. test problems and instructions
   b. Scratch paper and pencils
2. **Supplied by the contestant:**
   a. Basic hand-held calculator *MUST BRING! (no graphing or scientific calculator [with fraction keys] will be permitted).
   b. all competitors must create a one-page resume using a word processor and bring it to the orientation meeting on Thursday night after opening ceremonies.

Scope of Contest:

1. The test questions will be taken from problems encountered in the medical field and are selected from the area that might be used in the real world applications. Contestants will demonstrate their ability to solve math problems that deal with the following area:
a. Measurements including vital signs, temperature conversions, and height and weight.
b. Metric and household measurements
c. Conversions
d. ratio and proportion
e. Percentage
f. Intake and output
g. Roman numerals
h. Dosage calculations

2. The test will comprise 50 problems that will allow contestants the opportunity to utilize their problem-solving skills as well as their mathematical ability.
3. The contestants will have two hours to complete the test. No bonus points will be given for early completion of the test, and no contest will be allowed to go in or out of the testing site during the testing. Suggested references: "Standardized Medical Abbreviations"
4. Prepare a current resume. Students should include a written statement describing his/her career objectives, plans to achieve that objective, and competencies that have been met. (*See PDP, Level 3.1 for assistance in developing your resume).*

MEDICAL TERMINOLOGY CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Purpose:
National Skills/Sate Skills
To evaluate the knowledge of medical terminology and abbreviations of an individual preparing for employment in the health occupation field and to recognize outstanding students for excellence and professionalism.

Eligibility:
Open to active SkillsUSA members enrolled in programs that include medical terminology as a component.

Scope of Contest:
Core standards from the medical terminology portion of the National Health Care Core Skills Standards Project make up the category from which questions are developed for the Medical Terminology contest.

Skills Performance:
Contestants will demonstrate knowledge of medical word roots, prefixes, suffixes, and medical abbreviations by successfully answering the questions.

Supplies:
No.2 pencil (2)
Current résumé - ***Resume: A one page-type-written resume is required for every contestant.***

Clothing requirement:

For men: Official red blazer, windbreaker-style jacket or sweater; black dress slacks; white dress shirt, plain black tie with no pattern or Skills USA black tie; black socks and black shoes.
For women: Official red blazer, windbreaker-style jacket or sweater; black dress slacks or skirt with business-like white , collarless blouse, or white blouse with small, plain collar that may not extend onto the lapels of the blazer; skin-tone hose and black shoes: plain black flats or plain black shoes with a chunky heel no higher than 2'.
No heavy make-up
Small stud earrings-one per ear (optional)
No gum chewing
No nail polish, tip, or gel-nails short and clean No school ID or name on clothing
No cell phones or pages allowed

METAL TRADES A

EVENTS:

AUTOMATED MANUFACTURING
CNC MILLING
CNC TECHNICIAN
CNC TURNING
SHEET METAL
WELDING

SERIES DIRECTOR:

JAMES WOODWARD

CONTACT INFORMATION:

BLACKSTONE VALLEY TECHNICAL HIGH SCHOOL
65 PLEASANT STREET
UPTON, MA. 01568
PHONE: 508.529.7758
EMAIL: jwoodwar@valleytech.k12.ma.us

OBSERVER RULES FOR METAL TRADES A

The Following observer rules apply to all contests in Metal Trades A.

- Observers will be allowed to view the students during the competition from the designated area only. Any infraction will result in contestant disqualification.
- Talking or gesturing by the observers may result in contestant disqualification.
- Observers will not be permitted to communicate with contestants in the holding/assembly area.
- Talking to judges will not be permitted.
- All communications are to be directed to the series director only and only at the end of the contest.
- Contestants are to stay until they are debriefed at the end. Any communication from observers will result in contestant disqualification.
- No prints or information will be allowed to leave with the student participants/school personnel.
- No videotaping of contests. (Still photography only)

AUTOMATED MANUFACTURING CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Purpose:

To evaluate each contestant's preparation for employment in automated manufacturing and the team approach to problem solving work environment. To recognize outstanding students for excellence and professionalism in the field of automated manufacturing technology.

Eligibility:

Open to active SkillsUSA members enrolled in programs with precision machining, automated manufacturing, or CAD/CAM or CNC as the occupational objective.

Scope of Contest:

1. Teams must be composed of three members. Teams will demonstrate their ability to perform, exhibit, and compile skills and knowledge necessary from the following list of competencies determined by the SkillsUSA Championships technical committee.

2. The teams will be presented with dimensioned drawing(s) of a part(s) to prototype.

3. Each team will be issued a notebook. This will be a three-ring binder. Included in the binder will be all the necessary information and forms to complete the project. These forms will not be highly specific but will coach the teams. All binders, forms and drawings must be turned in to the judges at the end of the competition.

4. The competencies required for contestants to successfully compete are as follows:

a. Performing Mathematical & Measurement Calculations

1. Measure work piece to the nearest .001 inch
2. Calculate CNC speed and feeds
3. Calculate stock utilization and setup
4. Calculate tolerances

b. Designing, Sketching, Planning Machine Work

1. Transfer information from drawing to CAD drawing
2. Create CAD file for manufacturing
3. Begin manufacturing documentation process
4. Process Plan
5. Plot CAD file #1
6. Export CAD file

Scope of Contest: (cont.)

c. Create Tool path (CAM file), CNC Code

1. Create process plan (Job Plan)
2. Read-in CAD export file
3. Create tool path
4. Verify tool path
5. Create CNC Code
6. Send CNC code to machine tool

d. Perform CNC Machining Functions

1. Verify CNC file existence
2. Verify tool path
3. Setup part on mill
4. Set all offsets and tooling
5. Adjust to speeds and feeds as needed
6. In-process quality assurance
7. Perform tool changes
8. Perform multiple machining operations in one setup
9. Verify (TQM) process and part

e. Inspection of Part TQM process

1. Verify part to standards
2. Document process

Group Organizational Goal:

This is a group competition, and members may interact at will. The competition should run much like industry. The CAD operator will construct the part geometry, the CAM operator will generate the tool paths, and the CNC operator will do the setup and machine the part. When a team member has spare time, he or she will help others in the group.

One person should not dominate a team by doing the CAD drawing, the CAM tool path, and running the CNC machine while using the other members simply as support. The contest is designed to promote creativity in organization of production responsibility.

All group members are responsible for double-checking each other's work and quality control.

Tool Requirements: *One-page type-written resume required for every contestant

Provided by the Technical Committee:

Part(s) Design
Pencils
Material for Machining
Competition Notebook
Blank Diskettes or thumb drive

Provided by the Contestants:

CNC Machining center with:
- Machinist vise
- Hold-downs and clamps
- Tool holders
- End mills

Two Computers: A third may be utilized
- **One Computer** loaded with CAD software for CAD program
- **One Computer** loaded with software for CAM program. This computer must have an open full-sized PCI slot and Windows 98 or higher operating system. This computer will be connected to t**he CNC machine.**

Licensed versions of the above CAD and CAM software
One 6" dial or digital vernier caliper
One dial indicator. Dial indicator must have 3/8" or ½" holding shank to fit into tool holder supplied by the technical committee.
One Calculator
One pair of 2/4" or 1" parallels
One soft-face hammer
One 6" or 12" steel rule

Clothing Requirements: (cont.)

Work Pants
Work Shoes
NO cell phones allowed
SkillsUSA Massachusetts T-shirt
Safety glasses with side shields or goggles

Special Note: Clarification of Rules

The scope of the contest states that the equipment supplied by the contestant will be two separate computers, one with CAD on it and one with CAM on it.

Skills USA Massachusetts has decided that the computers that will be used do not have to remove any software to compete but will only be allowed to use one software program on each computer. IE one will be using a version of CAD and one will be using a version of CAM.

At no time will contestants be allowed to use the CAD component of the CAM software. The Drafting student's ability to use his / her skills on CAD software is essential to the integrity of the contest and in the preparation of our students for the National level of competition.

It is, however, important to allow the students the ability to create bounding boxes for the purpose of machinability only. This is an industry acceptable standard and will be put in place. This is the only CAD feature they will be allowed to use in their CAM software.

Contestants will not be allowed to make any CAD Engineering changes to the parts in their CAM software. If you have any questions please contact the Series Director, Jim Woodward using the contact information provided above.

CNC MILLING COTEST

COMPETITOR LUNCHES SPONSORED BY HAAS

REQUIREMENTS AND SCOPE OF CONTEST

Purpose:

To evaluate each contestant's preparation for employment in Computer Numeric Control machining. To recognize outstanding students for excellence and professionalism in the CNC machining field.

Eligibility:

Open to active SkillsUSA members enrolled in programs with precision machining, automated manufacturing, or CNC as the occupational objective.

Scope of Contest:

Each contestant will receive a dimensioned drawing and material to CNC-machine a part. Participants are expected to write a CNC program, set up the machine and tool offsets and machine a part without the use of CAD/CAM software. Only the part will be evaluated, not the CNC program. Participants are given 15 minutes to study the task and ask questions before beginning. The competition may run 6-8 hours, depending on the project design.

Competencies required are as follows:

1. Programming
    a. Write and verify CNC program without the use of CAM software (competitor has the opportunity to correct any program errors on the machine.)
    b. Display complete knowledge of DIN/ISO programming (G and M codes)
    c. Apply the correct use of cutter compensation (G41/G42)
    d. Adjust speeds and feeds as needed

2. Setup
    a. Setup machine and establish a zero reference point for machining the part
    b. Select and mount necessary tools from the provided set
    c. Establish tool offsets and enter them into the CNC machine control
    d. Enter any necessary tool corrections into the CNC machine control

3. Perform mathematical calculations
    a. Calculate CNC speeds and feeds
    b. Calculate programming coordinates from the drawing
    c. Calculate radius tangent points

4. Measuring
    a. Measure test part to the nearest 0.001"

5. Communication
    a. Read and interpret technical blue prints
    b. Understand all symbols on technical blue prints, such as geometric tolerances, surface-finish symbols, corner-break symbols, etc.

Test Project Scoring:

The three evaluation criteria for the test part are:

1. Conformity to Print:
    a. Visual conformity and accuracy of part to drawing. (Look for shape and features of part)
    b. Edges broken
    c. Transition of surfaces
    d. Part is burr-free
    e. Damage to part (clamp marks, scratches)

2. Dimensions:

    This is an objective scoring. Scores will only be granted if dimension is in compliance with the print. The score for each dimension will either be full points or zero points.

3. Use of Material

    Contestant will receive on piece of stock for the contest. Material may be Steel, Aluminum, Wax, or Delrin.

Tool Requirements: *One-page type-written resume required for every contestant

Provided by the Technical Committee:

CNC Mill with proper holding devices
Workbench
Necessary hand tools and cutting tools
Necessary information and furnishings for judges and technical committees

Provided by the Contestants:

0-1" micrometer
6 inch caliper (digital or vernier)
Non-programmable calculator
Pencils and paper
Machinery's Handbook (optional)
Deburring tools (files, Emory cloth, etc.)

Clothing Requirements:

Work Pants
Work Shoes
NO cell phones allowed
SkillsUSA Massachusetts T-shirt
Safety glasses with side shields or goggles

CNC TECHNICIAN

COMPETITOR LUNCHES SPONSORED BY HAAS

REQUIREMENTS AND SCOPE OF CONTEST

Scope of Contest: State Skills Competition 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 and execute 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.

EQUIPMENT AND MATERIALS

Supplied by the Technical Committee:

- Haas Programmable Controller
- CNC Lathe & CNC Mill
    - All tooling for program execution on CNC Lathe and Mill
    - • Flash Drive if needed,
- Inspection equipment. (Inspection Station),
- Deburring and finishing tools (Finishing station)

Supplied by the Contestant:

**One-page type-written resume required for every contestant*

- 2 pencils
- One page resume • Scratch paper
- Machinist Handbook
- Trigonometry Book
- Calculator

TO BE EVALUATED: Contestants will be judged on the following areas:

- MILLING: Programing using HAAS Simulators, Program execution on HAAS CNC Mill. (Parts are judged as a finished Product)
- TURNING: Programming and program execution on HAAS CNC Lathe (Parts are judged as a finished Product)
- CNC Theory
- G & M Codes
- Blueprint Reading
- Communications

Massachusetts Skills – CNC TECHNICIAN OUTLINE

- Work Station 1: CNC Machining- This station will allow competitors to program a HAAS CNC Turning center from prints, load and set tools and execute their program.

- Work Station 1B: CNC Machining- This station will allow competitors to program a HAAS CNC Milling Center from prints using a HAAS Simulator. Programs will then be loaded in to a HAAS CNC Milling Center to execute their program.

- Work Station 2: CNC Machining-Setup procedures- This station will allow a competitor to review a print/ program and pre-machined part. Competitor will properly mount the finished piece into the (HAAS) CNC Milling Center and locate a given datum point. No actual machining operations will take place at this station.

- Workstation 3: Measuring and Gauging- This session is performance based; competitors will physically measure and record actual parts through instructions and print specifications.

- Workstation 4: Print Reading and GDT- This station will allow competitors to interpret provided drawings and dimensioning/toleranceing.

These are subject to change slightly without losing main scope or ideas. There will be additional more timed workstations which will encompass simple tooling identification, program reading (identification of line by line code), and interviewing & employability assessments.

Use of calculators, Machinery Handbook, Trig books are allowed at worksite. All miscellaneous worksheets, note cards, etc. that are *not otherwise obtainable* by all contestants are not allowed.

Miscellaneous Notes:

- Contestants will be required to submit a one-page type-written resume.

- Contest site will provide all equipment and tooling for tasks required.

- Contestants will need to maintain a safe and professional working environment. Care and usage of tooling, inspection equipment, and overall workplace etiquette expected of a professional will be considered in final score.

CLOTHING REQUIREMENTS:

- Official Massachusetts Skills USA contest t shirt
- Appropriate blue or black work pants
- Work Boots
- Approved safety glasses with side shields.

CNC TURNING CONTEST

COMPETITOR LUNCHES SPONSORED BY HAAS

REQUIREMENTS AND SCOPE OF CONTEST

Purpose:

To evaluate each contestant's preparation for employment in Computer Numeric Control turning. To recognize outstanding students for excellence and professionalism in the CNC turning field.

Eligibility:

Open to active SkillsUSA members enrolled in programs with precision machining, automated manufacturing, or CNC as the occupational objective.

Scope of Contest:

Each contestant will receive a dimensioned drawing and material to CNC-turn a part. Participants are expected to write a CNC program, set up the machine and tool offsets and turn a part without the use of CAD/CAM software. Only the part will be evaluated, not the CNC program. Participants are given 15 minutes to study the task and ask questions before beginning. The competition may run 6-8 hours, depending on the project design.

Competencies required are as follows:

6. Programming
    a. Write and verify CNC program without the use of CAM software (competitor has the opportunity to correct any program errors on the machine.)
    b. Display complete knowledge of DIN/ISO programming (G and M codes)
    c. Apply the correct use of cutter compensation (G41/G42)
    d. Adjust speeds and feeds as needed

7. Setup
    a. Setup machine and establish a zero reference point for machining the part
    b. Select and mount necessary tools from the provided set
    c. Establish tool offsets and enter them into the CNC machine control
    d. Enter any necessary tool corrections into the CNC machine control

8. Perform mathematical calculations
    a. Calculate CNC speeds and feeds
    b. Calculate programming coordinates from the drawing
    c. Calculate radius tangent points

9. Measuring
    a. Measure test part to the nearest 0.001"

10. Communication
    a. Read and interpret technical blue prints
    b. Understand all symbols on technical blue prints, such as geometric tolerances, surface-finish symbols, corner-break symbols, etc.

Test Project Scoring:

The three evaluation criteria for the test part are:

1. Conformity to Print:
    a. Visual conformity and accuracy of part to drawing. (Look for shape and features of part)
    b. Edges broken
    c. Transition of surfaces
    d. Part is burr-free
    e. Damage to part (clamp marks, scratches)

2. Dimensions:

    This is an objective scoring. Scores will only be granted if dimension is in compliance with the print. The score for each dimension will either be full points or zero points.

3. Use of Material

    Contestant will receive on piece of stock for the contest. Material may be Steel, Aluminum, Wax, or Delrin.

Tool Requirements: *One-page type-written resume required for every contestant

Provided by the Technical Committee:

CNC Lathe with proper holding devices
Workbench
Necessary hand tools and cutting tools
Necessary information and furnishings for judges and technical committees

Provided by the Contestants:

0-1" micrometer
6 inch caliper (digital or vernier)
Non-programmable calculator
Pencils and paper
Machinery's Handbook (optional)
Deburring tools (files, Emory cloth, etc.)

Clothing Requirements:

Work Pants
Work Shoes
NO cell phones allowed
SkillsUSA Massachusetts T-shirt
Safety glasses with side shields or goggles

SHEET METAL CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Scope of Contest:

State Skills Competition- Sheet Metal

Contestants in the Sheet Metal contest are tested on their ability to perform such jobs as connecting sheet metal pieces with Pittsburg seams and dovetails. Professional Sheet Metal workers judge contestants on the basis of use of hand tools, correctness of layout and shop safety procedures.

One-type-written resume required for every constant

Tool Requirements:

Safety glasses
Tool box
Calculator
Hammer (*sheet metal tinners)*
12"or 24"Combination and/or framing square
Left and right aviation snips
Straight shears
8' min. Tape measure and 48" steel rule
Strapping tape rule
12" dividers or trammel points
Hand Seamer or Sheet Metal clamp
Pop rivet / blind rivet gun
24ct. 1/8" dia. x 3/8" long stl. blind rivets
Scratch gauges
Scratch awl
Center or prick punch
Hand dolly
Permanent marker pen

Blue Print Reading Test

Contestants will be tested in their knowledge of blue print reading.

¼" electric drill w/two 1/8" or 9/64" drill bits
Flat blade screw driver
Two pencils and paper pad
Pittsburg opener

Wooden or rubber mallet
7"or 8" straight jaw vise grip
Steel protractor
Rivet set or 3/8"x 3/4" x 4" or equivalent for setting flanged edge into Pittsburg lock

Clothing Requirements:

Shop work pants
Work boots (NO sneakers or shoes)
NO cell phones allowed
Long hair pinned up
SkillsUSA T-shirt

WELDING CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Scope of Contest:

On contest day each competitor receives the 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. The contestant will be tested on various aspects of welding:

1. Contestants will work on a steel project, making welds in various positions utilizing: gas metal arc welding (GMAW) *(both mild steel & SS filler wire processes)*, shielded metal arc welding (SMAW), Flux Core Arc Welding (FCAW), and gas tungsten arc welding (GTAW).
2. Contestants will weld an aluminum project. Welds are made in various positions using a variety of filler metals.

Minimum Tool Requirements:

**One-page type-written resume required for every contestant*

Combination square
Vise grips
6' Tape measure *(minimum)*
Assorted hand picks and cold chisels (deslagging)
Soap stone
Carbon Steel wire brush
Stainless Steel wire brush
Ball peen hammer
Spark lighter
Number stamp set
Welding helmet w/ #10 min. shaded lens
Safety glasses
Hack saw with extra blades
GTAW and GMAW style welding gloves
Chipping hammer with a wire brush attached
Half round metal file with a handle

NOTE: EACH CONTESTANT SHOULD HAVE THEIR OWN TOOL BOX.

Supplied by the Technical Committee:

A. UPDATE: The Technical Committee WILL BE PROVIDING ALL MATERIAL NEDCEEARY-The contestants will NOT have to bring a welment AND there will NOT be an advanced look at the print for the competition.
B. All the necessary welding equipment to complete the projects
C. Instructions, blueprints and any other miscellaneous information required.
D. Aluminum plate will be supplied for the Aluminum weld test

Clothing Requirements:

A welding operator should wear hard, slick cotton type clothing. Avoid wools and synthetics. He/She should wear long sleeve shirts with a collar that fits up tight to the neck and shirt pockets should have flaps over them. Trousers should be straight legged without cuffs. High topped shoes/boots, safety glasses with side shields, a good head shield with filter plate lens, gloves and leathers as needed ***(such as long sleeve welding jacket or shoulder sleeves with bib and apron).*** A welding hat is also advisable.

NOTE: A WELDING OPERATOR MUST WEAR PROTECTIVE CLOTHING AND BE SAFETY CONSCIOUS WHILE WELDING

METAL TRADES B

EVENTS:

ENGINEERING TECHNOLOGY
MECHATRONICS
WELDING SCULPTURE

SERIES DIRECTOR:

MATTHEW CONNORS

CONTACT INFORMATION:

BLACKSTONE VALLEY TECHNICAL HIGH SCHOOL
65 PLEASANT STREET
UPTON, MA. 01568
PHONE: 508.529.7758
EMAIL: mconnors@valleytech.k12.ma.us

OBSERVER RULES FOR METAL TRADES B

The Following observer rules apply to all contests in Metal Trades B.

- Observers will be allowed to view the students during the competition from the designated area only. Any infraction will result in contestant disqualification.
- Talking or gesturing by the observers may result in contestant disqualification.
- Observers will not be permitted to communicate with contestants in the holding/assembly area.
- Talking to judges will not be permitted.
- All communications are to be directed to the series director only and only at the end of the contest.
- Contestants are to stay until they are debriefed at the end. Any communication from observers will result in contestant disqualification.
- No prints or information will be allowed to leave with the student participants/school personnel.
- No videotaping of contests. (Still photography only)

ENGINEERING TECHNOLOGY CONTEST

Purpose: To recognize an outstanding engineering innovation project which has been developed by a three-member team of engineering students. The student team will present their innovative idea along with a display and live model.

Clothing Requirements:
For Men: SkillsUSA official attire: Official red blazer or jacket, black dress slacks, white dress shirt, plain black tie with no pattern or SkillsUSA black tie from Midwest Trophy, black socks, and black shoes.
For Women: Official red blazer or jacket, black dress slacks or skirt, with 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, and black shoes. To purchase official clothing, contact Midwest Trophy Manufacturing Co. Inc. by calling 1-800-324-5996 or order online at
http;//www.mtmrecongnition.com/skillsusa/.

Eligibility
Open to active SkillsUSA members enrolled in a career and technical education engineering or program that integrates engineering/pre-engineering techniques as an integral component of the instructional program.

Observer Rule:
No observers will be permitted during the judging phase of the team presentation. Live models and presentation displays may be viewed on the day of the competition. All teams will be invited to repeat the team presentation to the public following the judging phase.

Equipment and Materials:
SkillsUSA will provide:
• a space for the live model no bigger than 10’ x 12’
• a space for the storyboard
• one standard 120 volt electrical outlet
• one standard 8’ conference table

Supplied by the contestant team: ****One-page type-written resume required for every contestant***

• live model cannot be hazardous in any way.
• if the live model is not conducive to being presented in an indoor facility, please notify headquarters in advance so other arrangements can be made.
• live models must be transported and set-up in the contest area by the contestant team. No help will be provided by SkillsUSA.

Scope and Contest:
A team consisting of 3 students, all enrolled in the same educational institution during the current year.
Students may be members of only one team per contest year.
The project must be designed and constructed by students who are (or were enrolled immediately preceding the NLSC) enrolled in an engineering program (see definition in the eligibility section).
Each team will have one storyboard explaining the new innovation they collaboratively worked on.
Each storyboard may be smaller than, but may not exceed a maximum of 4’ x 4’.
The live model must be an accurate reflection of what is being claimed in the oral presentation.
Importance is placed on the oral presentation that lasts no longer than ten minutes.

Following the oral presentation, there will be a possible ten-minute question and answer session by the judging panel to clarify any questions that arise during the presentation.

High school and college/post-secondary educational institutions are eligible to participate.

Leadership from the team's career and technical instructor, academic teachers and business/industry is highly encouraged.

The panel of judges will consist of engineers, engineering educators and members from business and industry.

Judging Criteria:
Each engineering presentation will be judged according to its own merits and compliance with the listed criteria. Participants should read the guidelines carefully and make sure the project presentation covers all the criteria.

Live model – The live model is a working model that demonstrates the results of the teams' research and how the team has put their research into action (i.e. a newly designed air-intake system for a high mileage vehicle). The live model must accurately reflect the engineering design accomplishment referred to in the presentation. If judges wish, they will be able to inspect the model at the conclusion of the presentation.

Presentation – Students should demonstrate appropriate mastery of the engineering project. Each student should take an equitable role during the allotted time. The presentation given by the entire group should reflect excellent presentation skills, clear communication and explanation of the technical process related to the engineering innovation and design project. The use of technology presentation equipment is highly encouraged to convey a clear presentation.

Integration of business and industry – The project must demonstrate evidence of the integration and involvement of business and industry related to the engineering field. This involvement might take many forms (i.e., technical assistance), but must be evident during the presentation process. The team must have engaged business and industry in at least one phase of the project – research, planning, and/or construction of the model or assistance in a quality presentation.

Storyboard presentation model – The storyboard will chronicle the history of the innovation from idea to reality. The storyboard will be rated on gaining attention, explaining the engineering process involved, quality, imagination and overall effectiveness as a history of the project.

Overall effect – The entire presentation and supplied materials (i.e., storyboard, live model, etc) were projected in a businesslike and professional manner. The live model and presentation materials were well organized. The students' display of knowledge and clear connection to engineering business/industry has been firmly established.

MECHATRONICS CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Scope of Contest:

To better reflect the emerging industrial technology called "Mechatronics", this year's competition will include mechanical, fluid power, electronic and control components. Teams of 2 students will be required to assemble, integrate and program these components to create an automated system capable of completing a specific task. Programming can be done with committee-provided FluidSIM software. Scores will be based on task completion, accuracy and efficiency.

Tool Requirements: **One-page type-written resume required for every contestant*

Mechatronics Technical Committee provides:

Mechanical, fluid power and electronic components

FluidSIM software

24 VDC 2 AMP Power supply (for above components)

Terminal Strip

Status Box

Integration cables and patch cords (for above components)

Pneumatic tubing and cutter

Mini Compressor

Contest Site provides:

3' x 6' workstations

Chairs at each workstation (2)

110VAC at each workstation

1. Matthew Connors, Series Director, Metal Trade B (contact information below) NEEDS TO KNOW ASAP: if your Mechatronics team is able to bring a MecLab kit to the contest. ***If your team(s) are not able to supply their own kit, SkillsUSA will be able to acquire one for you from Festo, but Matthew Connors will need to know ASAP.***
2. ***Teams will be required to BRING THEIR OWN COMPUTER WITH THE REQUIRED SOFTWARE. COMPUTERS WILL NOT BE SUPPLIED.***

Teams provide:

1. Computer with Windows XP and CD/DVD drive (with Administrative Rights)
2. Pen/pencil
3. Safety glasses
4. Multimeter
5. Small Screw Drivers (Phillips and Regular)
6. Wire Cutter/Stripper
7. Allen Wrench Set (Inch and Metric)
8. Open-Ended Wrenches (Inch and Metric)
9. Appropriate Clothing

Notes

1. This year the use of a PLC **will not be allowed** for secondary (high school) students in an effort to provide a fair and equitable contest for all participants.
2. In the past there has been some concern regarding the use of PLC's for the Mechatronics competition. After a review of the national contest and the wording of the state contest, it has been decided that the use of PLC's **should only be for students competing at the post-secondary level**.

Clothing Requirements:

3. Work Pants
4. Work Shoes
5. NO cell phones allowed

SkillsUSA Massachusetts T-shirt
Safety glasses with side shields or goggles

Please refer to the 2017-2018 SkillsUSA Technical Standards for additional information

2017-2018 SkillsUSA Championships Technical Standards

available on-line to all professional members

WELDING SCULPTURE CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Supplied by the Technical Committee:
• All necessary information for the judges and technical committee.
• One 4-foot table

Supplied by the contestant:
• All competitors must create a one-page professional résumé and submit the day of the contest
• Student designed and produced sculpture
• Professional-detailed portfolio of the sculpture's creation.

Scope of the Contest
The contest consists of two parts:
1. Evaluation of the Sculpture
2. Oral presentation and questions and answers session. All contestants will be asked the same questions, determined by the judges, before the start of the contest Knowledge Performance

There will be no skill-related written test.

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

Contest Guidelines
Sculpture Design and Workmanship:
Materials used must be ferrous or non-ferrous metals. The sculpture must be an original and creative work of the student. Sculptures may be welded, brazed, or soldered, depending on the material used.

Projects are to be left unpainted, including primers and other opaque coatings.

All copyright laws must be followed in the creation of the design.

Sculptures may be delivered to the contest site on Thursday, April 27th, 2017 between the hours of 12:00 noon and 3:00 p.m.

The sculpture must be one continual piece, not multiple pieces unconnected.

The sculpture cannot exceed the maximum size of 18" tall x 12" wide x 18" long and cannot exceed a weight of 250 lbs.

Portfolio – **A portfolio must be placed with the sculpture prior to judging. It must be tabbed and must contain pictures and supporting evidence (i.e. receipts). It must include a description of the concept development and manufacture of the project and processes used to develop the sculpture. **A hard copy portfolio must be submitted if part and presentation is to be considered for judging.**

The first page of the portfolio must include a letter certifying that the sculpture was designed and constructed by the student. The letter must contain an itemized list of all expenses.

The letter must identify the school, city, state and local advisor. The letter must identify the student to be interviewed, division (high school or post-secondary), and the letter must be signed by the instructor **and** vocational-director or principal.

****NOTE:** **A digital copy of the portfolio must be submitted to:
mconnors@valleytech.k12.ma.us
NO LATER THAN April 26, 2017 at 5:00 p.m. A digitized copy as .pdf is preferred to eliminate software issues.

Presentation – The student will participate in a 4 to 5 minute presentation. Elements of the presentation should include:
1. General information (Individual's name, school, and title of project).
2. Discuss elements of the portfolio (concept, material, design and manufacture).
3. Inspiration for project design.
4. Details of processes and workmanship in the sculpture.
Question and Answer Session –
After each presentation the individual will be asked questions from the judges. Questions will be about the sculpture, presentation, materials, processes and workmanship.

WELDING SCULPTURE CONTEST
(continued)

Clothing Requirements:

Official SkillsUSA Attire consisting of:

For men: Official red blazer, windbreaker-style jacket or sweater; black dress slacks; white dress shirt, plain black tie with no pattern or Skills USA black tie; black socks and black shoes.

For women: Official red blazer, windbreaker-style jacket or sweater; black dress slacks or skirt with business-like white, collarless blouse, or white blouse with small, plain collar that may not extend onto the lapels of the blazer; skin-tone hose and black shoes: plain black flats or plain black shoes with a heel no higher than 2'.

-or-

Professional Business Attire.

OCCUPATIONAL SUPPORT TRADES A

EVENTS:

PRINCIPLES OF TECHNOLOGY
TECHNICAL COMPUTER APPLICATIONS
WEB DESIGN

SERIES DIRECTOR:

CHRIS HICKMAN

CONTACT INFORMATION:

BAY PATH RVTHS
57 MUGGETT HILL ROAD
CHARLTON, MA. 01507
508.248.5971
EMAIL: chickman@baypath.net

PRINCIPLES OF TECHNOLOGY CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Please refer to the 2017-2018 SkillsUSA Technical Standards for additional information

2017-2018 SkillsUSA Championships Technical Standards

available on-line to all professional members

TECHNICAL COMPUTER APPLICATIONS CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Scope of Contest:

State Skills – Technical Computer Applications
The contest will test the student skills through written exam, which will covers the installation and operation of the software, hardware and cabling plus general computer support knowledge. Topics also include information as related to the Internet, networking and data sharing. A practical exam will test the students skills using Microsoft Office 2010, specifically Word, Excel, and PowerPoint.

Hardware:
IBM PC's

Software:
Office Products including: Word, Excel, PowerPoint, Access and Windows XP. The host site has **Office 2013** and that will be the preferred product. If you would like to use another version please contact the series director ASAP.

Tool Requirements: *One-page type-written resume required for every contestant

2 - #2 Pencils with erasers
1 - Tablet of paper

Clothing Requirements

Official SkillsUSA blazer, windbreaker, or sweater and accompanying official dress or businesslike attire. ***(Refer to the 2017-2018 National Technical Standards)***

2017-2018 SkillsUSA Championships Technical Standards
available on-line to all professional members

WEB DESIGN CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Purpose:

To evaluate each member teams preparation for employment and to recognize outstanding students for excellence and professionalism in the field of web development.

Scope of Contest:

The contest will require each team to build a web-site.

Hands-on Evaluation:

Each team will be required to build a web-site for a non-profit organization. Each team will be given a flash drive with graphics, which can be used. They may be altered as the team sees fit. There will be no server side scripting or web server requirements. All projects will be submitted to the judges via a memory stick. **Any previously developed documents or graphics that are used by the team will disqualify that team.**

Tool & Equipment Requirements: ****One-page type-written resume required for every contestant***

Hardware Requirements:

The team must provide all the computers, and interconnecting equipment.

Software Requirements:

Any software can be used as long as it is properly licensed.

Clothing Requirements:

Official SkillsUSA blazer, windbreaker, or sweater and accompanying official dress or businesslike attire. ***(Refer to the 2017-2018 National Technical Standards)***

2017-2018 SkillsUSA Championships Technical Standards
available on-line to all professional members

OCCUPATIONAL SUPPORT TRADES B

EVENTS:

COMPUTER MAINTENANCE TECHNOLOGY
COMPUTER PROGRAMMING
INTERNETWORKING
Telecommunications Cabling

SERIES DIRECTOR:

ROGER BELLEROSE

CONTACT INFORMATION:

MONTACHUSETT RTHS
1050 Westminster Street
Fitchburg, MA
PHONE: 978-345-9200
E-Mail: bellerose-roger@montytech.net

INFORMATION TECHNOLOGY SERVICE CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

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

CLOTHING REQUIREMENT
For men: White SkillsUSA Massachusetts tee-shirt with black pants, black socks and black leather shoes.
For women: White SkillsUSA Massachusetts tee-shirt with black pants, black socks and black leather shoes.

ELIGIBILITY
Open to active SkillsUSA members enrolled in programs with computer maintenance technology, computer networking and security, Cisco network academy as the occupational objectives.

EQUIPMENT AND MATERIALS
1. Supplied by the technical committee:
All materials, schematics and equipment required for the contest. Internet whitepaper documents or Internet research documents are not permitted. If determined by the committee such documentation is required for the module, the technical committee will supply it.

2. **Supplied by the contestant:**
a. Pencils
b. Basic hand tools suited for accessibility to a device, such as screwdrivers, needle-nose pliers, etc.
c. Anti-static wrist strap with alligator clip end. Straps must be in proper working order.
d. Digital multi-meter
e. Contestants may bring diagnostic software with proof of ownership such as original disk or original software license, proof of payment of shareware license fee, or proof of software released into public domain (freeware)
f. Contestants may use standard technical data reference books such as those that include BIOS codes, HDD parameters, etc. Books normally used as a classroom text will not be permitted
g. Contestants may use malware detection and removal software with proof of ownership, as described in Item E
h. All competitors must create a one-page résumé, which will be submitted at the contest site the day of the actual contest

SCOPE OF THE CONTEST
The contest is defined by industry standards as determined from elements of the CompTIA A+ including elements of Network + and Security + guides. Certification objectives may be found at the following website: www.comptia.org. These are also free by request. Write to: CompTIA 3500 Lacey Road, Suite 100, Downers Grove, IL 60515; 630-678-8300.

Knowledge Performance
This portion of the contest will be a written knowledge exam. Competencies evaluated on the written exam are congruent with those evaluated on the newest release of the A+ Certification exam.

Skill Performance
This portion of the contest will be a series of modules through which each contestant will rotate on a fixed time schedule to troubleshoot end user computing issues. Adaptive research is not in the current scope of the contest.

Contest Guidelines
1. The contests will have several hands-on skill scenarios that demonstrate one's entry-level employment skills selected from the list of competencies as determined by the SkillsUSA technical committee. Scenarios may include but are not limited to the following:
a. Diagnose and service client issues with their relation to server or network interaction
b. Diagnose and resolve operating system and startup problems
c. Demonstrate ability to use utility software, drives and other peripherals

2. The software problems will relate to Windows operating systems, powershell and command-line skills.
3. Contestants will be awarded points based on their ability to solve problems or complete tasks within the allotted time. Partial points may be awarded for solving partial problems.
4. Competence is determined when the contestant acquires 60 percent of the available points.
5. Contestants will be provided, as required, manufacturers' documentation of the devices to be installed and/or serviced.
6. Winners will be determined on the basis of their total scores.
7. Specific penalties will be assessed for the failure to properly use anti-static straps at all times when in contact with the contest equipment. Penalties will be assessed at 5 points per occurrence, and notice of infractions will be communicated to the contestant when they occur.
8. Penalties will be assessed for failure to follow a judge's instruction that results in damage or loss of equipment or when improper handing is determined. Penalty may be assessed up to 10 points per infraction.

Contestants do not need to purchase the official SkillsUSA polo shirt required for National competition.

COMPUTER PROGRAMMING CONTEST

Purpose:
To evaluate the contestants knowledge and understanding of computer programming and to evaluate the students preparation for employment in the software industry.

Scope of the contest:
Contestants will be given a computer-programming problem consisting of background information and program specification with accompanying reference material and description of program requirements. Contestants will develop an appropriate (successfully executable) computer program from design notes and instructions. The programming document requirements may include, but not limited to, the following: Program module hierarchy, Structured flow chart for each module, each program module coded in Pseudo-English.

Eligibility:
Open to active SkillsUSA members enrolled in programs with computer programming as the occupational objective.

Clothing, Resume, and Supplies Requirements:

Clothing requirements:

- ***For men***: Official SkillsUSA white dress shirt with black dress slacks, black tie, black socks, and black leather shoes. Business like attire is also acceptable. NO SNEAKERS.

- ***For women***: Official SkillsUSA white dress shirt with black slacks or skirt, black socks or black or skin - tone seamless hose and business appropriate shoes. NO SNEAKERS.

Contestants do not need to purchase the official SkillsUSA polo shirt required for National competition.

Resume:

- ****One-page type-written resume required for every contestant***

Equipment and Materials:

- **All equipment is to be supplied by the contestant**
- **Recommending that students down load the free copy of VB Express 2008 Download or newer version and/or Microsoft C Sharp prepare for contest. Contest can be presented in either software application.**
- Flash drives will be provided to store the completed program, which will be left with the judges.
  - **Previous Contest requirements are available at** http://4square.net/ and select SkillsUSA from the left column of webpage
  - One reference manual

INTERNETWORKING CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Purpose:

To evaluate each contestant's preparation for employment and to recognize outstanding students for excellence and professionalism in the field of internetworking.
First, refer to the National SkillsUSA Technical Standards, General Regulations.

Clothing, Resume, and Supplies Requirements:

Clothing requirements:

- ***For men***: Official SkillsUSA white dress shirt with black dress slacks, black tie, black socks, and black leather shoes. Business like attire is also acceptable. NO SNEAKERS.

- ***For women***: Official SkillsUSA white dress shirt with black slacks or skirt, black socks or black or skin - tone seamless hose and business appropriate shoes. NO SNEAKERS.

Contestants do not need to purchase the official SkillsUSA polo shirt required for National competition.

Resume:

- ****One-page type-written resume required for every contestant***

Equipment and Materials:

- Pencil and paper (for notes)

Written Evaluation:
The purpose of the written portion, of the contest, is to test a student's complete knowledge of Internetworking. Questions from the written evaluation will be taken from the following general Internetworking topic areas:

- OSI model and industry standards
- Network topologies
- IP addressing, including subnet masks
- Basic Network Design
- Beginning router configurations
- Routed and routing protocols
- Advanced router configurations
- LAN switching theory and VLANs
- Advanced LAN and LAN switched design
- WAN theory and design
- WAN technology, PPP, Frame, Relay, ISDN
- Network troubleshooting

Hands-on Evaluation:

The purpose of the hands-on component of the contest will be to test a student's ability to design, install, and maintain Internetworks. Given a set of networking equipment *(cable, switch, routers, etc.),* the students must, in a finite amount of time, install network equipment and configure.

This would be similar to doing an installation at a trade show. The vision and context is that client companies would request a demonstration booth which runs a particular Internet application – and students, given equipment and tools, would provide the appropriate connectivity for the application to run successfully.

Equipment Provided for Contest:

- Cisco Routers
- Cisco Switch
- All Cat 5 Cables
- All V.35 Cable Used to Interconnect Network Equipment
- Computers
- Console Cables for Network Equipment

TELECOMMUNICATIONS CABLING

Clothing, Resume, and Supplies Requirements:

Purpose:

To evaluate each contestants preparation for employment, to recognize outstanding students for excellence, and professionalism in the field of Information technology.

Scope of contest

Knowledge Performance
The contest includes a written knowledge exam to assess knowledge of structured cabling.
Questions from the written evaluation will be taken from the following general telecommunications cabling topic areas and are verbalized in the attached competencies: cable pulling, copper media (UTP cabling), grounding and bonding, horizontal cabling, installation of support structures, plans (blueprint and drawing), safety practices, splicing, standards and codes, telecommunications cabling systems, testing UTP cabling, transmission theory and troubleshooting.

Skill Performance
The purpose of the hands-on component of the contest will be to evaluate the ability to install, terminate and manage telecommunications cabling.

Contest Guidelines

1. An installation will be tested to industry standard requirements.
2. The cabling project must be completed within the given time and certified for use.
3. Equipment and tools needed to install the appropriate connectivity for the project will be provided by the contestant.
4. Skills that are to be evaluated are outlined in the competencies provided by the contest technical committee. Standards are congruent with those established by the ETA Competency Requirements for Certified Data Cabling Installers.
5. Contestants should have a 10-hour OSHA Card

For students interested in voice and data network cabling and installation, This competition tests to worldwide industry standards for data and voice connections, physical and logical networks and signal transmission. Contestants demonstrate skills in reading network design documentation, parts list set- up and purchase, pulling and mounting cable, choosing wiring closets, patch panel installation and termination, installing jacks and cable testing. Both CAT 5/6e and fiber optics cable connector are presented.

The contest stresses safety and working effectively in group environments as well as customer service skills. Student will build: Note: EIA/TIA Color Wire Standard for T568B or T568A will not be provided to contestants or used by the contestant when building the describe cables.

Cables to be terminated and tested:

- Cat6 cable from bottom of wall (jack plate) up and over head to punch-down panel to the designated terminal.
- Coaxial cable crimped at both ends one end screwed onto jack plate at bottom of wall, the other end will be left hanging next to punch-down panel run with the Cat6 cable.
- A Cat5e cable terminated to the 66 block on the left run up the outside wall to the wire trough hanging from the ceiling and across to the punch-down panel to the designated terminal.
- A 25 pair cable terminated at 110 blocks on right side of wall run into wall and left hanging. This is for demonstrating knowledge of color code termination only.
- We will have a selection of fiber optic cables with various connectors on them that the contestant must write down and identify the different terminals.
- Contestant will assemble two cables on a bench and demonstrating knowledge of color code termination only.

Clothing, Resume, and Supplies Requirements:

Clothing requirements:

- ***For men***: Official SkillsUSA white polo shirt with black dress slacks, black tie, black socks, and black leather shoes. Business like attire is also acceptable. NO SNEAKERS.
- ***For women***: Official SkillsUSA white polo shirt with black slacks or skirt, black socks or black or skin - tone seamless hose and business appropriate shoes. NO SNEAKERS.

Resume:

- ****One-page type-written resume required for every contestant***

Contest Guidelines

- An installation will be tested to industry TIA/EIA standard requirements.
- The cabling project must be completed within the given time and certified for use.
- Equipment and tools needed to install the appropriate connectivity for the project will be provided by the contestant.
- Skills that are to be evaluated are outlined in the competencies provided by the contest technical committee. Standards are congruent with those established by the ETA Competency Requirements for Certified Data Cabling Installers.
- Contestants should have a 10-hour OSHA Card

Tool and Supplies Requirements:

NOTE: IF THE CONTESTANT DOES NOT HAVE TOOLS THEY WILL BE DISQUALIFIED. NO TOOLS WILL BE PROVIDED AT CONTEST SITE

Supplied by the technical committee:

- Mock wall, Cable Ladder, Equipment Racks, Racks, Cable, Patch Panels, Telecommunications Outlets, Termination Blocks and Modular Plugs
- Other Various Connectors
- Fiber Optics Connectors

Equipment and Materials Supplied by contestant:

a. Personal eye protection and Hard Hat
b. Stripping Tools
c. 8 pin modular plug crimping tool
d. Cable prep tool for F-style compression connector using RG 6 Cable
e. F-style coax compression tool
f. Compression tool to do BNC and RCA connectors
g. Electrician's scissors
h. Probe-pics
i. Volt ohmmeter (needed to test continuity), 4 pair tester and Coax tester or combo tester
j. Electrical tape
k. Cable tester
l. Fish tape
m. Other cable/wire preparation and installation/termination tools
n. Cable labeling device
o. Tone Generator and probe
p. 6 inch tie wraps

SERVICE OCCUPATIONS A

EVENTS:

COMMERCIAL BAKING
CULINARY ARTS
FOOD & BEVERAGE SERVICE

SERIES DIRECTOR:

HEATHER K. McCall

CONTACT INFORMATION:

GREATER LAWRENCE RTHS
57 RIVER ROAD
ANDOVER, MA 01810
978.686.0194 x2017
EMAIL: hmccall@glts.net

COMMERCIAL BAKING CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Scope of Contest:

National Skills - Commercial Baking
The commercial baking contest covers a variety of production techniques and knowledge of the modern baking industry. The contestants are given a written test covering basic baking science. The performance phase is the actual preparation of goods and presentation of finished products ready for sale to customers. Contestants are given a predetermined selection of all necessary food items.

State Skills - Commercial Baking
Each contestant will be supplied with the raw ingredients and/or ready-to-use dough(s) to produce bakery items.

Formula and mix/bake procedures for each item, with the exception of cake icing, white, will be provided to each contestant.

Contestants will also be graded on the following:
Scaling, Mixing, Dough Make-up Skills, Batter Mixing Methods, General Baking and Finishing, Presentation

Tool Requirements:

1 - Hand rolling pin or
1 - Regular rolling pin
1 - Pastry wheel (straight or fluted)
3 - 9" Pie tins (no deep dish)
1 - Metal bench scraper
1 - Plastic scraper
1 - Rubber spatula
3 - Pastry bags at least 3
1- Bench canvas *(approximately 3' x 5')*
1- Wooden spoon
1 - Asst. Cake decorating tips with food coloring
1 - Cake turn table
1 - Timer
1 - Serrated knife
1 - Grease brush
2 - Muffin tins
1 - Egg wash brush
1 - Bench brush
1 - Hand whip
1 - #10 or #12 Scoop
1 - Dough thermometer
1 - Glaze brush
3 - Spatulas *(2 straight, 1 off-set)*
1 - Dough knife
1 - Pair of scissors
1 - Lg. kitchen spoon
1 - Paring knife
4 - S/S side bowls *(1 - 8 qt. capacity, 3 - 3/4 to 1 qt. capacity)*
Graduated Measures (*cup, pint, quart, gallon)*
1 – set measuring spoons
1- Baker's Scale, spring scale, or digital scale)

Optional Tools:
Cream Horn Irons
Round or fluted cookie cutters only

******No other food items allowed (e.g., sprinkles, decorates, etc.)***
DECORATING ICING WILL BE PROVIDED BY THE HOST SCHOOL.

ALL FORMULAS WILL BE PROVIDED.

Serve Safe/HACCP sanitation procedures will need to be followed.

Clothing Requirements:

Baker/Chef uniform without school name
White chef's hat, ***(paper or cloth)*** and hairnet
White or black leather shoes ***(NO sneakers)***
White T-shirt or white shirt under chef's coat
Apron ***(white)***
Side towels

CONTESTANTS WILL NOT BE ALLOWED IN THE CONTEST AREA WITHOUT CORRECT SHOES.

Chef's scarf ***(optional, worn with chef's coat)***
NO nail polish
NO jewelry
NO cell phones or pagers allowed
Cleaning towels
1 - Flair pen
1 – Notebook

EACH CONTESTANT WILL BE GRADED ON DRESS AND SANITARY WORK HABITS.

Each student receives

2 lbs. Puff Pastry Dough (or 3 sheets)
2 lbs. Danish Pastry Dough
Recipe for White Bread Dough
Recipe for Pie Dough
Recipe for Muffin Batter
2 cake layers (or one cake to be split)
Frosting
Fillings

Each student will prepare

From the Bread Dough
(raw dough weights)
1- 12 oz. pan loaf
1- 12 oz round loaf
2 three strand braided loaves 18 oz each loaf
1 sheet pan of 2 oz. single knot dinner rolls

From Puff Pastry Dough:
Prepare 3 varieties of Puff Pastry Products

From the Danish Dough:
Prepare 3 varieties of Danish

Prepare Pie Dough

Prepare **one** 9" two crust pie
Prepare **one** 9" lattice top pie
Using **1#12** ounces of fruit filling

Students will cut and fill and decorate two (2) cake layers with the inscription of "Happy Birthday"

Two (2) different styles of borders
Three (3) to five (5) roses, leaves, appropriately colored and decorated for size of cake.
Cake will be professionally presented.

Pie Dough

20 ounces	Pastry flour
14 ounces	Shortening, all-purpose
6 ounces	Cold water
2 teaspoons	Salt
1 ounce	Sugar

1. Gather ingredients and equipment.
2. Rub or cut shortening into flour to form nuggets the size of peas.
3. Dissolve salt and sugar in water.
4. Add water mixture to flour mixture.
5. Refrigerate. Use as needed

Blueberry Muffin Recipe

8	ounces	Sugar
1 1/2	ounces	Butter, unsalted
1/3	teaspoon	Salt
1	teaspoon	Vanilla extract
5	ounces	Eggs
9	ounces	Bread flour
¼	ounce	Baking soda
9	ounces	Sour cream
7	ounces	Blueberries, frozen

1. Gather ingredients and equipment.
2. Preheat oven. Grease muffin pans or line with muffin liners.
3. Cream sugar, butter, salt and vanilla together.
4. Add ½ of the eggs and cream together for one (1) minute. Scrape bowl. Add rest of eggs and cream for one (1) more minute.
5. Mix flour and soda together and add to mix. Mix until flour is absorbed into mixture.
6. Add sour cream and scrape bowl for one (1) minute until blended.
7. Fold in blueberries into batter.
8. Scoop with appropriate-sized scoop.
9. Bake 20-25 minutes or until golden brown and springy.

White Pan Bread

2 ½ pounds	Bread flour
4 ounces	Sugar
4 ounces	Shortening
2 ounces	Dry milk
1 ounce	Dry active yeast
1 ounce	Salt
4 ounces	Eggs
1 ¼ pounds	Water

1. Gather ingredients and equipment.
2. Dough temperature: 80°F
3. Allow dough to rise (approximately 90 minutes) punch and allow to rise again. (Approximately 45 minutes)
4. Make up bread products as indicated.
5. Wrap excess dough and leave on rolling rack.
6. Finish fermentation and bake 400°F.

Notes

Students should come to competition with a work schedule and notes.

CULINARY ARTS CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Scope of Contest: Massachusetts Skills - Culinary Arts

The contest for culinary arts is a five (5) hour competition, encompassing both hot and cold food preparation and presentation. Contestants are rated on their technical culinary skills, sanitation and food safety techniques, and above all, the quality of their prepared items, particularly their creative presentation.

Judges will check that each contestant has only the exact tools and equipment stated. NO OTHER TOOLS AND EQUIPMENT ARE ALLOWED, INCLUDING UNIFORMS. PLEASE MARK EACH PIECE OF EQUIPMENT with your **initials only** (*attach a piece of masking tape and mark with a marker*).

NOTE: EACH CONTESTANT WILL PREPARE A MEAL FOR FOUR PEOPLE. THE CONTESTANT WILL PLATE TWO PORTIONS OF HIS/HER CHOICE, ONE FOR TASTING. RECIPES ARE PROVIDED VARAITIAONS OF RECIPES ARE ALLOWED.

Meat Fabrication

Contestants will breakdown and fabricate one (1) whole chicken into 8 pieces and be presented to the judging panel before proceeding.

Knife Work

Contestants will demonstrate 5 different knife cuts and display them to the judging panel before utilizing in the recipes or cooking process.

Hot/Cold Food Preparation and Presentation

Utilizing the fabricated chicken along with other available food items, the contestant will produce two plates/portions the following food items to the judging panel. There are recipes included in this packet; you are NOT required to adhere to them and variation is allowed but you may only use the available food items.

- **Sautéed Chicken Breast Entrée** – Served with appropriate Sauce, Starch and Garnish
- **Braised Chicken Leg/Thigh Entrée** – Served with appropriate Sauce, Starch and Garnish
- **Appetizer** – Generally utilizing the Wing Portions of the Chicken served with appropriate Sauce
- **Chicken Broth** – Prepare Chicken Broth/Stock utilizing the carcass and scraps of the fabricated Chicken
- **Minestrone Soup** – 2 portions of soups , variation of recipe allowed
- **Rice Pilaf**
- **Broccoli with Hollandaise Sauce**
- **Glazed Carrots**
- **Salad with an Emulsion Dressing**

Variations of recipes are allowed

Tool Requirements: *One-page type-written resume required for every contestant

Equipment:

1 ea. - Food Mill, small
2 ea. - S/S Bowls small and medium
1 ea. - Instant Read Thermometer
1 ea. - Graduated Measuring Containers – Cup, Quart, Half Gal.
1 ea. - Wire bowl sieve
1 ea. - Portion scale

Pots and Pans:

2 ea. - Sauce pan 1 qt.
2 ea. - Sauce pan 2 qt. with cover
2 ea. - Sauté pan 10”-12”
1 ea. – Cast Iron Skillet 10”-12”

Knives:

1 ea. - Paring knife
1 ea. – Serrated knife
1 ea. – Butcher’s steel
1 ea. - French knife
1 ea. – Boning knife

Hand tools:

1 ea. – Solid and slotted spoon
1 ea. – Wooden Spoon
1 ea. – Zester
1 ea. – Parisienne scoop
1 set - Graduated measuring spoons
1 pr. – Tongs
1 ea. – Potato peeler
1 ea. – Ladle, 8oz
2 ea. – Rubber spatula
1 ea. – Wire Wisk, med.

Specific listed tools are not required, but you will not be given tools at the site
Tools that are not listed above will not be allowed

Note: Familiarize yourself with the following:

- CIA Chart of Vegetable Cuts
- Avocado
- Shallots

Clothing Requirements: Each contestant is required to present themselves in the follow professional attire

Houndstooth Checkered Chef Pants
White socks
White chef's scarf (Optional)
Hair net
No jewelry No cell phones
Paper chef's hat ***WILL BE*** provided
Black Work shoes (No Sneakers allowed)

White chef's jacket (No school markings)
White apron
4 side towels, 2 cleaning rags
No nail polish/No artificial nails

Pen, Pencil, Black Sharpie,Pocket,Notebook Non-Slip

Note: A. **No** school I.D. may be worn on any part of the uniform.
B. A 10% point total will be deducted for infractions or unprofessional looking contestants.

CULINARY ARTS CONTEST
NOTES

NOTE TO CONTESTANTS

1. Read each recipe carefully prior to beginning.

2. Underline items which must be cooked and cooled, or which must sit prior to cooking.

3. Check all your ingredients prior to cooking. Notify a judge immediately if you are missing an item.

4. Prepare your items according to the time each item requires for cooking, holding, maintaining, chilling, etc. Note well any items, which require special handling, such as "keep warm" or "chill." However, remember that ***you will present your menu in the following order as soon as they are ready.***

    1. Appetizer
    2. Soup
    3. Salad
    4. Entree/Vegetable/Starch *(must be presented as a unit)*

    The contest manager will keep you informed of the remaining time.

VEGETABLE ACCOMPANIMENT FOR SAUTEED ENTRÉE
Skill Component: Green Vegetable Cookery Broccoli
Yield: 2 servings

Ingredients for Sauce

Egg Yolks, 2 each
Water 1 oz
Fresh Lemon Juice 1 oz
Hot Sauce to Taste
Clarified Butter 6 oz

1. Cut broccoli into uniform cuts, enough for two orders, blanch and hold for service.

2. Several minutes before service, cook broccoli so that they are tender. Toss with melted butter, salt and pepper. Place on plate and top with Hollandaise Sauce.

3. To make Hollandaise: egg yolks in SS bowl. Add lemon juice and water.

4. Place the bowl over double boiler, whipping the mixture continually with whip. As the yolks cook, the mixture will thicken. When the mixture is thick enough Remove from the heat. Do not overcook the egg yolks.

5. Adjust consistency of the yolk mixture with a touch of water.

6. Begin to add the warmed clarified butter to the egg yolk mixture, Whisking constantly to form an emulsion.

7. Adjust the seasonings with salt and pepper and Tabasco sauce to taste. Hold for service in/over warm brain marie.

For creative variation, you may utilize additional herbs and

CHICKEN STOCK

Skill component: Stock
Yield: 2 Qts
Ingredients:

Chicken bones and trim	From your fabricated chicken
Water	2 ¼ Quarts
MirePoix	½ pound
Sachet	1

1. Add cold water to chicken bones and meat. Bring to a boil-reduce to a simmer.
2. Simmer 30 minutes skimming fat and scum
3. Add mirepoix and Sachet
4. Simmer until desired flavor is reached
5. Strain- use as needed

SALAD WITH EMULSION DRESSING

Contestants Choice
Skill Component: Emulsion
Yield: 2 Servings
Instructions:

- Each contestants will have a selection of greens for this salad.
- Prepare emulsion dressing of choice using ingredients available
- Prepare appropriate garnish (Croutons, nuts, etc.)
- Immediately prior to the designated plating time for the salad course, assemble and plate your salad. Deliver one plate to Tasting Judges and one plate to Presentation area.

Seasonings from the contest supplies at your discretion.

Skill Component: Glazed Vegetables
Yield: 2 portions

Batonnet Carrots	From knife cuts
Butter	1 oz
Sugar or honey	2T
Stock	2 oz.
Salt	to taste
Pepper	to taste

1. Place carrots in pan with butter, sugar, and stock
2. Cover with a parchment paper and bring to a simmer
3. Simmer until vegetables are tender and they are glazed.

Minestrone Soup

Ingredients:

½ cup of oil
¼ cup onion
¼ cup carrots
¼ cup celery
¼ cup zucchini
¼ cup summer squash
2 cups fresh spinach, cleaned, rough chop
4 cup each chicken and beef stock
1 cup rich tomato sauce
1 cup each kidney white beans
1 cup cooked pasta, dittalini
Fresh Basil, Oregano, thyme
Salt and Pepper to taste

Method:

1. Wash and clean all vegetables.
2. Dice vegetables paysanne and sauté in olive oil.
3. Then add all stock, tomato sauce, and the beans, season to taste.
4. Simmer until the vegetables are al dente, adjust seasonings.
5. Add the cooked pasta

Garlic bread croutons for soup:

Ingredients:

1. French bread
2. Butter
3. Chopped Garlic
4. Paprika
5. Chopped parsley
6. Parmesan cheese

Method:

1. Slice bread cross ways, ¼ in slice.
2. Sprinkle with garlic butter
3. Sprinkle with paprika, Parmesan cheese, and chopped parsley.
4. Bake 400-degree oven until golden brown and hot.
5. Reserve for service

Plate two (2) plates of entrée with appropriate starch and vegetable accompaniment

STARCH ACCOMPANIMENTS FOR SAUTEED ENTRÉE

Skill Component: Pilaf

Yield: 2 servings

Ingredients:

½ cup butter
¼ cup diced onion
¼ cup diced carrot
½ cup orzo
1 tablespoon chicken base
1 cup rice
2 cups water
1 bay leaf, salt, black pepper

Method:

1. Melt butter in 2 quart sauce pot
2. Brown orzo in butter, be careful not to burn
3. Add vegetables, rice and stir to coat.
4. Add stock and season to taste.
5. Bring to boil, cover and reduce to simmer
6. Cook until all liquid is absorbed and rice is tender.
7. Reserve for service.

STEWED CHICKEN ENTRÉE

Skill Component: Braise
Yield: 2 Servings

Chicken	Legs, thighs – Large dice,
Salt	to taste
Pepper	to taste
Flour for dredging	as needed
Clarified butter or oil	1 oz.
Garlic crushed	1 clove
Onions	From knife cuts
Carrot	From knife cuts
Turnip	From knife cuts
Celery	From knife cuts
Tomato concassee	From knife cuts
Tomato Paste	2 t.
White wine	¼ C
Chicken stock	¾ C
Demi glace	1 – 1 ½ C
Aromatics – Seasonings and/or herbs	As desired
Tourne Potatoes	From knife cuts

1. Season chicken
2. Dredge lightly in flour – brown in hot oil on all sides – remove from pan
3. In same pan sauté onions and carrots to a light brown. Add and sauté celery to aroma
4. Add tomato concasse and paste and cook out 3 minutes
5. Deglaze with wine – add chicken stock and reduce by ½
6. Add demi glace, turnips, and aromatics – bring to a simmer
7. Add chicken back to sauce – cover and cook on stove top or in a 325 degree oven until done – 35-40 minutes
8. During the cooking process, add the potatoes at an appropriate time to assure proper doneness
9. Degrease Sauce and adjust seasoning and consistency as necessary
10. Plate two portions and garnish as desired.

For creative variation you may utilize additional herbs and seasonings from the contest supplies at your discretion.

RESTAURANT SERVICE CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Scope of Contest:

State Skills - Food & Beverage Service
Purpose:

To evaluate each contestant's preparation for employment and to recognize outstanding students for excellence and professionalism in table service.

Equipment and Material:

Supplied by the Technical Committee:

- All necessary equipment and food items
- All necessary information and furnishings for judges and technical committee.

Supplied by the Contestant: *One-page type-written resume required for every contestant

- Black pen
- Pencil
- Guest check book
- Guest check presenter (black)
- Table crumber manual
- Calculator

Clothing Requirements:

Black leather shoes ***(no sneakers)***
White shirt or blouse ***(point or straight collar)***
Black socks or neutral hose
Hairnet for below the collar hair
Black pants
Black tie
¾ length bistro style apron
No cell phones or pagers allowed

Eligibility:

Open to active SkillsUSA members enrolled in a program with foodservice as the occupational objective.

1. The practical contest will be geared toward American Style Table service cover as seen in the SkillsUSA Leadership Handbook (Formal Service) in a commercial restaurant.
2. The performance phase will be actual customer service of customers (judges) in a restaurant setting.
3. Contestants will be given a written test covering different styles of table service, proper table set up, side work, taking a customer's order, personal hygiene, sanitation and general table service techniques. This test will be given prior to the actual practical test at the test location.
4. Contestants will demonstrate their ability to perform jobs and skills selected from the following lists of competencies:
   A. Table set up as seen in the SkillsUSA Leadership Handbook
      - Flatware
      - Dishware
      - Glasses
      - Linen/napkin folding (8 different folds)
      - Condiments

   B. Professional Presentation
      - Greeting
      - Attitude

   C. Taking an order
   D. Sequence of service
   E. Carrying a service tray
   F. Meeting customers' needs/handling problems
   G. Computation and presentation of guest check
   H. Breakdown of table
   I. Sanitation/personal hygiene

SkillsUSA's Leadership Handbook
to be used for reference for table setting

SERVICE OCCUPATIONS B

EVENTS:

COSMETOLOGY (UNDER 500 HOURS)
COSMETOLOGY (OVER 500 HOURS)
ESTHETICS
NAIL CARE

SERIES DIRECTOR:

DONNA McMAHON
PENNY ESTEE

CONTACT INFORMATION:

GREATER LOWELL TECHNICAL HIGH SCHOOL
250 PAWTUCKET BLVD.
TYNGSBORO, MA 01879
PHONE: 978.454.5411
EMAIL: pestee@gltech.org

NASHOBA VALLEY TECHNICAL HIGH SCHOOL
100 LITTLETON ROAD
WESTFORD, MA 01886
PHONE: 978.692.4711
EMAIL: dmcmahon@nashobatech.net

MEMORANDUM

TO: ***To All Cosmetology, Esthetics and Nail Care Advisors***

FROM: ***Penny Estee, Series Director & Donna McMahon, Series Director***

DATE: ***January, 2017***

RE: ***Contest Requirements***

Due to difficulties experienced in the past, no advisors will be allowed to communicate in any way with the event manager or judges involved in the cosmetology contests -- Cosmetology under 500 hours, Cosmetology over 500 hours, Esthetics, or Nail Care -- until the contest is complete and all judges' score sheets are marked and turned in.

Any violation of this will result in the disqualification of the advisor's student(s).

COSMETOLOGY CONTEST
(UNDER 500 HOURS)

▪ REQUIREMENTS AND SCOPE OF CONTEST

Scope of Contest:

Update: All contestants must present a resume to the Events Manager on the day of the competition. All contestants must have the required mannequin listed on the tool list. Refer to attached order form for information on how to order your mannequin.

State Skills - Cosmetology
All contestants will demonstrate their ability to perform job skills selected from the following list of competencies. Cosmetology contestants are required to duplicate a preselected haircut and style on a mannequin. Live models are used for PRE SELECTED DISNEY Fantasy hair style and make-up and should come to the competition with a ½ TO 1 FULL PAGE EXPLANATION OF FANTASY STYLE TO BE DONE and clean dry hair ready to be styled.

1. Fantasy Hair Style
   a. Style hair to produce fantasy effects. (DISNEY FANTASY STYLE)
   b. Incorporate braids, twists, curls.etc.
   c. Secure hair with bobby pins, hair pins, and bands, if needed.
   d. Demonstrate balance, proportion, and form in the finished look.

   60 min.

2. Fantasy Make-Up
   After combing out the DISNEY fantasy hairstyle, perform a dramatic evening fantasy makeup to compliment the hairstyle. Sequins, feathers, etc., may be attached with surgical or other appropriate facial adhesive. False eyelashes may be attached. Creativity and artistry are being looked for here. No Masks to be used on the face.
   45 min.

3. Haircut - on long-haired mannequin (12 “or more)
   Perform a haircut with tools necessary to complete the (pre-selected) style.
   45 min.

4. Hair Style - on mannequin
   Blow dry and using a curling iron style to complement the haircut.
   30 min

6. Interview Question

During the competition, all contestants will be briefly interviewed. During the interview, all contestants will have a choice of three (3) questions at random to be answered within a five (5) minute time period. However, all contestants will be allowed to complete these interviews and will not be marked down for any additional time needed.

*Also, contestants' scores will not be based on the answers they give but focused on the professional presentation and their ability to sell themselves during the interview.

One of the following questions will be asked:

1. Within the beauty industry, where do you see yourself in the next two (2) years?
2. How will a salon benefit by hiring you?
3. Explain two (2) qualities you are looking for in a salon and why?

Special Notes:

1. ***No hairpieces or weaves or extensions will be allowed for any portion of the competition. Only the hair growing from the model's head may be used to create the style. See Page 103.***

2. ***Hair ornaments of any type may be used provided that no more than 1/4 of the completed hairstyle is covered.***

3. ***Follow all sanitation and safety rules!***

Tool Requirements: *One-page type-written resume required for every contestant

Discard bag
Blow dryer
Spray Bottle
Neck bands *(sanek strips)*
Brushes
Sufficient cosmetics for make-up application
Clips (butterfly, double prong)
Curling Iron (Marcel)
Bobby Pins
Hand Sanitizer
Towels *(enough for all services)*
Capes
Hair Sprays
Combs
Hair Cutting Tools
Mannequin Stand
Styling Aids
Flat Irons
Hair Pins
Mannequin

1 Mannequin Needed – GABRIELA 560 19"-21"

MAIL TO: BURMAX COMPANY
28 Barretts Ave.
Holtsville, NY 11742
Attn: School Division

FAX: 1-631-289-7590

CALL TOLL FREE: 1-800-645-5118
Attn: School Division

**FOLLOW ALL SANITATION RULES*

Clothing Requirements:

All Contestants will be required to wear white top and white bottom (NO JEANS) or white dress and white professional shoes, no open toes or open back. (NO SNEAKERS) Make-up for women will be minimal. Jewelry will be minimal. Makeup and jewelry will be appropriate. There will be a clothing penalty for clothing violations.

All Models will wear white tops and black bottoms. Shoes should be appropriate for competition movement. Models will arrive with clean faces with No make-up and clean hair. All models will take a SkillsUSA employability skills test at contest site.

Models Note: **No visible piercing on face or body OF YOUR MODEL FOR SAFETY REASONS. Any JEWELRY should be put on after last comb-out.**

Note to All Competitors: **Additional equipment maybe brought to the contest site, but, will be subject to the approval of the judging team.** ***Single strand extensions including all colors will be accepted. No more than 5 single strand extensions may be attached.***

Haircut for Under 500 Hours

2017 ORDER FORM

COSMETOLOGY CONTEST
(OVER 500 HOURS)

▪ REQUIREMENTS AND SCOPE OF CONTEST

Scope of Contest:

State Skills - Cosmetology
All contestants will demonstrate their ability to perform job skills on a mannequin selected from the following list of competencies. Cosmetology contestants are required to duplicate a preselected haircut and style on a mannequin. Pre-selected haircut will be shown to all competitors at the competition site.

State Skills - Cosmetology
Contestants will demonstrate their ability to perform the following job skills on Mannequins:

1. Hair Styling
   a. Create an Evening Style
   b. Create a design that is smooth and clean demonstrating balance, proportion and form in finished style.
   c. Incorporate current trends
   - 60min.
2. Permanent Waving (Mock)
   A. On a long-haired mannequin (12 inches in length) section hair into 9 Panels.
   B. On one predetermined section demonstrate a regular perm wrap.
   C. Demonstrate a mock solution and or neutralizer application.
   - 30 min.
3. Hair Coloring/Hair Straightening/Foils (Mock)
   a. On same long-haired mannequin, divide the hair into five Panels.
   b. On one predetermined section demonstrate a virgin application (2 steps)
   c. On one predetermined section, demonstrate a retouch hair color (½ inch regrowth).
   d. On one predetermined section, demonstrate a virgin sodium hydroxide hair straightening process.
   e. On one predetermined section demonstrate foils using the slicing method.
   f. On one predetermined section demonstrate foils using the weaving method.

45 min.

Scope of Contest: (cont.)

4. Hair Cutting - haircut on long-haired mannequin (12" or more)
   Judges will select cut and style at the event - student will perform haircut, blow dry and style to the given picture.
   - ☐ 45 min.

5. Interview Question
   During the competition, contestants will be briefly interviewed. During the interview, all contestants will be asked the same question, to be answered within a five (5) minute time period. However, all contestants will be allowed to complete these interviews and will not be marked down for any additional time needed.

   **Also contestants' scores will not be based on the answers they give but focused on the professional presentation and their ability to sell themselves during the interview.

Tool Requirements: ***One-page type-written resume required for every contestant***

- Spray bottle
- Neck bands (sanek strips)
- Perm rods (enough for a full head)
- Blow dryer
- Clips (butterfly, double prong, etc.)
- Combs
- Bobby and Hair Pins
- End wraps
- Cotton
- Haircutting Tools
- Towels (enough for all services) Combs
- Brushes
- Foils (Traditional)
- Hair Spray
- Hair net
- Curling iron (Marcel)
- Flat Iron
- Discard bag
- 2 Mannequins (See Below)
- Mannequin Stands (2)
- Gel/Setting lotion (enough for hair color techniques)
- Applicator bottles, bowl and brushes (for mock perm, mock color, and foils)

2 Mannequins Needed – Nicki 100% Chemical Free Manikin #N333 –

MAIL TO:	BURMAX COMPANY 28 Barretts Ave. Holtsville, NY 11742 Attn: School Division	**FAX:** 1-631-289-7590	**CALL TOLL FREE:** 1-800-645-5118 Attn: School Division

For Evening Comb out (Optional)

- Bobby pins
- Hair pins
- Barrettes
- Hair combs
- Spray(s)
- Flowers
- Hair ornaments (no more than ¼ of head)

NOTE TO ALL COMPETITORS

ADDITIONAL EQUIPMENT MAY BE BROUGHT TO THE CONTEST SITE, BUT, WILL BE SUBJECT TO THE APPROVAL OF THE JUDGING TEAM.

*** Coloring mannequin is optional**

Clothing Requirements:

All contestants will be required to wear white top and white bottom (NO JEANS) and white professional footwear, no open toes, open back, NO SNEAKERS. Makeup and jewelry will be minimal. No high heels OR platforms. There will be a point deduction for clothing violations. Remember, you will be judged on professional image, as well as professional attitude.

2017 ORDER FORM

SkillsUSA

BURMAX COMPETITION MANIKINS

SUPER LOW PRICES! Good thru March 31, 2017.

ALL 100% HUMAN HAIR

DEBRA
D804
17" – 19" brown hair.
Regular Price $29.60
SkillsUSA Price
$27.75 ea.

SAM II BROWN
S153
19" – 22" brown hair.
Regular Price $39.99
SkillsUSA Price
$37.48 ea.

S153-DUO
With H-222 Holder.
Regular Price $44.24
SkillsUSA Price
$40.52 ea.

SAM II BLONDE
S153-BL
19" – 22" blonde hair.
Regular Price $40.60
SkillsUSA Price
$37.48 ea.

S153D-BL
With H-222 Holder.
Regular Price $44.65
SkillsUSA Price
$40.52 ea.

NICKI
N333
22" light brown hair. 100% natural, hand-implanted human hair, free from all chemicals and hair color. Perfect for color treatments and chemical processes.
Regular Price $74.99
SkillsUSA Price
$65.55 ea.
CHEMICAL-FREE COLOR TRAINING MANIKIN

GABRIELA
560
19" – 21" brown hair. Natural neck and actual human hair growth pattern. Perfect for hair designs with forward styling.
Regular Price $47.99
SkillsUSA Price
$39.40 ea.

MR. SAM
MEN-HEAD
19" brown hair.
Regular Price $45.57
SkillsUSA Price
$38.25 ea.

LAUREN
651
24" – 26" brown hair.
Natural neck.
Regular Price $79.99
SkillsUSA Price
$75.00 ea.

SAMANTHA
SAM-4
23" blonde hair.
Shoulder manikin.
Pierced ears.
Regular Price $62.15
SkillsUSA Price
$56.46 ea.

AMANDA
329
21" brown hair.
Shoulder manikin.
Regular Price $61.80
SkillsUSA Price
$54.39 ea.

FAX: 631.289.7590 BURMAX PHONE: 800.645.5118

NAIL CARE CONTEST

▪ REQUIREMENTS AND SCOPE OF CONTEST

Scope of Contest:

State Skills – Nail Care

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

1. **Initial degree of difficulty** (pre-judged before the start of the contest at the contest site). Based on condition and characteristic of natural nails.

2. **Initial preparation** (pre-judged before the start of contest at the contest site).
   Table Set-Up
   a. Table set-up can only consist of items needed for the specific contest application in progress (i.e., if sculptured is in progress, the tip and wrap and nail art materials should not be visible during this time). Time will be allowed between each contest to reset the table set-up.
   b. All products and solutions must be properly identified with the manufacturer's original packaging, original labeling, and be odorless.
   c. Product labels cannot be defaced.
   d. Required tools and products accounted for and professionally organized.
   e. Sanitation solutions must be newly activated and labeled properly.

NOTE: ANY PRODUCT THAT APPEARS TO HAVE BEEN ALTERED, AS DETERMINED BY THE TECHNICAL COMMITTEE, WILL BE JUST CAUSE FOR THE CONTESTANT TO BE DISQUALIFIED FROM THE COMPETITION.

Models

Hands must be properly prepped.

a. **NO** jewelry is allowed during competition (i.e., rings, watches or bracelets).
b. Contestants and models will be required to have hands cleansed with an anti-microbial cleanser under the supervision of a Technical Committee member prior to entering the contest site and after each (escorted) break.
c. Models and contestants will use a hand sanitizer in the contest area.

3. Product and Tool Control
   a. Proper control and usage of all items.
   b. Neatness and professionalism in which all items are used.

4. Gel/Tip Application 60Min.
   Tip Application

Tip customizing	Proper fit
Tip alignment	Tip application technique

Air pockets
Extension length
Clarity with no visible plastic
Amount of gel/glue utilized for each nail
Tip blending
Color distinction

Scope of Contest: Sculptured Nails 60 min.

5. Sculptured Application
   Efficiency in working with product
   Clarity
   File marks
   Degree of thinness and thickness
   Monomer contamination
   Color distinction
   Void of bubbles and ridges

6. Cuticle and Nail Groove
   Cuticle
   Healthy, with no abrasions
   Cuticle free of any product

   Nail Groove
   Extension alignment
   No ridge or unevenness

7. Shape and Length
   Shape
   Consistent
   Contour
   Continuity
   Proportionate to the hand
   Degree of thinness and thickness

   Length
   Appropriate to nail bed
   Consistency

8. Arch and C-Curve
   Arch
   Left and right hand side view taper
   Lower arch clean and symmetrically balanced
   highest point of the arch

   C-Curve
   Conformity with nail plate

9. Surface Finish
   Smooth High gloss sheen
   NO file marks, cloudiness, ridges or dull spots
   White fiber lines – tip & wrap application

10. Lacquer/Polish
    Neatness
    Skill in evenness and accuracy
    Brush marks

11. Perform foot care in a nail care situation on one foot.
    1. Perform a basic pedicure
        A. Demonstrate proper steps for a basic pedicure
        B. Demonstrate knowledge of a safe and sanitary pedicure procedure.

30 min.

Scope of Contest: (cont.)

12. Wearable Nail Art Application

The contestant will complete wearable nail art on nails. Contestant will have prepared the models nails in the first two required contests. (One hand will have a complete set of sculptured nails. One hand will have a complete set of tip with gel overlay.)

All contestants will submit to the Events Manager a short summary describing in detail their nail art theme before the competition. Nail art will be done on one hand only.

THE NUMBER OF NAILS USED FOR NAIL ART WILL BE DECIDED AT THE COMPETITION.

All nail painting and artwork must be done during the wearable nail art application. Items NOT allowed for use in the wearable nail art application: gems, skins, feathers, rhinestones, glitters, threads, fabrics, foils, beads, tapes, jewelry. No 3-D medium art, airbrushing, decals/stencils or cast moldings will be allowed.

30 min.

Creativity:
Clarity of line — Notable precision of expression

Color Coordination:
Colors must work together harmoniously

Level of Difficulty:
Degree of being inventively unique

13. Overall Results of Workmanship
    Execution of skill, precision and professionalism throughout the contest
    Cleanliness and organization of the working environment
    Sanitation and safety procedures throughout the contest

14. Interview Question
    During the competition, all contestants will be briefly interviewed. During the interview, all contestants will have a choice of (3) three questions at random to be answered within a five (5) minute time period. However, all contestants will be allowed to complete these interviews and will not be marked for any additional time needed.

**Also, contestants' scores will not be based on the answers they give but focused on the professional presentation and their ability to sell themselves during the interview.

ONE of the following questions will be asked:

1. Describe the importance of a thorough client consultation.
2. Within the professional industry, where do you see yourself in 5 years?
3. What expectation do you have about being employed in a salon?

NOTE: CONTESTANTS MUST BE PREPARED TO COMPETE IN ALL SEGMENTS OF THE CONTEST TO ENTER THE SKILLSUSA CHAMPIONSHIPS.

Tool Requirements:

Supplied by Technical Committee

- Tables, chairs, foot bath, and electrical hook-ups
- Technical guidelines for the specific applications required to be performed
- All necessary information and supplies for judges and the technical committee
- Score sheets for each of the respective contest applicants

*Tool Requirements: *One-page type-written resume required for every contestant*

Supplied by Contestant

Electrical extension cord
Disposable contestant work area placemat
Assorted files and buffers
Cuticle pusher
Assorted files and buffers
Forms for sculptured extensions
Water bottle dispenser
Portable air purifier if you have one
Lint free pads and/or cotton
Goggles and mask
Manicure table lamp (optional)
Hand Sanitizer
Acrylic nail brushes
Orangewood stick
Instrument for cutting nail tips
Dappen dishes with covers
Nail sanitizer
Goggles and mask
Nail sanitizer
Half Well Nail Tips ONLY
Polish/Lacquer- Dark crème lacquer/polish (i.e., dark red)
Plastic zip lock bags, gallon size for disposal of refuse
Portable kit organizer (to transport all necessary items needed for the contest)

Cuccio products gel kit should which include:
1 mini black LED light, 1 primer pen, 1 gel brush, 1 T3 opaque pink hard gel (LED Cure), 1 T3 white hard gel (LED Cure), 1 veneer base coat, 1 pack of assorted clear tips, 1 small brush on glue for tips, 1 cleanser for induction layer, 1 veneer top coat.

IF YOU HAVE A LED LIGHT, ONLY PRODUCTS NEED TO BE ORDERED.

CUCCIO PRODUCT KIT SHOULD INCLUDE:
1 odorless monomer 2 ounces, 1 odorless white powder 2 ounces, 1 odorless pink powder 2 ounces, 1 acrylic brush, 1 primer pen, 1 sealer, 1 pack of 50 large rectangular sculpting forms, 1 small sani spray.

CUCCIO PRODUCT KIT SHOULD INCLUDE:
1 pair foam pedicure slippers, 1 nail brush, 1 sani nail file, 1 pair toe separators, 1 Birchwood stick.

Supplies, sanitized implements, and products needed to complete a basic pedicure on one foot.

White terry towels (15 x 26) - **NO holes, stains or colors allowed**
Anti-bacterial solution for foot bath
Disinfectant/sanitation surface spray (for work environment)
Disinfectant tray system or sanitizing jar (for implements)
Anti-microbial cleanser (for pre-cleaning of feet)
Lotions and creams needed for pedicure
FOOT BATH WILL BE PROVIDED AT COMPETITION SITE

Optional Items Allowed

Cushion for chair
Oil (*can only be used **after the judging** has been completed*)
Hand lotion/crème (*can only be used **after judging** has been completed*)
Fine tip art brush for polish/lacquer clean-up

Supplies Not Allowed

***NO* MIX & MATCH OF CHEMICALS** (I.E., THE ACRYLIC POLYMER AND ODORLESS MONOMER USED FOR THE SCULPTURED APPLICATION MUST BE PRODUCED BY THE CUCCIO MANUFACTURER AND THE RESIN AND CATALYST USED FOR THE TIP AND GEL APPLICATION MUST BE PRODUCED BY THE SAME MANUFACTURER.) ***NO* EXCEPTIONS**

NOTE: ANY OTHER ITEMS BROUGHT BY THE CONTESTANT WILL BE SUBJECT TO THE APPROVAL BY THE TECHNICAL COMMITTEE AND MUST BE DECLARED AT THE TIME OF THE PRE-CONTEST SITE KIT CHECK.

Clothing Requirement:

Contestants:

White top and white skirt or pants (NO JEANS) with white or clear seamless hose or white socks and white professional shoes. **NO OPEN TOE SHOES OR SNEAKERS ALLOWED.**

Models:

White tops, black bottoms (NO JEANS) Shoes should be appropriate for competition movement.

Eligibility

Open to active Skills members enrolled in programs with cosmetology/nail care as the occupational objective.

2017 ORDER FORM

COSMETOLOGY CONTEST
ESTHETICS

REQUIREMENTS AND SCOPE OF CONTEST

Scope of Contest:

The contest will include separate skill performance tasks and Oral Communication assessment.

State Skills - Cosmetology
All contestants will demonstrate their ability to perform job skills selected from the following list of competencies. Live models are used for facials, massage, mask application, Business Day-Time and Fantasy make-up and should come to the competition with clean skin with no make-up.

1. **Cleansing Facial**
   Demonstrate: Cleansing
   Demonstrate Exfoliation
   Massage using Tapotement (percussion), Petrissage, effleurage, Friction and Vibration...
   The use of facial steamer and hot towels.
   Mask application, and removal.
   All safety and sanitation regulations must be followed throughout all procedures.

60 min.

2. **Business Makeup Application**
   Perform a basic makeup application for daytime business following all safety and sanitation regulations.

30 min.

3. **Fantasy Make-up Application**
   Perform a dramatic evening fantasy makeup without removing the pre applied business make-up. Sequins, feathers, etc., may be attached with surgical or other appropriate facial adhesive. False eyelashes may be attached. Creativity and artistry are being looked for here. No Masks are to be used on the face. Following all safety and sanitation regulations.

60 min.

The Fantasy makeup portion of the contest will have a preselected theme (movie, story, genre, time period, etc.) A written description of the contestant's character and interpretation within the theme is to be limited to one page, typewritten and contained within a plastic sleeve. The description must be submitted on the day of the competition. No exceptions; none or late descriptions will result in a 10-point deduction.

Cosmetology Esthetics (cont.)

4. Interview Question
During the competition, all contestants will be briefly interviewed. During the interview, all contestants will have the same question to be answered within a five (5) minute time period. However, all contestants will be allowed to complete these interviews and will not be marked down for any additional time needed.

*Also, contestants' scores will not be based on the answers they give but focused on the professional presentation and their ability to sell themselves during the interview.

Special Notes:

3. Follow all sanitation and safety rules!

Tool Requirements: ****One-page type-written resume required for every contestant***

2 Facial Bed Sheets 78X40 , Facial Steamer, Headband or Wrap, 2 Capes, Gloves, Decontamination Supplies, Trash Bag for Soiled Items

Enough Towels and Washcloths to complete all services

Skin Care products including Hand Sanitizer, Makeup Remover, Cleanser, Mask , Moisturizer, Massage Cream, Toner , Sunscreen

All cosmetics and Disposable items needed for Fantasy Make-up (Eyelashes, Adhesives, Tweezers)
All Cosmetics and Disposable items needed for Business Day time Make-up

**TOWEL WARMERS WILL BE PROVIDED AT COMPETITION SITE.*

**FOLLOW ALL SANITATION RULES*

Clothing Requirements:

All Contestants will be required to wear white top and white bottom or white dress, and white professional shoes, no open toes or open back. (NO JEANS and NO SNEAKERS). Hair must be pulled back off face. There will be a clothing penalty for clothing violations. No Jewelry.

***Models must wear Black bottom and white top. Shoes must be appropriate for competition movement. Have hair pulled away from the face; must have a clean, cosmetic-free face; and must not wear earrings facial piercings or necklaces. Jewelry may be worn in the fantasy portion of the contest. If any piercings are not removed, points will be deducted with no exceptions**

TECHNOLOGY EVENTS

EVENTS:

ELECTRONICS TECHNOLOGY
HUMANOID ROBOTICS (Limited Demonstration)
MOBILE ROBOTICS
ROBOTICS & AUTOMATION TECHNOLOGY

URBAN SEARCH & RESCUE

SERIES DIRECTOR:

JAYLENE DosSANTOS

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ELECTRONICS TECHNOLOGY CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Scope of Contest:

National Skills - Electronics Technology

The six-hour contest is divided into four sections that are designed to test the contestants' knowledge of analog and digital circuitry; ability to troubleshoot electronic circuits; ability to construct and test experimental circuits; to design and select circuit components; and to assemble an electronic circuit. In addition, all aspects of the contest test the contestant's ability to use and calibrate electronic equipment, record and organize data, and demonstrate good safety practices.

State Skills - Electronics Technology

Test will include construction of multistage circuit using digital, analog, and discrete components. Safety procedures will be observed.

Tool Requirements: *One-page type-written resume required for every contestant

1. Small Hand Tools and Supplies Provided by Contestant

   A. Diagonal cutters
   B. Long nose pliers
   C. Wire strippers
   D. Hook-up wire *(10' of #22 gauge)*
   E. 3 Solderless breadboard 3" x 6"
   F. Safety glasses
   G. Soldering iron
   H. Solder
   I. De-soldering tool
   J. Solder wick
   K. Jewelers slotted screwdriver

2. Test Equipment

   All test equipment will be supplied, however, if you wish to bring your own DMM or VOM it will be acceptable.

***OPTIONAL, STUDENTS MAY BRING THEIR OWN TRAINER**

Clothing Requirements

Work pants (No jeans)
Work shoes
NO cell phones or pagers allowed at contest site
SkillsUSA Massachusetts T-shirt
Safety glasses

ROBOTICS AND AUTOMATION CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Scope of Contest

Teams of two will demonstrate their ability to perform, exhibit, and compile skills and knowledge necessary from the following list of competencies determined by the Robotics and Automation Technology SkillsUSA Technical Committee members.

The team will be provided with a written description of the task requirement and a list of the available equipment and material. The team will develop a system layout and robot program, and then demonstrate its product. Upon completion of this task, the team will be given a requirement to refine its system design and again demonstrate its functionality.

A. Perform Analysis of Task

1. Evaluate written task
2. Evaluate provided equipment and material
3. Evaluate system revision

B. Design, Sketching, Planning

1. Determine sequence of operation
2. Select equipment and material to meet functional need
3. Create flow chart
4. Create layout
5. Process system revision

C. Implement Design

1. Develop robot program
2. Install equipment
3. Integrate equipment with system controller
4. Modify system to meet revision requirements

D. System Performance

1. Perform functional test for total system operation
2. Present system for evaluation
3. Perform functional test to meet revision requirements
4. Present revised system for evaluation

Group Organization and Goals

This is a group competition and all members may interact at will. It is our hope that the competition will run much like actual industry.

1. The robot programmer will program the robot and peripheral equipment.
2. The electro-mechanical integrator will install the peripheral equipment and integrate it into the system.

We expect that when a team member has spare time he or she will help the other team member. It is our hope that one person will not dominate a team. It is in no way desirable for one person to do all the work while the other team member merely assists. Each team member must take an active role in this competition.

We have taken this course to promote creativity in the organization of production responsibility. All members are responsible for double-checking a team member's work and quality control.

General Information

1. This competition will be executed using intelitek's Scorbor-ER 4u robot, speed-controlled conveyor, and experiment table.
2. Other equipment and material is from local supply sources.
3. Each team will provide one working computer with Windows XP or Windows 7, 2GB RAM, 2GB free space on hard drive. Student or instructor must have administrative access to install robot software (SCORBASE).
4. Teams will consist of two members.

Goals

1. To have every team complete the contest.
2. To have each team member demonstrate reading and writing skills.
3. To have each team member use his or her critical thinking and problem-solving abilities.
4. To have each team member illustrate responsibility, teamwork, and self-management skills.

Notebooks

Each team will be issued a notebook and information packet. This will be a three-ring binder in which the team will complete the documentation of its assigned task.

*Tool Requirement: *One page type-written resume required for every contestant*

The team will require the following equipment and material to complete the competition. The Technical Committee provides most of the required equipment and materials, but the team must bring certain items.

Robotics and Automation Technical Committee provides:
Speed-controlled conveyor
Proximity sensor
Photoelectric sensor
Microswitches
Template storage area
Templates, portable and overlays
Plastic and metal blocks
Task assignment
Notebooks
Power strips and Extension cords
Scorbot-ER 4u robot with controller, power supply, cables and Scorbase Pro software

Contest Site provides:
3' x 6' Tables
Chairs (2 at each table)
110 VAC at each workstation

Teams provide:

Computer System (Pentium 4 800MHz or higher, 2GB RAM, 2GB free space on hard drive, USB port, CD-ROM drive, Windows XP or Windows 7 with administrative access.)

Each Team's computer MUST have a MINIMUM of 2GB of RAM available.

Also, each team MUST download and install the SCORBASE software before they arrive at the contest site. It can be downloaded from the following link: Scorbase_Robocell_V5335.zip

When installing the software, please select "SCORBASE for the ER-4u"."

Hookup wire 20-24 awg (3 different colors, 100 feet total)

- Wire Cutters
- Wire Strippers
- Flat Head Screw driver
- Phillips Screw Driver
- Needle nose pliers
- Safety Glasses with clear lens
- Tie wraps
- Pencils (2)
- Straight edge
- Templates allowed for Flow Chart
- Multimeter

Clothing Requirement

Work pants
Work shoes
SkillsUSA- T-Shirt
No cell phones or pagers allowed at contest site
Safety glasses (clear lens)
No hanging jewelry
Long hair MUST BE tied back

MOBILE ROBOTICS CONTEST

Mobile Robotics Team Guide found here:

http://www.skillsusa.org/wp-content/uploads/2017/01/2017-Mobile-Robotics-Contest-011117-Final-Rev-C.pdf

Massachusetts State Competition Information:

Clothing Requirements

Work pants (No Jeans)
Safety glasses (clear lens)
Work shoes
No hanging jewelry
SkillsUSA- T-Shirt
Long hair MUST BE tied back
No cell phones or pagers allowed at contest site

Teams should arrive to competition with robots **already constructed**.
One page type-written resume required for every contestant

Team Provided Components

1. Engineering Notebook
2. Safety Glasses and Work Gloves
3. Dremel (or similar) rotary tool with appropriate attachments
4. Drill and drill bits
5. Imperial Allen Wrench Set
6. Aircraft metal snippers for cutting Vex material
7. A WiFi enabled laptop equipped with licensed Vex programming software and suitable presentation software.
8. Power strip and extension cord
9. Calculator (standard or scientific)
10. Tape measure or ruler
11. Hammer
12. Philips and standard screwdriver
13. Metal file
14. Pliers
15. Graph Paper
16. Pens and Pencils
17. Electrical Tape
18. Clear Tape
19. Markers
20. Scissors
21. Replacement batteries and chargers-
    a. ALL 7.2V ROBOT BATTERIES MUST BE MADE BY VEX ROBOTICS
    b. 9V and AAA can be manufactured by any vendor
22. Grease or graphite (NON-AEROSOL)
23. Vex competition switch simulator and Vex programming cable
24. Empty small containers or part bins
25. Tap Set

THESE ARE THE ONLY ITEMS ALLOWED IN THE COMPETITION AREA DURING COMPETITIONS.

URBAN SEARCH & RESCUE (ROBO RESCUE) CONTEST

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: updates.skillsusa.org.

ELIGIBILITY (TEAM OF 2)
Open to active SkillsUSA members enrolled in programs with robotics, engineering, automation, manufacturing, electronics, and emergency services as the occupational objectives.

CLOTHING REQUIREMENT
For men: Official SkillsUSA white polo shirt with black dress slacks, black socks and black leather shoes.
For women: Official SkillsUSA white polo shirt with black dress slacks or knee-length skirt, black socks or black or skin-tone seamless hose and black leather dress shoes
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.

EQUIPMENT AND MATERIALS
1. Supplied by technical committee:
a. Challenge field: 12' x 12' simulated neighborhood
b. Field elements: components of a residential area and obstacles to traverse, open, and manipulate in order to locate and dispose of simulated explosive ordnances
c. A command center area equipped with a table, two chairs, and a video monitor
d. General workspace for each team designated as a "pit" area, including one table, two chairs, and access to a 120-volt electrical supply

2. Supplied by the contestant:
a. Safety equipment — eye protection is required at all times in the contest area
b. Laptop computer (optional) for technical presentation purposes only. Laptop not used for robot operation.
c. Fully assembled, tested, and operational ordnance disposal robot conforming to the guidelines and parts restrictions listed in this document (see "Urban Search and Rescue Challenge Kit Bill of Materials" in Appendix)
d. Team number affixed to robot
e. Presentation software for oral presentation to judges (optional)
f. CAD/CAM software for blueprint design (optional)
g. Completed Engineering Notebook
Note: Technical drawing/blueprint of robot drive chassis must be included in notebook
h. Pens, pencils and paper
i. Tools:
1. Allen wrench set (English)
2. Clamping vise
3. Metal tin snips
4. Power strip
5. Calculator
6. Tape measure
7. Hammer
8. Metal file
9. Flat-head and Phillips-head screwdrivers
10. Wire strippers (one set)
11. Wire cutters/snips (one set)
12. Roll of electrical tape
13. 4" nylon wire ties (25 pack)
14. Multimeter
15. Multinut pliers
16. Metal-cutting hacksaw (manual)
17. Cordless drill with charger
18. Set of standard drill bits
19. Pliers (needle nose or regular)
20. Set of box wrenches
j. 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. Check the Contest Guidelines and/or the updates page on the SkillsUSA website at updates.skillsusa.org.

SCOPE OF THE CONTEST

Knowledge Performance

This portion of the contest will entail a knowledge exam. Competencies evaluated on the written portion will be general principles used in robotics. There will be a 30-minute limit for the written test.

Skill Performance

A two-member team builds its robot and arm mechanism prior to the competition and then, during the competition, remotely operates the robot, which should be capable of locating, grabbing and moving simulated ordnances on the challenge course. This remotely operated vehicle (ROV) must traverse the course, locate the ordnances, secure them and properly dispose of them. Each team will perform one round of competition consisting of a time limited mission to locate and dispose of two ordnances.

Contest Guidelines

1. Teams must be comprised of two students. If a team member is absent, the lone team member will be allowed to compete, but a 30-point penalty will be applied to the overall score.
2. Each robot must have an identification label with the team's number listed.
3. Each technical presentation should last for 12 minutes and should be primarily oral, with supporting materials of printed or electronic media and physical models. Penalty for presentation over/under 12 minutes will be assessed. Students should be prepared to discuss the roles they played, their robot design, and the functions of their robot. (*Note*: The technical committee will not provide projector, screen or other presentation equipment.)
4. Team members should design, build, and experiment with robots constructed for the SkillsUSA Urban Search and Rescue Challenge. Other approved parts and raw materials may also be used. The prebuilt robot and arm mechanism will be required to grab, hold and move objects during the mission.
5. The robot's arm mechanism must be capable of opening a standard-size mailbox and reaching *into the box up to five inches*, grabbing the simulated ordnance and pulling it out of the mailbox. The arm mechanism must be capable of reaching items positioned *up to nine inches above the floor.*
6. Part Restrictions:
   a. Limit of four continuous rotation DC motors or servo motors per competing robot
   b. Limit of four standard-scale proportional servo motors or equivalent
   c. Maximum of one transmitter (up to six channels)
   d. Maximum of two DC motor controllers
   e. One rechargeable battery pack for drivetrain motor power, maximum 12V
   f. One battery pack for receiver and/or servo power, maximum 6V
   g. One battery operated wireless camera, maximum 9V. This single camera must be mounted to the robot
   h. Robot must fit into an 18" x 18" x 18" space when starting but may be expanded to a larger size during the challenge.
   i. Any other battery-operated components installed on the robot must use one of the above-listed power sources
   j. Each team must provide in its engineering notebook a technical drawing or blueprint detailing the construction of its robot drive chassis and additional drawings/blueprints for its associated arm mechanism.
   k. The robot and arm mechanism must be assembled by the team prior to the competition.
   l. All robots will be required to pass inspection by judges to determine if all of the parts used are from the list of allowed parts.
   m. Robots will not be allowed to compete with an arm mechanism that poses

danger to competitors or could potentially cause damage to the challenge field.

n. Accuracy of the robot's construction matching the blueprint will be considered during scoring. All follow proper safety procedures and use eye protection at all times in the contest area.
p. Teams may bring a laptop computer and blueprint drawings of their robot and arm mechanism designs to the contest building area. A description of the assembly process is required to be within the Engineering Notebook. The designs also may be printed or hand drawn copies.

Engineering Notebook
The Engineering Notebook will be submitted for judging at check-in. Required elements include:
1. Overall neat and professional appearance
2. A complete bill of materials for the robot drive chassis and arm mechanism designed and used in competition at the event
3. A detailed description of the assembly process for the robot drive chassis and arm mechanism
4. Illustrations, sketches, photos, and written log entries accurately documenting the design and prototyping iterations detailing the evolution and logical progression of the robot's design
5. Explanations noting how testing was conducted, why modifications were made, skills learned, and how robot might further be modified to improve performance and achieve desired objectives if no restrictions were in place

Challenge Course Rules
Note: Team members must wear safety glasses at all times while they are in the competition area! All teams will be expected to adhere to the official rules for the Urban Search & Rescue Challenge competition and compete in a positive and professional manner.
1. *New in 2017*: A time trial must be completed prior to the timed mission. The ordnance will be placed in a specified location on the course and the route traveled to retrieve and dispose of the ordnance must be identical for all teams. This route will be determined by the event chairperson. At the competition site, the simulated necessary parts and tools for construction must be brought to the competition site. Team members will be required to

residential area will be provided and maintained by the technical committee. During competition, the course will be reset to its original state before each team competes. The ordnance pieces will be placed before each team competes.
3. The Urban Search and Rescue Challenge event will consist of a time trial and a single timed mission for each team. During the mission, the robot has up to six minutes to navigate the course, complete the challenge and return to home base.
4. Each team will operate its mobile robot and navigate by line of sight and by the video feed from an onboard wireless camera. The command center will be within view of the playing field, and team members must remain seated at the command center while competing.
5. An official will be in charge of placing the team's robot at the starting point on the challenge course. (Reminder: The robot must fit within an 18" x 18" x 18" space at the start but may expand to any size after it enters the neighborhood.)
6. After a "clear" signal is issued by a challenge course official, time will begin as soon as the robot moves. Following completion of a mission, time will stop upon successful return to home base following disposal of two simulated explosive ordnances or expiration of the six-minute time limit.
7. Robots should remain on roads and paths within the neighborhood to avoid property damage. Shortcuts are not allowed and will result in penalties.
8. The mission will last a maximum of six minutes.
9. Team members are not allowed to touch their robot at any time while a mission is in progress, unless instructed to do so by a judge.

10. The containment unit where the ordnance pieces are placed by the robot after removal from the course must remain outside the field of play and as close to the starting position as possible. Any team that deliberately moves the containment unit from its starting point will be penalized.
11. An official will award points for the team's mission based on the official contest rubric.

Penalties
1. A deduction will be assessed each time an ordnance is dropped.
2. Each time the robot stalls or becomes hung up and has to be freed by officials, a deduction will be assessed. An official will free a robot at the request of a team member.
3. A deduction will be assessed whenever a robot goes off the designated path within the neighborhood or outside of the course boundaries. Shortcuts are not allowed.

Approved Materials
Approved robot materials and quantity to be used:

Urban Search and Rescue Challenge Bill of Materials
4" wheel 6
16T sprocket 4
24T Sprocket 6
32T Sprocket 2
Chain w/Link 1
Chain Breaker 1
Gear Hub Spacer 10
100 mm Axle 12
DC Drive Motor 2
Motor Mount 2
Axle Set Collar 12
288 mm Channel 6
160 mm Channel 4
96 mm Channel 4
32 mm Channel 6
L Bracket 6
Flat Building Plate 2
Flat Bracket 6
2" Standoff Post 12
1" Standoff Post 12
180 Servo 2
Single Servo Bracket 2
Bronze Bushing 24
Axle Hub 12
Motor Hub 2
1/8" Axle Spacer 24
3/8" Axle Spacer 6
Motor Power Cable 2
On/Off Switch 1
12-volt Battery 1
Motor Speed Controller 1
1/2 SHCS 200
Hex Keys 1
Zip Tie Pack 20
Kep Nut 200
3/8" BHCS 50
NiMH Battery Charger 1
4ch R/C Controller 1
288 mm Flat Bar 4
Servo Pivot w/Bearing 1
80T Gear 2
40T Gear 2
Electronics Deck 1
Green Bin 1
Lid 1
Top Card 1
Side Label Sticker 1
Camera Pack
900 MHz Camera 1
9-volt Adaptor 1
Camera Mount 1
Control System
2.4 GHz 6ch R/C Controller 1
Additional parts and raw materials legal for use:
1. Other robot parts similar in size and design to Urban Search and Rescue Challenge materials
2. One 12" x 24" sheet of acrylic plastic, maximum thickness of 0.250"
3. One 12" x 24" sheet of aluminum, maximum thickness of .080"
4. 3-D-printed parts of original design
5. Raw material used for fabricating custom robot part

Standards and Competencies

RR 1.0 — Demonstrate knowledge in safety rules and practices

1.1 Maintain a safe work area
1.2 Demonstrate safe and correct use of hand tools
1.3 Follow safety rules during robotic assembly
1.4 Demonstrate safe operation of robotic equipment in tele-op mode

RR 2.0 — Produce technical documentation

2.1 Keep an engineering notebook detailing design discussions, design details, design changes and troubleshooting notes
2.2 Develop a technical drawing of the final competitive robot design
2.3 Produce a bill of materials for the final of the drive train of the robot
4.4 Demonstrate and explain the functioning of the package delivery system of the robot

RR 5.0 — Demonstrate understanding of robot electrical systems

5.1 Identify electrical/electronic systems within the final robot design
5.2 Demonstrate and explain the function of electrical control systems of the final robot design

RR 6.0 — Demonstrate tele-op skills and real-time problem solving

6.1 Demonstrate ability to safely and quickly maneuver the robot through rough and unknown terrain via tele-op
6.2 Demonstrate ability to overcome challenging areas of course terrain via tele-op
6.3 Demonstrate ability to locate objects through remote robotic manipulation via tele-op
6.4 Demonstrate ability to transport objects via tele-op

RR 7.0 — Demonstrate ability to present and explain technical information

7.1 Demonstrate correct and effective use of oral, written and technological tools to present technical information regarding engineering design process, robot construction and robotic tele-op control
7.2 Demonstrate knowledge of design choices and implementations during the engineering design process
7.3 Demonstrate knowledge of team processes and individual team member competitive robot design
2.4 Explain design choices and changes made within the engineering design process

RR 3.0 — Demonstrate knowledge of robot parts

3.1 Identify mechanical and delectrical parts of the final robot design
3.2 Demonstrate understanding of the mechanical and electrical functions of the parts of the final robot design

RR 4.0 — Demonstrate understanding of robot mechanical systems

4.1 Identify mechanical systems within the final robot design
4.2 Demonstrate the function of control systems of the final robot design
4.3 Demonstrate and explain the functioning contributions

Committee Identified Academic Skills

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

Math Skills

• Use scientific notation
• Use fractions in contextual applications to solve problems
• Students use percentages in contextual applications to solve problems.
• Students solve problems through the contextual application of proportions.
• Students measure time, distance, and angles within contextual problem-solving applications.
• Students simplify numeric expressions.
• Students use comparisons, predictions, and inferences in analyzing data to solve a problem.
• Students use modeling techniques to solve problems.
• Students write and solve algebraic expressions in one or more variables.

• Students use derived measurements to solve problems.

Science Skills

• Plan and conduct a scientific investigation
• Apply knowledge of heat, sound, mechanical, chemical, electrical and light energy within contextual problem-solving applications
• Apply knowledge of kinetic and potential energy in contextual applications to solve problems

• Use knowledge of Newton's laws of motion
• Use knowledge of simple and compound machines to solve problems
• Apply knowledge of gears, motors and linkages to solve problems within contextual applications
• Use formulas to solve problems
• Apply scientific knowledge within the engineering design process
• Apply knowledge of force and motion concepts in contextual problem solving
• Use knowledge of mechanical, chemical and electrical energy
• Use knowledge of temperature scales, heat and heat transfer
• Use knowledge of work, force, mechanical advantage, efficiency and power
• Use knowledge of principles of electricity and magnetism
• Use knowledge of static electricity, current electricity and circuits
• Use knowledge of signal frequencies and baud rate
• Use knowledge of communication modes (full/half duplex)

Engineering Skills

• Apply the engineering design process to solve a contextual problem
• Apply the principles of circuit analysis
• Apply the elements of circuit design and construction
• Understand and apply energy and power types, sources, and conversions
• Apply methods of maintaining, servicing, troubleshooting and repairing systems
• Apply skills and techniques related to building, repairing, and maintaining robotic mechanisms
• Apply techniques and technologies related to the production of technical drawings
• Apply basic mechanical skills related to robotic design, construction, and troubleshooting
• Understand and apply knowledge of safety during construction and use of equipment
• Apply problem-solving and engineering design processes to solve unforeseen challenges

Language Arts Skills

• Make effective use of spoken, written, and visual communications with team members within the problem-solving and engineering-design processes
• Make effective use of spoken, written, and visual communications with a variety of audiences
• Use appropriate information resources within the research-and-design process
• Organize and synthesize information for use in research-and-design processes and in written and oral presentations
• Demonstrate the ability to correctly read and interpret rules, instructions, and specifications within the robotic challenge
• Demonstrate the proper use of language, both written and verbal
• Demonstrate knowledge of appropriate reference materials

Connections to National Standards

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

Math Standards

• Algebra
• Data analysis and probability
• Problem solving
• Reasoning and proof
• Communication
• Connections
• Representation

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

Science Standards

• Understands relationships among organisms and their physical environment
• Understands the sources and properties of energy

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• Understands forces and motion
• Understands the nature of scientific inquiry

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

Language Arts Standards

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

and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes
• Students use spoken, written and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion and the exchange of information)
Source: IRA/NCTE Standards for the English Language Arts. To view the standards, visit: www.ncte.org/standards.

Massachusetts State Competition Requirements:

No Pneumatics or air compressors allowed

Teams should arrive to competition with robots **already constructed**.

One page type-written resume required for every contestant

Clothing Requirement

Work pants (NO JEANS)
Work shoes
SkillsUSA- T-Shirt
No cell phones or pagers allowed at contest site
Safety glasses (clear lens)
No hanging jewelry
Long hair MUST BE tied back

HRI – Humanoid Robotics (Demonstration)

Purpose

Robotics is quickly integrating into modern day life, creating a safer and more productive world. It is widely believed that robots will eventually take over dangerous jobs that are currently done by humans. Therefore, companies will be looking for talented individuals who can program these robots. This event will evaluate students' programming knowledge using a humanoid robotics platform. A team of two contestants will be evaluated on their ability to develop, document, execute, and deploy a computer program for a humanoid robot to complete a series of tasks. This challenge will recognize outstanding students for excellence and professionalism in the fields of Human-Robot Interaction (HRI), Computer Science, Computer Programming, and Robotics.

Clothing Requirements

For men: Official SkillsUSA state tee-shirt with black pants, black socks, and black leather shoes.

For women: Official SkillsUSA state tee-shirt shirt with black pants, black socks or black or clear seamless hose, and black leather shoes.

Eligibility

Open to active SkillsUSA members enrolled in programs with computer programming as the occupational objective. And or associated with Human-Robot Interaction, Computer Science, Computer programming, or Robotics

Equipment and Materials

1. Supplied by the technical committee:
2. 110 volt outlet
3. Timer
4. Access to the Choreographe programming software
5. Items robot will retrieve
6. **NAO robot (to be used during competition for those schools that do not currently own a NAO Robot)**
7. Supplied by the contestant:
    1. A PC laptop computer and charger that meets the following minimum specifications:
        a. 2.1 GHz CPU (dual or quad-core recommended)
        b. 3GB of free disk space
        c. 2GM RAM
        d. Graphics Open GL capable graphics adapter with at least 1GB of RAM is required (recent nVidia or ATI graphics adapter is recommended)
        e. OS Windows 7 or 8.1 or XP
        f. USB port
        g. Admin rights (or admin password) to load competition software on laptop
    2. Notecards, if desired
    3. 25 ft. tape measure
    4. Pencils
    5. Calculator
    6. All competitors must create a one-page resume and submit a hard copy to the technical committee chair at orientation. Failure to do so will result in a 10-point penalty.
    7. You can bring your own NAO robot , it will be inspected before use.

Scope of the Contest

The contest will consist of the following parts:

A. Knowledge Performance
   1. A reflective paper
   2. A presentation
   3. An exam
B. Skill Performance
   1. On Site Programming Challenge

Each component of the event is described below.

Knowledge Performance

Notebook:

The purpose of the notebook is for the contestants to write a reflective paper that outlines an innovative way a humanoid robot could be implemented into everyday life in the future. The paper should contain ideas and recommendations on how others could implement the idea as well as repercussions an implementation such as this may cause.

The notebook must be brought to the contestant orientation meeting. The format listed below must be followed:

A. The notebook must be an official SkillsUSA three-ring binder (two inch #101-2410 from e-group)
B. The notebook must not contain more than 20 pages (40 surfaces)
   Note: A surface is only that material which can be pasted or glued to a notebook page. Any pockets, foldout pages, individual materials contained in plastic sleeves, multiples pages, or similar features will count as additional surfaces and will be subject to penalty, except where specifically stated otherwise. Pages must be plasticized without affecting the scores.
C. The notebook should be organized in the following format:
   1. Title Page – The title page must include the name of the project, chapter name, school address, and the names of the presenting team members.
   2. Introduction – The introduction should provide a brief and concise description or overview of your idea in one page or less.
   3. Table of Contents – The table of contents should indicate page numbers. All surfaces should be numbered, and the information should be organized according to the following appropriate sections:
      a. Section I (Objectives) – Objectives should be specific
      b. Section II (Impact) – Describe what you feel the impact would be after integration of a humanoid robot into everyday human life.
      c. Section III (Benefits) – Explain how your ideas would benefit society.
      d. Section IV (Repercussions) – Explain any repercussions your idea would have on society, if any.

Presentation:

The purpose of the presentation is to provide the judges with an understanding of your idea, how the idea was decided upon, and thoughts or recommendations of how others could implement your idea.

A. Presentation is a minimum of 5-7 minutes and a maximum of 10 minutes in length.
B. Time Penalty: 5 points are deducted for each 30 seconds (or fraction) under the five minutes or for each 30 seconds (or fraction) over the ten minutes. Time is started when the presentation begins.
C. Both members of the team must participate in the presentation.

Witten Test

The exam will consist of basic geometry and Choreographe programming knowledge

Skill Performance

On Site Programming:
Using NAO Choreographe software, students will program the NAO robot to perform a series of tasks provided to them by the technical team. The programming component will test students' skills using a variety of robotic sensors, such as movement, vision, and color recognition.

Below is a list of some potential tasks the robot will need to complete:

A. The robot will need to demonstrate controlled balance, locate an object, pick it up, and bring it back to the starting point.
B. The robot will need to identify a specific object out of three (based on recognition, color, or Naomark), retrieve the specified object, move it to a shelf, and return to the starting point.
C. The robot will need to identify three unique objects, put a specified object in a trash can, move one specified object to a shelf, bring one specified object back to a specified location, place that object in the outstretched hand of one of the contestants, and then return to the starting point.

In each of the scenarios above, the robot will need to explain to the audience what it is doing while it is performing each task.

Prior to programming the NAO robot to complete a given assignment, the contestants will develop a written flow chart that outlines the program flow. Once the flow chart has been approved by the committee, the contestants will then continue with programming their robot for the assigned task.

Standards and Competencies:
HRI 1.0 – Engineering Notebook
HRI 1.1- Create a professional notebook that follows guidelines and effectively expresses the idea of the team.

HRI 2.0 – Presentation Development
HRI 2.1- Develop an effective presentation that provides the judges with a detailed overview of the teams' idea.

HRI 3.0 – Oral Presentation Skills
HRI 3.1- Each team will conduct a three- to five-minute professional presentation to the judges on how the team plans to accomplish the project. Each team member is required to have an active part in the presentation.

HRI 4.0 – Professional Attire
HRI 4.1 - Wear appropriate clothing for the SkillsUSA national contest.

HRI 5.0 - Time Management
HRI 5.1 - Manage time allotted to complete the assigned tasks. Time allotment per station or task assigned by the Technical Committee at time of orientation.

HRI 6.0 – Software Development
HRI 6.1 - Develop a program to optimize movement of a robot based on criteria given by the technical team in order to complete a task.

HRI 7.0 – Programming Knowledge
HRI 7.1 - Basic programming knowledge

Committee Identified Academic Skills
The technical committee has identified that the following academic skills are embedded in this contest.

Math Skills:
1.0 Shapes and Figures
1.1 Uses synthetic geometric models to solve distance problems
1.2 Uses analytic methods to solve distance problems

2.0 Problem-Solving

2.1 Engages in problem finding situations in the community

2.2 Solves real-world problems involving three-dimensional measures

3.0 Units of Measurement

3.1 Understands the concept of unit analysis

Science Skills:

1.0 Models

1.1 Knows that criteria are used to evaluate a model's representation of the real world. Use knowledge of simple machines, compound machines, powered vehicles, rockets and restraining devices

2.0 Science, technology, and society

2.1 Knows that throughout history, diverse cultures have developed scientific ideas through technology

2.2 Knows that throughout history, diverse cultures have solved human problems through technology

2.3 Knows that human adaptation has allowed for humans to overcome "limits to growth" imposed by physical systems

2.4 Knows that societal challenges inspire questions for scientific research

Language Arts Skills:

A. Provide information in oral presentations.
B. Demonstrate use of verbal communication skills (word choice, pitch, feeling, tone, and voice).
C. Demonstrate use of nonverbal communication skills (eye contact, posture, and gestures) using interviewing techniques to gain information.

Contest Location/Setup Information

1. Approximately 1400 square ft. is needed to run the event for 12 teams. The flooring in the competition area (12' x 12') needs to be smooth (polished) concrete or a commercial tile.
2. For the initial contest: 1-3" wide roll of blue painters tape, 25' tape measures, engineering notebooks, graph paper for each team, one calculator per team, and pencils.
3. For the robot performance finals: a 12' X 12' arena needs to be marked off on the floor using blue painters tape.
4. Each student work station (1-6' table per team) will need an 110V electrical drop.
5. Two electrical drops need to be run for the judges' use.
6. The time needed for the event is eight hours.

Humanoid Robotics

Items Evaluated	Possible Points	1	2	3	4	5
Engineering Notebook						
Overall Appearance	50					
Depth of Documentation	50					
Presentation						
Oral Presentation	40					
Support Materials	30					
Team Participation	30					
NAO Task Performance						
Task #1 - Object Retrieval	150					
Task #2 - Object Selection	250					
Task #3 - Object Sorting and Retrieval	350					
Math and Written Exam	**50**					
Resume Penalty	**-10**					
Clothing Penalty	**-50**					
Time Over/Under	**-20**					
Total Possible Points	**1000**					

One page type-written resume required for every contestant

Clothing Requirement

Work pants (NO JEANS)
Work shoes
SkillsUSA- T-Shirt
No cell phones or pagers allowed at contest site
Safety glasses (clear lens)
No hanging jewelry
Long hair MUST BE tied back

TRANSPORTATION SERVICE TRADES A

EVENTS:

AUTOMOTIVE REFINISHING
COLLISION REPAIR TECHNOLOGY
POWER EQUIPMENT TECHNOLOGY

SERIES DIRECTOR:

Jeremy Guay

CONTACT INFORMATION:
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COLLISION REPAIR CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

The competition requires contestants to do metal work-welding including MIG welding, structural damage analysis and alignment of body and frame, estimation of damaged automobile, plastic identification and repairs. Contestants are judged on the overall appearance of the finished product, speed, and proper safety practices. Contestants will be required to remain in their testing area until judges direct them to their next assigned contest area.

Contestants can be and will be disqualified immediately for any communication with people outside of the contest perimeters or any use of cell phones or other prohibited electronic devices. Contestants will be disqualified immediately for any safety violation that the judges/Series Director/Board Member deems places the contestant and or others in danger of injury.

CONTESTANTS 1-3

8:30 AM	Briefing
8:40 AM	Metalworking
10:00 AM	Job Interview
10:50 PM	Frame Analysis
11:35 PM	Holding Room
12:05/12:35 PM	Lunch
12:40 PM	Estimating
2:00 PM	MIG Welding
2:50 PM	Plastic Repair on damaged bumper cover
4:05 PM	**DONE**

CONTESTANTS 4-6

8:30 AM	Briefing
8:40 AM	Plastic Repair on damaged bumper cover
10:00 AM	Job Interview
11:05 AM	Frame Analysis
11:55 AM	Holding Room
12:05/12:35 PM	Lunch
12:40 PM	MIG Welding
1:30 PM	Estimating
2:50 PM	Metalworking
4:05 PM	**DONE**

CONTESTANTS 7-9

8:30 AM	Briefing
8:40 am	Frame Analysis
10:00 am	MIG Welding
10:50 am	Plastic Repair on damaged bumper cover
12:00 pm	Holding Rom
12:05/12:35 PM	Lunch
12:40 pm	Metalworking
2:05 PM	Estimating
3:20 PM	Job Interview
4:05 PM	**DONE**

CONTETSANTS 10-12

8:30 AM Briefing
8:40 AM MIG Welding
9:30 AM Estimating
10:50 AM Metalworking
12:05/12:35 PM Lunch
12:40 PM Plastic Repair on damaged bumper cover
2:05 PM Job Interview
2:55 PM Frame Analysis
4:05 PM **DONE**

Metalworking	1 hr. 15 mins. (Have fender with E coat only/no paint) One dent to be worked out without the use of filler, one dent to be repaired using body filler. Prepare panel (fender) for primer).
Judge is looking for:	Safety, proper use of tools, metal straightening, use of filler material, techniques and overall final appearance. .Student to prepare panel/fender for primer
Frame/Body Analysis	1 hr. *Also tags maybe provided to hang onto suspension & steering components listed on a sheet. The following gauges may be used Tram & self centering gauges*
Judge is looking for:	Safety, suspension/steering parts I.D., steering geometry and alignment, use of frame/body manuals, body measurements, describe damage on paper, draw out what you see
MIG Welding	45 minutes plug weld, stitch weld, continuous weld, (vertical weld and flat weld) Welders that will most likely be used are Miller 175, and 160's
Judge is looking for:	Proper use of PPD's , safety procedures are followed, good penetration of weld, proper set up and tuning of the machine.
Damage Analysis/Estimate	1 hr. 15 mins. Student should be able to identify five types of vehicle damage, & prepare a hand written estimate
Judge is looking for:	Vehicle I.D., estimate written legibly, list of parts in logical sequence, time involved in repairing, parts and material cost, estimate completed final figure
Job interview	15 minutes (with portfolio – Students name and school should not be present on their portfolio binder)
Judge is looking for:	the ability to communicate with the judge, good eye contact, fill out a job application legibly
Plastic Repair	1 ½ hrs. *(Add bumper tab repair to the contest, and written test on bumpers).*Repair damaged bumper cover 3M plastic Repair system
Judge is looking for	Safety, surface preparation, featheredging, block sanding, overall final appearance, and general knowledge test

Clothing Requirements: ***All work clothes will be free of insignias/labels.*** ***A clothing penalty will be deducted from your total score for failure to comply with dress code. Dickie like work pants*** **(dark blue) Jeans will not be considered work pants** ***Leather work boots only (No sneakers or shoes allowed)***
Dickie like work shirt (dark blue) Safety glasses (w/side shields) Prescription glasses can be used only if they are equipped with side shields. If not, they must be covered with goggles

Tool Requirements:

Tool requirements:

1. Hammers
2. Dollies
3. Sanding blocks
4. Board sanders
5. (2) #2 pencils
6. Adjustable wrench
7. Metal file
8. Cheese file
9. Small grinder 3-5 "
10. Grinding disc.
11. DA sander
12. DA sanding paper assortment
13. Sanding paper for shaping polyester body filler (example 80, 180, 320 grit)
14. Welding hood
15. Welding gloves
16. Welding vest
17. Calculator
18. Measure for English/metric fractions
19. Tru-flat air nipple's (12-225, 12-335)
20. Safety glasses with side shields
21. Face shield
22. 2 scuff pads each Grey and Red
23. Dust respirator
24. One page type- written resume along with their portfolio **(students name and school should not be present on their resume)**
25. Welding respirator
26. Air blow gun
27. Any assorted tools that the contestant may feel they could need

Clothing Requirements:
All work clothes will be free of insignias/labels. A 5% clothing penalty will be deducted or possible disqualification for failure to comply with the dress code.

- Dickie like work pants (dark blue). **Jeans will not be considered work pants.**
- Leather work boots only **(No sneakers or shoes allowed)**
- Dickie like work shirt (dark blue)
- Safety glasses (w/side shields) Prescription glasses can be used only if they are equipped with side shields. If not, they must be covered with goggles.

POWER EQUIPMENT TECHNOLOGY CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

The competitions purpose is to evaluate each contestant's preparation for employment and recognize outstanding students for excellence and professionalism in engine and equipment diagnostics, overhaul and repair of both liquid and air-cooled engines. It will also evaluate the ability to troubleshoot and possibly overhaul the power train components of a piece of powered equipment and/or machinery.

Contestants can be and will be disqualified immediately for any communication with people outside of the contest perimeters

Power Equipment Technology										
Contestant Number	Items Evaluated	Written Test	Parts I.D.	Customer Service Job Quote	Failure Analysis	Precision Measurements	4-cycle service	Interview/Portfolio	Explain how a 2-cycle air cooled engine and a 4-cycle engine operate	Clothing penalty
	Possible Points	100	75	100	150	150	150	100	175	0 or -50

Equipment and Materials:

1. Supplied by the technical committee:
    a. All necessary engines, engine parts, work stations, test stands, power equipment, gasoline, oil and all basic hand tools as well as necessary specialty tools.
    b. Industry manuals, including service and repair instruction manuals.
2. Supplied by the contestant:
    a. All competitors must create a one-page typed resume to be turned in at the time of the contest orientation.
    b. Contestants must provide a portfolio **(without the school or contestants name)** at the time of the interview**. (Portfolios will be returned at the end of the contest).**

Clothing Requirements:

All work clothes will be free of insignias/labels. A 5% clothing penalty will be deducted from your total score for failure to comply with dress code.

Dickie like work pants (dark blue)
(Jeans will not be considered work pants)

Dickie like work shirt (light blue)

Leather work boots only
(Sneakers or shoes will not be allowed)

Safety glasses (w/side shields)

AUTOMOTIVE REFINISHING TECHNOLOGY CONTEST

The competition requires contestants to do metal work-welding including MIG welding, structural damage analysis and alignment of body and frame, estimation of damaged automobile, plastic identification and repairs. Contestants are judged on the overall appearance of the finished product, speed, and proper safety practices. Contestants will be required to remain in their testing area until judges direct them to their next assigned contest area.

Contestants can be and will be disqualified immediately for any communication with people outside of the contest perimeters or any use of cell phones or other prohibited electronic devices. Contestants will be disqualified immediately for any safety violation that the judges/Series Director/Board Member deems places the contestant and or others in danger of injury.

CONTESTANTS 1-3

8:30 AM Briefing
8:45 AM Estimating/Paint I.D.120
10:15 AM Tinting/Color matching including mixing
10:50 PM Buffing 40
11:30 PM Bagging of vehicle
11:30-12:00 Holding Room
12:00/12:30 PM **Lunch**
12:35 PM Bagging of vehicle
1:15 PM Interview
1:55 PM Prep. Entire panel for BC/CC
3:10 PM **DONE**

CONTESTANTS 4-6

8:30 AM Briefing
8:40 AM Prep. Entire panel for BC/CC
10:05 AM Buffing
10:45 PM Bagging of vehicle
11:25 Holding Room
12:00/12:30 PM **Lunch**
12:35 PM Interview
1:15 PM Tinting/Color matching including mixing
1:55 PM Estimating/Paint I.D.
3:10 PM **DONE**

CONTESTANTS 7-9

8:30 AM Briefing
8:40 AM Bagging of vehicle
9:25 AM Tinting/Color matching including mixing
10:10 AM Prep. Entire panel for BC/CC
11:35/12:00 Holding Room
12:00/12:30 PM **Lunch**
12:30 PM Estimating/Paint I.D.
1:55 PM Interview
2:45 PM Buffing
3:25 PM **DONE**

CONTETSANTS 10-12

8:30 AM Briefing
8:40 AM Tinting/Color matching including mixing
9:25 AM Bagging of vehicle
10:10 AM Estimating/Paint I.D.
11:35/12:00 Holding Room
12:00/12:30 Pm **Lunch**
12:30 PM Prep. Entire panel for BC/CC
1:55 PM Buffing
2:45 PM Interview
3:25 PM **DONE**

Prep. Entire panel for BC/CC 1.25 hrs. Perform proper sanding techniques and final sand for sealer application in relationship to tasks.
Judge is looking for: *Safety, proper use of tools, metal straightening, use of filler material, techniques and overall final appearance.*
NOTE *Should student prepare panel/fender for primer*

Buffing 45 minutes *A painted panel to be colored sanded with appropriate sand paper for buffing. Using the correct material to achieve a high gloss finish.*
Judge is looking for: *Safety, proper use of tools/equipment, and supplies. Overall finished product*

Masking of vehicle 45 minutes. Appropriate masking techniques for refinishing fender and blending into adjacent panel application in relationship to tasks.
Judge is looking for: *Safety, mask and protecting of panels no to be refinished, mask door jambs and other aperture panels.*

Paint test/Interview 45 minutes. ASE style test, with portfolio students name and school should not be present on their portfolio
Judge is looking for: *the ability to communicate with the judge, good eye contact, fill out job application legibly*

Tinting/Color matching 45 minutes. Complete color assessment in relationship to the task. Selecting the correct toner for color within the formula.
Judge is looking for: *ability to determine adjustment that must be made, ability to select the correct toner, ability to follow set directions.*

Estimating/Paint ID 1.25 hrs. Proper vehicle ID, estimate written legibly, list parts in logical sequence, time involved repairing, parts material cost, estimate completed final figure. Locate and document vehicle manufacturer's paint code application in relationship to tasks. Identify the code using paint manufacturer manuals.
Judge is looking for *Safety, Vehicle I.D., estimate written legibly, list of parts in logical sequence, time involved in repairing, parts and material cost, estimate completed final figure. Accurate location of paint ID and ability to look code up in manufacturer's manual.*

Clothing Requirements: ***All work clothes will be free of insignias/labels. A 5% clothing penalty will be deducted from your total score for failure to comply with dress code. Dickie like work pants (dark blue)(***Jeans will not be considered work pants) ***Dickie like work shirt (light blue) Leather work boots only (Sneakers or shoes will not be allowed) Safety glasses (w/side shields)***

Tool requirements:

- DA sander
- Spray guns – Be sure the air nipples will work with host site equipment
- Paint suite
- Painting respirator
- Hook-it and sticky back DA pads
- ½-7/8 wrench set
- Adjustable wrench
- Air pressure gauge (spray gun)
- DA pad wrench
- Sanding blocks
- Cartridge-type respirator(charcoal-filtered)
- Calculator
- One page type- written resume along with their portfolios **(students name and school should not be present on their resume)**
- Air blow gun
- Any assorted tools that the contestant may feel they could need. Contestants will not be able to borrow any tools from the hosting school.
- Buffers will be provided but contestants can bring their own.
- Students will be required to wear fresh air supplied hoods for the painting portion of the contest. These will be provided.

TRANSPORTATION SERVICE TRADES B

EVENTS:

AUTOMOTIVE SERVICE TECHNOLOGY
DIESEL EQUIPMENT TECHNOLOGY
MARINE SERVICE TECHNOLOGY

SERIES DIRECTOR:

SAMUEL PORAZZO
SCOTT BOYDSTON

CONTACT INFORMATION:

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AUTOMOTIVE SERVICE TECHNOLOGY CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Contestants will rotate among multiple test stations. Each station will be timed and one rest station is built into the rotation. Test stations may include the following:

- HVAC
- Engine Performance
- Charging Systems
- Environment, Health and Safety
- Electrical Circuit Diagnosis
- Electronic Service Information
- Steering and Suspension
- Information Systems – ChiltonPro
- Professionalism – Job Interview Skills
- Brake Service
- Engine Mechanical

Tool Requirements:

- One-page type-written resume
- 2 - #2 Lead pencils with eraser
- All other tools and equipment will be supplied.

Clothing Requirements:

Work pants ***(NO Jeans)***
Work boots ***(NO sneakers)***
Safety glasses
SkillsUSA Massachusetts Tee Shirt
NO cell phones
NO Jewelry

DIESEL EQUIPMENT TECHNOLOGY CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Contestants will be tested on multiple work stations, which may include the following:

- Shop Skills
- Drive Train
- Precision Measurement
- Electronic Diagnosis
- Safety
- Hydraulic Components
- Machine Inspection
- Electric Power Generation
- On Highway
- Live Engine Test

Tool Requirements:

- One-page type-written resume
- 2 - #2 Lead pencils with eraser
- All other tools and equipment will be supplied.

Clothing Requirements:

Work pants ***(NO Jeans)***
Work boots ***(NO sneakers)***
Safety glasses
SkillsUSA Massachusetts Tee Shirt
NO cell phones
NO Jewelry

MARINE SERVICE TECHNOLOGY CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

Contestants will be tested on multiple work stations, which may include the following:

- Fuel Systems
- Outboard Valve Adjustment
- Remote Control Key Switch Tests
- Control Harness
- Engine Component Identification
- Precision Measuring
- Service Manual Navigation
- Electrical Board Set up and Testing
- Principles of Navigation
- Capacitor Discard Ignition Systems
- Two and Four Cycle Engine Theory of Operation
- Sterndrive Shim Calculations
- Lower Unit Service.

Tool Requirements:

- One-page type-written resume
- 2 - #2 Lead pencils with eraser
- All other tools and equipment will be supplied.

Clothing Requirements:

Work pants ***(NO Jeans)***
Work boots ***(NO sneakers)***
Safety glasses
SkillsUSA Massachusetts Tee Shirt
NO cell phones
NO Jewelry

DISPLAY EVENTS & TECHSPO

EVENTS:

CHAPTER DISPLAY
CRIMINAL JUSTICE
PROMOTIONAL BULLETIN BOARD
TECHSPO

SERIES DIRECTOR:

STEPHEN P. CONDON

CONTACT INFORMATION:

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CRIMINAL JUSTICE CONTEST

REQUIREMENTS AND SCOPE OF CONTEST

The competitions purpose is to evaluate each contestant's preparation for employment and recognize outstanding students for excellence and professionalism in Criminal Justice.

This new demonstration contest will follow National Contest rules as written in the 2012-2013 SkillsUSA Championships Technical Standards, EXCEPT for CLOTHING REQUIREMENTS. State competition clothing requirements are as follows:

Clothing Requirements:
All work clothes will be free of insignias/labels. A 5% clothing penalty will be deducted from your total score for failure to comply with dress code.

Dickie like work pants (dark blue) - Jeans will not be considered work pants
Dickie like work shirt (light blue)
Leather work boots only - Sneakers or shoes will not be allowed
Safety glasses (w/side shields)
And all other equipment specified in National Standards under Supplied By Contestant.

TECHSPO
REGISTRATION FORM

CHAPTER*(SCHOOL)*NAME: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP CODE: _____

SCHOOL PHONE NUMBER: _____

CHAPTER ADVISOR NAME: _____

STUDENT'S NAME ENTERING THE PROJECT: _____

STUDENT'S SHOP *(CAREER)* AREA: _____

STUDENT'S GRADE LEVEL: _____

IS THIS STUDENT REGISTERED TO PARTICIPATE IN THE STATE CONFERENCE?

YES ☐ NO ☐

IF YES, WHERE ARE THEY PARTICIPATING IN: _____

IF NO, WHO WILL SET-UP/TAKE DOWN THE EXHIBIT ENTRY: _____

PROJECT DESCRIPTION:

_____

_____

_____

_____

ENTRY NUMBER: _____

(This number will be inserted by MA SkillsUSA)

This form should accompany the project to the judging area. Techspo entries are paid for using the State Conference Summary Sheet.

This form does not need to be sent to the state office prior to the time of Display

TECHSPO
GRADING SHEET

Judge: _____

Project Number: _____

PROJECT	POINTS	GE'S	POINTS
EDUCATIONAL VALUE/RELEVANCE	1-10		
DESIGN/FORMAT	1-10		
CREATIVITY/ORIGINALITY	1-10		
QUALITY OF WORKMANSHIP	1-10		
OVERALL PRESENTATION	1-10		
SUBTOTAL	**50**		
CLOTHING PENALTY (*minus 0-5% of Total Points*)			
TOTAL			

Refer to the 2017-2018 Technical Standards for Information, Standards and rules for Display Events

2017-2018 SkillsUSA Championships Technical Standards

available on-line to all professional members

OCCUPATIONALLY RELATED EVENTS

EVENTS:

COMMUNITY SERVICE
CUSTOMER SERVICE
ENTREPRENEURSHIP
RELATED TECHNICAL MATH

SERIES DIRECTOR:

KATHY CONOLE

CONTACT INFORMATION:

PHONE: 978.692.3943
EMAIL: kconolemava@aol.com

Refer to the 2017-2018 Technical Standards for information on all Occupationally Related Contests

ENTREPRENEURSHIP – SPECIAL INFORMATION

- **Business Plans must be sent to the State SkillsUSA office POST MARKED no later than April 7, 2017. Six copies (without binders) required.**

  Mail to:
  Entrepreneurship Contest
  SkillsUSA Massachusetts
  250 Foundry Street
  South Easton, MA 02375

  AND

  E-mail one copy to: kward@maskillsusa.org (.pdf format)

- **A computer, LCD projector and screen WILL BE PROVIDED for presentations. Teams should bring their presentation on a flash drive.**

COMMUNITY SERVICE – SPECIAL INFORMATION

It is very important to note: ALL Community Service teams must bring their completed notebooks TO THE BRIEFING MEETING on Thursday night, April 27, 2017. The notebooks will be sent for judging after the briefing meeting.

2017-2018 SkillsUSA Championships Technical Standards
available on-line to all professional members

INDIVIDUAL LEADERSHIP EVENTS

EVENTS:

EMPLOYMENT APPLICATION PROCESS
EXTEMPORANEOUS SPEECH
JOB INTERVIEW
PREPARED SPEECH

SERIES DIRECTOR:

Gayle Begley

CONTACT INFORMATION:

PUTNAM VOCATIONAL TECHNICAL ACADEMY
1300 STATE STREET
SPRINGFIELD, MA 01119
PHONE: 413.787.6937
EMAIL: begleyg@springfieldpublicschools.com

Refer to the 2017-2018 Technical Standards for information on all Individual Leadership Contests

2017-2018 SkillsUSA Championships Technical Standards

available on-line to all professional members

TEAM LEADERSHIP EVENTS

EVENTS:

CHAPTER BUSINESS PROCEDURE
OPENING & CLOSING CEREMONIES
CAREER PATHWAYS SHOWCASE (Formerly Tech Prep Showcase)
COMMUNITY ACTION PROJECT (Demonstration)

SERIES DIRECTOR:

BRIAN BENTLEY

CONTACT INFORMATION:

EMAIL: briansbentley@comcast.net

COMMUNITY ACTION PROJECT CONTEST

Purpose:

To evaluate an individual contestant's or team to two contestants' ability to develop, execute, document and present a Project that was completed in their Community or School Community which provides a benefit or learning experience to the Community or School.

Clothing Requirement:

For men: Official red blazer, windbreaker-style jacket or sweater; 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, windbreaker-style jacket or sweater; black dress slacks or skirt with 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 and black shoes. Or as updated by SkillsUSA
Note: Contestants must wear their official contest clothing to the contest orientation meeting.

Eligibility:

The contest is available to students who are classified under the provisions of Public Law 105-17, Individuals with Disabilities Education Act, 1997.

An individual or a team of two students from the same school may organize the Community Action Project. The students may enlist the assistance of others at their school in completing the Project, including other shops or chapters within the school. However, only the individual student or team who developed the Project must present the results at the competition. The students need not necessarily be from the same shop, just the same school. If a team, both members must be actively involved in the presentation.

Knowledge Performance:

There is no written knowledge (PDP) test required in this contest.

Equipment and Materials:

1. Supplied by the technical committee
    a) Judges
    b) 110 volt outlet and one extension cord
    c) Timer and Time cards

2. Supplied by the contestant:
    a) Notebook documenting project.
    b) Presentation media, such as posters, Laptop computer, LCD projector or other visual equipment as necessary for the presentation. Recommendation is to have a backup presentation should technical problems occur when using a computer.
    c) One-page, typewritten resume for student(s) involved in the presentation. Plus where required, such as at the Nationals, by SkillsUSA, the on-line submission of the resume is required.

Scope of the Contest:

The contest will require contestant(s) to develop and execute a Project in their Community or School Community. Documentation or recording of the events will be maintained in a Notebook to be presented at the competition. The presentation shall last a minimum of 5 minutes and a maximum of 10 minutes, explaining the purpose and scope of the Project, how the Project was developed, methods used, implementation and execution of the project, and results.

The contest will consist of two parts:

1. At Home School:

Project will be completed prior to competition.

a) Determine the need or desire for a Project
b) Scope or outline of the Project
c) Develop the timeline of the Project
d) Implement the Project
e) Anticipate results of the Project or impact to the Community
f) Include participation of others involved; school peers, school administration, community leaders, or other support people.
g) Evaluate final results of the Project by the student or team.

Notebook:

Purpose of the notebook is to document and capture the chronological events in the completion of the Project. The Notebook will be judged at the contest. The Notebook may be of a design by the student or team. However, the format listed below must be followed.

a) Title Page – Name of the Project
b) Table of Contents
c) Section 1: Methodology for determining the project to be completed. How did you decide on the Project, who did you enlist at this stage, what was the anticipated goal of the Project?
d) Section 2: How was the Project organized? What was the timeline? Who was responsible for which steps? How did you determine this?
e) Section 3: Implementation schedule, specific steps to be followed.
f) Section 4: Result of the Project. Impact of the Project on the School or Community, who benefited from the Project.
g) Section 5: Recognition of Publicity gained. Was this recognition in any local papers, other media, school assembly, local community group, letters of appreciation, etc?
h) Section 6: Your evaluation of the Project and recommendation. Do you feel the Project was successful or not? If yes, why? If not, why?

2. Presentation:

Purpose of the presentation is to provide the judges with an understanding of the Project, how the project was decided or determined, how it was completed, results achieved, and thoughts or recommendations for others to do a similar project.

a) Presentation shall be a minimum of 5 minutes and a maximum of 10 minutes in length.
b) Time Penalty: 5 points will be deducted for each 30 seconds (or fraction thereof) under the five minutes or for each 30 seconds (or fraction thereof) over the ten minutes. Time will be started with the presentation begins. The timekeeper will signal the presenter at 5 minutes, eight minutes, and ten minutes.
c) Presentation can use any type of media, such as PowerPoint, slides, transparencies, posters, etc. Be creative to express to the judges your presentation. All presentation materials must be produced by the students involved in the project whether they are presenting or not.
d) If team of 2 students, both must participate in the presentation.

Standards and Competencies:

- CAP 1.0 – Create a community project.
  - Determine the need/desire of the project
  - Develop the project
  - Obtain assistance in completing the project
  - Execute the project

- CAP 2.0 – Create a professional notebook that follows guidelines and effectively expresses Project.
  - Design a title page that lists the name of the project
  - Construct a table of contents and organize subjects in order and list with page numbers
  - Write clear and effective objectives and scope of Project
  - Describe impact of the Project on the school or community
  - Secure any publicity, including newspaper articles, letters of commendation from appropriate sources
  - Clearly evaluate and recommend (or not) your Project.

- CAP 3.0 – Design and prepare an effective presentation that provides the judges with an overview of the Project, including the results achieved
  - Prepare a five to ten minute presentation of the Project
  - Organize the demonstration in a logical and coherent manner
  - Incorporate at least one of the following visual aids in the presentation: posters, flip chart, overhead transparencies, 35mm slide presentation and/or PowerPoint or other computer presentation.

- CAP 4.0 – Deliver the presentation in a professional manner meeting the standards outlined by the technical committee.
    - Explain the Project through the use of media you have chosen
    - Demonstrate an effective and pleasing delivery style
    - Effectively use verbal illustrations and examples
    - Make a formal and effective introduction to the presentation that clearly identifies the scope of the Project.
    - Use a variety of verbal techniques including: modulation of voice, changing volume, varied inflection, modifying tempo and verbal enthusiasm
    - Demonstrate poise and self-control while presenting
    - Demonstrate good platform development and personal confidence
    - Tie organizational elements together with an effective closing
    - Complete the Presentation within the time limits set by the contest requirements

- CAP 5.0 – Wear appropriate clothing per SkillsUSA National requirements.
    - Display clothing the meets national standards for competition
    - Demonstrate good grooming in dress and person hygiene.

Committee Identified Academic Skills:

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

Math Skills

Potential calculations based on providing results of the project, cost analysis, etc.

Science Skills

Green Project or other project related to the environment within the community.

Social Studies

Community Demographics, generational impact, historical impact based on the type of project.

Language Arts Skills

Provide information in oral presentations
Demonstrate use of verbal communication skills: word choice, pitch, feeling, tone and voice
Demonstrate use of nonverbal communication skills: eye contact, posture and gestures using interviewing techniques to gain information
Organize and synthesize information for use in written and oral presentations
Use print, electronic databases and online resources to access information in books and articles
Demonstrate narrative writing
Demonstrate information writing
Edit writing for correct grammar, capitalization, punctuation, spelling, sentence structure and paragraphing

Connections to National Standards

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

Math Standards

- None Identified
- Source: NCTM Principals and Standards for School

Mathematics: To view high school standard, visit: standards.nctm.org/document/chapter7/index.htm. Select "Standards" from menu.

Science Standards

- Understands the nature of scientific inquiry
- Understands the scientific enterprise. Source: McREL compendium of national science standards. To view and search the compendium, visit: www.mcrel.org/standards-benchmarks/.

Language Arts Standards

- Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes
- Students employ a wide range of strategies as they write. They use different writing process elements appropriately to communicate with different audiences and for different purposes
- Students apply knowledge of language structure, language conventions (e.g., spelling and punctuation), media techniques, figurative language and genre to create, critique, and discuss print and nonprint texts
- Students conduct research on issues and interests by generating ideas and questions and by posing problems. They gather, evaluate and synthesize data from a variety of sources (e.g., print and nonprint texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience
- Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge
- Students participate as knowledgeable, reflective, creative and critical members of a variety of literacy communities
- Students use spoken, written and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information)

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

Rating Sheet

Initial proposed rating sheet is attached. Notebook documenting the project will be worth 400 points with the presentation worth 600 points.

Community Action Project – Limited Demonstration Contest

Notebook

Title Page	5
Table of Contents	5
Section 1	80
Section 2	80
Section 3	50
Section 4	80
Section 5	50
Section 6	50
TOTAL	**400**

Presentation

Introduction, involvement of members	75
Project Scope, Creativity	100
Organization	75
Steps/Timeline	75
Results	75
Closing	50
Organization of Presentation	100
Presence, Demeanor, Self-Confidence	50
TOTAL	**600**

Refer to the 2017-2018 Technical Standards for information on all other Team Leadership Contests

- *SPECIAL NOTE: Chapter Business Procedure, Clarification:* Knowledge Performance: The written exam consists of 100 multiple-choice questions found in the National Association of Parliamentarians Exam which is based on Roberts Rules of Order Newly Revised *11th Edition will be administered at the same time as Employability Skills Testing.*

- *SPECIAL NOTE: For Career Pathways Showcase and Community Action Project please refer to 2017-2018 Technical Standards.*

- Employability Testing will take place in Zachary's restaurant (start time 7:30am, on a rolling basis according to presentation time.)

- The set-up time for Career Pathways Showcase is 8:00am to 9:00am in the presentation room assigned.

- *SPECIAL NOTE: The Opening & Closing Ceremonies Contest will allow adult observers only and contestants will be prohibited from watching other teams.*

2017-2018 SkillsUSA Championships Technical Standards

available on-line to all professional members

DEMONSTRATION SKILL EVENTS

EVENTS:

ACTION SKILLS
AMERICAN SPIRIT AWARD
JOB SKILL DEMONSTRATION A
JOB SKILL DEMONSTRATION (OPEN)
OUTSTANDING CHAPTER
OCCUPATIONAL HEALTH & SAFETY

SERIES DIRECTOR:

KRISTINE SMITH

CONTACT INFORMATION:

GREATER LAWRENCE TECHNICAL HIGH SCHOOL
57 River Road
Andover, MA 01810
PHONE: 978.686.0194
EMAIL: ksmith@glts.net

Refer to the 2017-2018 Technical Standards for information on all Demonstration Skill Contests

2017-2018 SkillsUSA Championships Technical Standards

available on-line to all professional members

Massachusetts
SkillsUSA Championships

CONTEST LOCATIONS LIST

SkillsUSA Massachusetts
Event/Activity Locations Roster
2017 SkillsUSA Championships Events

Series: Building Trades A	Series Director: Noel Lamothe	Address: Tantasqua Regional HS 319 Brookfield Road Fiskdale, MA 01518	Telephone: 508/347-3045 x5130 Email: lamothen@tantasqua.org
Board Member Liaison: Brian Kelly			
Event	**Location**	**Event Manager**	**Briefing Room**
Masonry	Upton Highway Barn	Lawrence Bradley	Best Western Hotel Princess Ballroom
Industrial Motor Controls	Room 209C Written 208C	Steve Sullivan Assisted by: Dave Barboza	Best Western Hotel Princess Ballroom
Electrical Construction Wiring	Room 210C Holding 208C	Tom Donahue	Best Western Hotel Princess Ballroom
Major Appliance Technology	Plumbing Shop 070C Holding 081C	Jeffrey Thompson	Best Western Hotel Princess Ballroom
Series: Building Trades B	**Series Director: Ray Mahon**	**Address: Bay Path RVTHS 57 Old Muggett Hill Rd. Charlton, MA 01507**	**Telephone: 508/248-5971 Email: rmahon@baypath.net**
Board Member Liaison: Brian Kelly			
Event	**Location**	**Event Manager**	**Briefing Room**
Cabinetmaking	Carpentry Shop – Room 330C Holding Room 340C	Christopher Ward	Best Western Hotel Princess Ballroom
Carpentry	Old Gym 750B Holding Room 340C	Andy McCullough	Best Western Hotel Princess Ballroom
Plumbing	Room 080C Holding Room 071C	Shawn Sandgren	Best Western Hotel Princess Ballroom
Heating, Ventilation, Air Conditioning & Refrigeration	HVAC Shop – Room 110D – 111D	Chris Faucher	Best Western Hotel Princess Ballroom

SkillsUSA Massachusetts
Event/Activity Locations Roster
2017 SkillsUSA Championships Events

Series: **TeamWorks**	**Series Director:** **Ken Pacheco**	**Address:** **Chief Operations Officer** **Facilities & Operations** **Fall River Public Schools** **360 Elsbree Street** **Fall River, MA 02721**	**Email:** **kenpacheco@fallriverschools.org**
Board Member Liaison: John Brochu with help from John Rodominick			
Event	**Location**	**Event Manager**	**Briefing Room**
TeamWorks	Best Western Hotel Tent at the Trade Center **All Teams required to check-in to hotel on Wednesday, April 26, 2017 and attend industry-sponsored dinner Wednesday night.*	Chris Gallagher	Best Western Hotel Princess Ballroom
Series: **Commercial** **Design A**	**Series Director:** **Becky Larson**	**Address:** **Bay Path RVTHS** **57 Old Muggett Hill Rd.** **Charlton, MA 01507**	**Telephone:** **508/248-5971** **Email:** **rlarson@baypath.net**
Board Member Liaison: John Brochu			
Event	**Location**	**Event Manager**	**Briefing Room**
Advertising Design	Graphics Computer Lab – Room 051B	Don Goldman	Best Western Hotel Duchess Room
Photography	521-522	Bill Chenaille	Best Western Hotel Duchess Room
Digital Cinema Production	Room 526 Editing Room - 525	Tom Williams	Best Western Hotel Duchess Room

SkillsUSA Massachusetts
Event/Activity Locations Roster
2017 SkillsUSA Championships Events

Series: **Commercial** **Design B**	**Series Director:** **Mark Lyons**	**Address:** **3HTi, LLC**	**Telephone:** **Office: 617/431-2680** **Cell: 978/846-1194** **E-Mail:** **mlyons@3HTi.com**
Board Member Liaison: John Brochu			
Event	**Location**	**Event Manager**	**Briefing Room**
Additive Manufacturing Technology	Rooms TBA	Dave Kempski	Best Western Hotel Corporate Room
3D Visualization & Animation Technology	Rooms 524A & 527A	Ed Hull	Best Western Hotel Corporate Room
Architectural Drafting	Drafting Shop – Room 160D	Samantha Squailia	Best Western Hotel Corporate Room
Technical Drafting	Drafting Shop – Room 165D	Ed Gebo	Best Western Hotel Corporate Room
Series: **Commercial** **Design C**	**Series Director:** **Rick Allain**	**Address:** **Joseph P. Keefe Technical HS** **750 Winter Street** **Framingham, MA 01702**	**Telephone:** **508/416-2100 x478** **E-Mail:** **rallain@jpkeefehs.org**
Board Member Liaison: John Brochu			
Event	**Location**	**Event Manager**	**Briefing Room**
Graphic Communications	J.P. Keefe Technical HS - Graphic Communications Shop	Doug Sturgis	Best Western Hotel Duchess Room
Graphic Imaging Sublimation	J.P. Keefe Technical HS - Graphic Communications Shop	Steve Lutch	Best Western Hotel Duchess Room
Painting & Design Technology	J.P. Keefe Technical HS	John Hughes	Best Western Hotel Duchess Room
Screen Print Technology	J.P. Keefe Technical HS - Graphic Communications Shop	Ray Chaulk	Best Western Hotel Duchess Room

SkillsUSA Massachusetts
Event/Activity Locations Roster
2017 SkillsUSA Championships Events

Series: Health Occupations A	Series Director: Tara Lane	Address: Tri County RVTHS 147 Pond St. Franklin, MA 02038	Telephone: 781/864-6537 Email: lane@tri-county.tc
Board Member Liaison: Michelle Roche			
Event	**Location**	**Event Manager**	**Briefing Room**
Practical Nursing	Competition Center	Justine Naper	Best Western Hotel Marlboro Room
Medical Assistant	Competition Center	Penny Hennessy	Best Western Hotel Marlboro Room
Nurse Assistant	Competition Center	Tricia Munger	Best Western Hotel Marlboro Room
Board Member Liaison: Jane Baldi			
Health Knowledge Bowl	Holiday Inn Marlboro	Dawn Mecartea | Danielle Lambert	Best Western Hotel Zachary's Restaurant
Series: Health Occupations B	**Series Director: Erin Roy**	**Address: 1327 Providence Road Whitinsville, MA 01588**	**Telephone: 774/280-1426 Email:** erinroy6912@gmail.com
Board Member Liaison: Michelle Roche			
Event	**Location**	**Event Manager**	**Briefing Room**
Basic Health Care	Health Services Shop – Room 310B	Holly Lafrance	Best Western Hotel Marlboro Room
Dental Assistant	Dental Lab – Room 670B	Tricia Wosney	Best Western Hotel Marlboro Room
First Aid/CPR	Competition Center	Chris Olsen	Best Western Hotel Marlboro Room

SkillsUSA Massachusetts
Event/Activity Locations Roster
2017 SkillsUSA Championships Events

Series: Health Occupations C	Series Director: Debbie Brightman	Address: Greater New Bedford RTHS 1121 Ashley Blvd. New Bedford, MA 02745	Telephone: 508/998-3321 Email: dbrightman@gnbvt.edu
Board Member Liaison: Michelle Roche			
Event	**Location**	**Event Manager**	**Briefing Room**
Early Childhood Education	Health Services Shop – Room 311B Holding Room 300B	Judith Thornhill | Pauline McCready	Best Western Hotel Marlboro Room
Health Occupations Professional Portfolio	Classroom 502 Holding Room 501	Grace Gwozdz	Best Western Hotel Marlboro Room
Medical Math	Classroom 512A	Paul Correira	Best Western Hotel Marlboro Room
Medical Terminology	Classroom 523A	Brenda Carvalho	Best Western Hotel Marlboro Room
Series: Technology Events	**Series Director: Jaylene DosSantos**	**Address: Tri County RVTHS 147 Pond St. Franklin, MA 02038**	**Telephone: 781/864-6537 Email: jayleneEAdosSantos@gmail.com**
Board Member Liaison: Karen Maguire			
Event	**Location**	**Event Manager**	**Briefing Room**
Electronics Technology	Electronics Shop – Room 643B - 641B	John Safkais	Best Western Hotel Southboro Room
Robotics & Automation Technology	Classrooms; 302B, 304B, 305B	Bryant Abbot	Best Western Hotel Southboro Room
Humanoid Robotics	Rooms 534B & 536B		Best Western Hotel Southboro Room
Mobile Robotics Technology	102D	Michael Ogilvy	Best Western Hotel Southboro Room
Urban Search & Rescue	200B	Chris Herget	Best Western Hotel Southboro Room

SkillsUSA Massachusetts
Event/Activity Locations Roster
2017 SkillsUSA Championships Events

Series: Metal Trades A	Series Director: James (Woody) Woodward	Address: Blackstone Valley RTHS 65 Pleasant Street Upton, MA 01568	Telephone: 508/529-7758 X2130 Email: jwoodwar@valleytech.k12.ma.us
Board Member Liaison: Karen Maguire			
Event	**Location**	**Event Manager**	**Briefing Room**
Automated Manufacturing	Facilities 180D	Mark O'Brien	Best Western Hotel Northboro Room
CNC Technician	Machine Shop Room - M130D	Michael Pasciuto	Best Western Hotel Northboro Room
CNC Milling	Room 131D	William Weir	Best Western Hotel Northboro Room
CNC Turning	139D	Scott Brooks	Best Western Hotel Northboro Room
Sheet Metal	Metals Shop – Room 150D	Kendall Sprague	Best Western Hotel Northboro Room
Welding	Metals Shop – Room 150D	Scott Houle	Best Western Hotel Northboro Room
Series: Metal Trades B	**Series Director: Matthew Connors**	**Address: Blackstone Valley RTHS 65 Pleasant Street Upton, MA 01568**	**Telephone: 508/529-7758 X2570 Email: mconnnors@valleytech.k12.ma.us**
Board Member Liaison: Karen Maguire			
Event	**Location**	**Event Manager**	**Briefing Room**
Engineering Technology	Room 620D Holding Room 640B	Meghan Abella-Bowen	Best Western Hotel Northboro Room
Mechatronics	221C	David Kempski	Best Western Hotel Northboro Room
Welding Sculpture	202B	James Tamulen	Best Western Hotel Northboro Room

SkillsUSA Massachusetts
Event/Activity Locations Roster
2017 SkillsUSA Championships Events

Series: Occupational Support Trades A	Series Director: Chris Hickman	Address: Bay Path RTHS 57 Old Muggett Hill Road Charlton, MA 01507	Telephone: 508/248-5971 Email: cjh.hickman@baypath.net
Board Member Liaison: David Papagni			
Event	**Location**	**Event Manager**	**Briefing Room**
Web Design	Computer Lab – Rooms 510 & 511	Steve King	Best Western Hotel Boxboro Room
Technical Computer Applications	Business Tech Shop – Room 401B	James Sullivan	Best Western Hotel Boxboro Room
Principles of Engineering Technology	308B – 309B	Katie Cunningham	Best Western Hotel Boxboro Room
Series: Occupational Support Trades B	**Series Director: Roger Bellerose**	**Address: Montachusett RTHS 1050 Westminster Street Fitchburg, MA 01420**	**Telephone: 978/345-9200 Email: bellerose-roger@montytech.net**
Board Member Liaison: David Papagni			
Event	**Location**	**Event Manager**	**Briefing Room**
Internetworking	IT Shop – Room 010B Holding Room 011B	Steve Ricciardi	Best Western Hotel Boxboro Room
Information Technology Service	IT Shop – Room 011B Holding Room 011B	Scott Soucy	Best Western Hotel Boxboro Room
Computer Programming	Computer Lab – Room 625D	Pat Toomey	Best Western Hotel Boxboro Room
Telecommunications Cabling	Computer Lab	Mauricio Cano-Arango	Best Western Hotel Boxboro Room

SkillsUSA Massachusetts
Event/Activity Locations Roster
2017 SkillsUSA Championships Events

Series: Service Occupations A	Series Director: Heather McCall	Address: Greater Lawrence RTHS 57 River Road Andover, MA 01810	Telephone: 978/686-0194 ext. 2016 Email: hmccall@glts.net
Board Member Liaison: Karen Maguire			
Event	**Location**	**Event Manager**	**Briefing Room**
Commercial Baking	Baking Kitchen - Room 143D Holding Room 019D	Gloria Cabral	Best Western Hotel Seminar Room
Culinary Arts	Culinary Kitchen – Room 140D Holding Room 019D	Richard McKinney	Best Western Hotel Seminar Room
Restaurant Service	3 Seasons Dining Room – Room 142D Holding Room 019D	Suzanne Bagnera	Best Western Hotel Seminar Room
Series: Service Occupations B	**Series Director: Donna McMahon Penny Estee**	**Address: Greater Lowell Tech. 250 Pawtucket Blvd. Tyngsboro, MA 01879**	**Telephone: 978/454-5411 Ext 6694 Email: PEstee@gltech.org**
Board Member Liaison: Michelle Roche			
Event	**Location**	**Event Manager**	**Briefing Room**
Cosmetology (Under 500 hrs.)	Cosmetology Shop - Room 631D	Sharon Clohesey	Best Western Hotel Salon A
Cosmetology (Over 500 hrs.)	Cosmetology Shop 637D	Gail Fabri-Schwartz	Best Western Hotel Salon A
Nail Care	Media Center – Room 710A Holding Room 111D	Bonny Schow	Best Western Hotel Salon A
Esthetics (Limited Demonstration)	Blackstone Valley 629D & Cosmetology Shop	John Taylor	Best Western Hotel Salon A

SkillsUSA Massachusetts
Event/Activity Locations Roster
2017 SkillsUSA Championships Events

Series: **Transportation** **Service Trades A**	**Series Directors:** **Jeremy Guay**	**Address:** **Bay Path RTHS** **57 Old Muggett Hill Rd.** **Charlton, MA 01507**	**Telephone:** **508/248-5971** **Email:** **jguay@baypath.net**
Board Member Liaison: John Brochu			
Event	**Location**	**Event Manager**	**Briefing Room**
Automotive Refinishing	Auto Body Shop – Rooms 220C Holding Room 223C	Ken Robbins	Best Western Hotel Salon B
Collision Repair Technology	Auto Body Shop – Rooms 220C Holding Room 223C	Jim Marshall	Best Western Hotel Salon B
Power Equipment Technology	QCC Area – Room 230C	Bill Hazeldine	Best Western Hotel Salon B
Series: **Transportation** **Service Trades B**	**Series Director:** **Scott Boydston/Sam Porazzo**	**Address:** **Universal Technical Institute** **39 North Circle Drive** **East Longmeadow, MA 01028**	**Cell Phone:** **774/571-1781** **Email: sboydston@uti.edu** **sporazzo@uti.edu**
Board Member Liaison: John Brochu			
Event	**Location**	**Event Manager**	**Briefing Room**
Auto Service Technology	Automotive Technology Shop – Room 230C Holding Room 231C	Peter Fallone	Best Western Hotel Salon B
Diesel Equipment Technology	Milton CAT	Ronald N. Barton	Best Western Hotel Salon B
Marine Service Technology	Outside Venue	Ted Chamberlin	Best Western Hotel Salon B

SkillsUSA Massachusetts
Event/Activity Locations Roster
2017 SkillsUSA Championships Events

Series: Display Events & Techspo	Series Director: Stephen Condon	Address: Greater New Bedford 1121 Ashely Blvd New Bedford, MA	Telephone: 508/998-3321 Email: scondon@gnbvt.edu
Board Member Liaisons: Brian Bentley/ Sheila Herbert			
Event	**Location**	**Event Manager**	**Briefing Room**
Criminal Justice	Multi-media shop / Outside Venue	Kellie Martin	Best Western Hotel Court Yard
Display	BW Hotel	Jim McCreedy	Best Western Hotel Court Yard
Promotional Bulletin Board Display	BW Hotel	Stephen Marciszyn	Best Western Hotel Court Yard
Techspo	BW Hotel Trade Center, Rear Section	Mindy Kempner	Best Western Hotel Court Yard
Series: Occupationally Related Events	**Series Director: Kathy Conole**	**Address: 4 Chamberlain Road Westford, MA 01886**	**Telephone: 978/692-3943 Email: kconolemava@aol.com**
Board Member Liaison: Linda Coté			
Event	**Location**	**Event Manager**	**Briefing Room**
Customer Service	Marriott Courtyard Boston 1 Room	Bonnie Carr & Kim McFarland	Best Western Hotel Salon C
Related Technical Math	Best Western – Zachary's	Stacey O'Keefe	Best Western Hotel Salon C
Community Service	Marriott Courtyard Worcester Room	June Renaghan	Best Western Hotel Salon C
Entrepreneurship	Marriott Courtyard Boston 2 Room	Rebecca McInnis	Best Western Hotel Salon C

SkillsUSA Massachusetts
Event/Activity Locations Roster
2017 SkillsUSA Championships Events

Series: Freshman Events	Series Director: Carol Hartnett	Address: Address: Blue Hills RTHS 800 Randolph Street Canton, MA 02021	Telephone: 781/828-5800 Email: chartnett@bluehills.org
Board Member Liaison: **Linda Coté**			
Event	**Location**	**Event Manager**	**Briefing Room**
Career Choice Commentary	Embassy Suites Hotel – Bentley Room	Richard Vickery	Best Western Hotel Salon C
Exploratory Project Demonstration	Embassy Suites Hotel – Clark Room	John Mare	Best Western Hotel Salon C
Sticker Design	Embassy Suites Hotel – Berklee Room	Edward Hartnett	Best Western Hotel Salon C
Series: Individual Leadership Events	**Series Director: Gayle Begley**	**Address: RL Putnam Technical Academy 1300 State Street Springfield, MA 01119**	**Telephone:413/748-6336 begleyg@springfieldpublicschools.org**
Board Member Liaison: Brian Bentley/Sheila Herbert			
Event	**Location**	**Event Manager**	**Briefing Room**
Employment Application Skills	Best Western Hotel Coat Room & Business Office	Sherry Anderson | Diane Swenson	Best Western Hotel Salon D
Extemporaneous Speech	Best Western Hotel Executive & Corporate	Diane Lyman	Best Western Hotel Salon D
Job Interview	Best Western Hotel Duchess & Draped Hallway	Martha McCarthy	Best Western Hotel Salon D
Prepared Speech	Best Western Hotel Boxboro	Jillian Gentle	Best Western Hotel Salon D

SkillsUSA Massachusetts
Event/Activity Locations Roster
2017 SkillsUSA Championships Events

Series: Team Leadership Events	Series Director: Brian Bentley	Address:	Telephone: 508/246-9815 Email: briansbentley@comcast.net
Board Member Liaison: Brian Bentley/Sheila Herbert			
Event	**Location**	**Event Manager**	**Briefing Room**
Chapter Business Procedure	Best Western Hotel Zachary's & Marlborough (after OCC.)	Stacey Pacheco	Best Western Hotel Trade Center - Rear Section
Community Action Project	Marlborough (before OCC & CBP)	Sherry Anderson | Diane Swenson	Best Western Hotel Trade Center - Rear Section
Open & Closing Ceremonies	Best Western Hotel Marlborough (after Community Action Project)	Stacey Pacheco	Best Western Hotel Trade Center - Rear Section
Career Pathways Showcase	Best Western Hotel Seminar & Salon A, Princess Ballroom *Set-up hour 8:00-9:00 a.m. Friday, April 28, 2017 (all presentation materials must be set up within this time frame)	Sheila Herbert | Glenn Koocher | Ruth Sundby	Best Western Hotel Trade Center - Rear Section
Series: Demonstration Skill Events	**Series Director: Kristine Smith**	**Address: Greater Lawrence RTHS 57 River Road Andover, MA**	**Telephone: 978/686-0194 Email: ksmith@glts.net**
Board Member Liaison: Brian Bentley/Sheila Herbert			
Event	**Location**	**Event Manager**	**Briefing Room**
American Spirit Award	Best Western Hotel Second Floor Conference Room	Joseph Martins	Best Western Hotel Salon E
Action Skills	Best Western Hotel Northboro	Lesa Breault-Gulbicki	Best Western Hotel Salon E
Job Skill Demonstration – A	Best Western Hotel Southboro	Robert Wilby	Best Western Hotel Salon E
Job Skill Demo – Open	Best Western Hotel	Robert Ciosek	Best Western Hotel

	Westboro		Salon E
Outstanding Chapter	Best Western Hotel Second Floor Conference Room	Dennis Abdow	Best Western Hotel Salon E
Occupational Health & Safety	Best Western Hotel Second Floor Conference Room	Dennis Abdow	Best Western Hotel Salon E
Holding Area For Demonstration Skill Events/Leadership Events	Best Western Hotel	Demonstration Skill Events and Leadership Events: All Star Restaurant	
Leadership Development Activities	**Mary-Theresa Tringale, Program Consultant**	**SkillsUSA Massachusetts 250 Foundry Street South Easton, MA 02375**	**Telephone: 508.230-1273 E-Mail: mtringale@maskillsusa.org**
Event	**Location**	**Event Manager**	**Briefing Room**
State Officer Candidates	Best Western Hotel Executive	Katelyn Fitzsimmons & State Officers	Best Western Hotel Executive Room
Delegate Assembly/ Voting Delegates	Best Western Hotel Trade Center	Mary-Theresa Tringale	Best Western Hotel Trade Center
Employability Testing [for Leadership, Demonstration Skill & Occupationally Related Events]	Best Western Hotel Zachary's Restaurant	Don Erickson	Zachary's Restaurant

SkillsUSA Massachusetts
Event/Activity Locations Roster
2017 SkillsUSA Championships Events

Host Sites for the SkillsUSA Championships

Blackstone Valley Technical HS / JP Keefe Technical HS
65 Pleasant Street/ 750 Winter Street
Upton, MA/Framingham, MA
Site Coordinator(s):
Tom Belland
Cyra Hathaway
Jim Brochu
Steve Grabowski
Michele S. Denise

Best Western Royal Plaza Hotel and Trade Center
181 Boston Post Road, West
Marlboro, MA 01752

Marlboro Courtyard by Marriott
75 Felton Street
Marlboro, MA 01752

Holiday Inn, Marlborough
265 Lakeside Avenue
Marlborough, MA 01752

Hampton Inn, Marlborough
277 Boston Post Road, West
Marlborough, MA 01752

Embassy Suites
123 Boston Post Road, West
Marlboro, MA 01752

SkillsUSA Massachusetts Staff

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Champions at Work

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SkillsUSA MASSACHUSETTS

SkillsUSA Massachusetts, in partnership with business and industry, provides opportunities for members to develop individually and improve teamwork, leadership and professional skills through education, training, service and competition.