



SERIES: BUILDING TRADES B CONTEST: CABINETMAKING

Online
Submission
by April 26

Online
Resumé
Submission

Series Director: RAY MAHON • (508) 769-5728 • mahonray@aol.com

Competition: Blackstone - Carpentry Rooms 330 & 342 with Event Manager: Christopher Ward

REQUIREMENTS AND SCOPE OF CONTEST

Advisors will be sent log-on information for the **Learning Management System**, which will be open on April 10.

Contestants must submit an electronic copy of their resumé to the **LMS** by April 26, by 5:00pm.

Contestants must submit an electronic copy of the Cabinetmaking Memorandum to the **LMS** by April 26, by 5:00pm.

Clothing Requirements: **avoid a clothing penalty**

Khaki work pants, as shown

Leather work boots

Safety glasses **MUST BE WORN AT ALL TIMES**

SkillsUSA Massachusetts T-Shirt, provided

Hard Hat, not required

NO cell phones or SmartWatches allowed

Safety: **avoid a safety violation or being removed from the contest**

NO loose/long hair (must be secured)

NO loose clothing

NO jewelry

No sneakers

Tool Requirements: **Contestants must submit online a one-page type-written resume, failure to do so will result in a 50-point penalty**

Contestant's Cabinetmaking Memorandum must be completed, signed and submitted to the LMS by April 26, see page 16 for form and details

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

Sliding T bevel

#1, #2, #3 Phillips screwdrivers

2 - pencils, sharpened

3/16, 1/4 slotted screwdrivers

Drill index 1/16 to 3/8 x 1/16

1/4" collet router

Biscuit joiner

1 pt. Wood glue

1 qt. Nontoxic contact cement

2 – contact cement application brushes

Nail Set

6" machinist scale

Phillips screwdriver bit set for drill

Edge banding trimmer

Power drill 3/8 or 1/2 (cordless or corded) and driver

Laminate tools, flat mill file, plastic laminate roller, electric trimmer, flush cutter, bevel cutter

Set of wood chisels (1/4", 3/8", 1/2", 3/4", 1") **(Chisels must be ground and sharpened)**

National Skills:

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: The event will include 10-12 of the following:

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

CABINETMAKING MEMORANDUM

THIS FORM MUST BE UPLOADED THROUGH THE LMS ALONG WITH THE CONTESTANT'S RESUME

TO: Cabinetmaking School Advisor
FROM: Cabinetmaking Event Manager
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
- Spindle Sander
- Band Saw
- Router
- Tennoner
- Edge Sander
- Other - Please List: _____
- Disc Sander
- Surface Planer
- Radial Arm Saw
- Chisel Mortiser
- Power Drill
- Drill Press
- Jointer
- Lathe
- Shaper
- Portable Hand Saws
- Hand Held Laminate Trimmer
- Stoke Sander

Signed (Student)

Signed (Advisor)

Signed (Administrator)

In order to be allowed to use the machinery in the contest area this document MUST be completed, with all required signatures, and submitted to the LMS BEFORE April 26, 2023



SERIES: BUILDING TRADES B CONTEST: CARPENTRY



Series Director: RAY MAHON • (508) 769-5728 • mahonray@aol.com
Competition: Blackstone - Old Gym Rooms 750 & 342 with Event Manager: Andrew McCullough

REQUIREMENTS AND SCOPE OF CONTEST

Advisors will be sent log-on information for the **Learning Management System**, which will be open on April 10. Contestants must submit an electronic copy of their resumé to the **LMS** by April 26, by 5:00pm.

Clothing Requirements: avoid a clothing penalty

Khaki work pants, as shown	Leather work boots	Safety glasses MUST BE WORN AT ALL TIMES
SkillsUSA Massachusetts T-Shirt, provided	Hard hat	Work gloves

Safety: avoid a safety violation or being removed from the contest

NO loose/long hair (must be secured)	NO loose clothing	NO jewelry	NO sneakers
NO cell phones or SmartWatches allowed			

Tool Requirements: Contestants must submit online a one-page type-written resume, failure to do so will result in a 50-point penalty

- | | | |
|---|--|--|
| 1 – 3’ or 4’ OSHA approved step ladder | 1 - Claw hammer, (16-22 oz. smooth face) | 2 - Sharpened pencils |
| 1 - Circular Saw | 1 - Tool box | 1 - Hand Saw |
| 1 - Block plane | 1 - Tool Belt | 1 - Cats paw/Nail claw |
| 1 - Flat Bar | 1 - Phillips and flathead screwdriver | 1 - Combination square or speed square |
| 1 - Utility knife with extra blades | 1 - Framing square (stair stops optional) | 1 - Chalk line |
| 1 - Set of wood chisels (1/4” -1”) | Nail sets (1/32, 2/32 and 3/32) | 1 - 24” or 30” level |
| 1 - Pair Straight Cutting Tin snips | 1 - Pair Left-Hand Cutting Tin snips | 1 - Pair Right-Hand Cutting Tin snips |
| 1 - Ruler or tape measure | 1 - Pair slip joint pliers | 1 - Keyhole saw |
| 1 - Combination wood rasp and file | 1 - 25’ Extension cord (UL approved, grounded) | |
| 1 - Cordless Drill and driver (bits will be provided) | | |

Purpose:

To evaluate each contestant’s preparation for employment and to recognize outstanding students for excellence and professionalism in the field of residential and commercial carpentry.

Eligibility:

Open to active SkillsUSA members enrolled in programs with carpentry as the occupational objective.

State Skills:

The contestants are required to complete a project specifically designed to test overall carpentry skills, which include framing, exterior trim, vinyl siding 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.



SERIES: BUILDING TRADES B CONTEST: HVAC & REFRIGERATION



Series Director: RAY MAHON • (508) 769-5728 • mahonray@aol.com
Competition: Blackstone - Room 110 with Event Manager: Tom Belland

REQUIREMENTS AND SCOPE OF CONTEST

Advisors will be sent log-on information for the **Learning Management System**, which will be open on April 10. Contestants must submit an electronic copy of their resumé to the **LMS** by April 26, by 5:00pm.

Clothing Requirements: avoid a clothing penalty

Khaki work pants, as shown	Work shoes	Safety glasses MUST BE WORN AT ALL TIMES
SkillsUSA Massachusetts T-Shirt, provided	Hard hat	NO cell phones or SmartWatches allowed

Safety: avoid a safety violation or being removed from the contest

NO loose/long hair (must be secured)	NO loose clothing	NO jewelry	NO sneakers
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Tool Requirements: Contestants must submit online a one-page type-written resume, failure to do so will result in a 50-point penalty

Pen/Pencil	Reg. & Phillips screwdriver	Pliers (Water Pump)	Wire Cutter
Flaring block and yoke	Flint spark lighter	Tubing Cutter	Gloves
Refrigeration service valve ratchet	Reamer	Lockout locks or tags	Wire Stripper
Simpson VOM MODEL 260 or similar	10" adjustable wrench	Hammer (Ball Peen)	Safety glasses
Refrigerant manifold gauge set	Temperature and Pressure Chart	Tubing bender 1/4" - 3/8"	Tape/ ruler
1/4, 3/8, 1/2, 5/8 swaging tools	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.

National Skills:

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:

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.



SERIES: BUILDING TRADES B CONTEST: PLUMBING



Series Director: RAY MAHON • (508) 769-5728 • mahonray@aol.com
Competition: Blackstone - Rooms 080 & 071 with Event Manager: Wayne Little

REQUIREMENTS AND SCOPE OF CONTEST

Advisors will be sent log-on information for the **Learning Management System**, which will be open on April 10. Contestants must submit an electronic copy of their resumé to the **LMS** by April 26, by 5:00pm.

Clothing Requirements: avoid a clothing penalty

Khaki work pants, as shown	Leather work boots	Hard Hat	Safety glasses
SkillsUSA Massachusetts T-Shirt, provided	Work gloves	NO cell phones or SmartWatches allowed	

Safety: avoid a safety violation or being removed from the contest

NO loose/long hair (must be secured)	NO loose clothing	NO jewelry	NO sneakers
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The Following Items Will Be Supplied by the Technical Committee:

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

Tool Requirements: Contestants must submit online a one-page type-written resume, failure to do so will result in a 50-point penalty

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	Huskey 3/8" Torque wrench
Pencils	Chalk	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 and Driver	Utility knife
Torch Striker	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.**

State Skills:

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.



SERIES: COMMERCIAL DESIGN C
CONTEST: PAINTING & DESIGN TECHNOLOGY



Series Director: RAY MAHON • (508) 769-5728 • mahonray@aol.com
 Competition: Blackstone - P&D Shop Room 060 with Event Manager: John Hughes

REQUIREMENTS AND SCOPE OF CONTEST

Advisors will be sent log-on information for the **Learning Management System**, which will be open on April 10. Contestants must submit an electronic copy of their resumé to the **LMS** by April 26, by 5:00pm.

Clothing Requirements: avoid a clothing penalty

Blue or black work pants, as shown Safety Shoes or Work Boots Safety glasses
 SkillsUSA Massachusetts T-Shirt, provided NO jeans
 NO cell phones or SmartWatches allowed

Safety: avoid a safety violation or being removed from the contest

NO loose/long hair (must be secured) NO loose clothing NO jewelry NO sneakers, open toes or Crocs

Tool Requirements: Contestants must submit online a one-page type-written resume, failure to do so will result in a 50-point penalty

Safety glasses or goggles	Dust mask	Can opener or 5-in-1
Sand paper	Sanding pad	Extension pole
Screwdriver	Putty knife	Drop cloths
Paint Pail	Rags	Hawk or mud pan
4" - 6" broad knife, and 10" joint knife or trowel	Brushes, 2-inch, & 1 ½-inch (optional)	Roller pan
Angled sash brushes (1 ½-inch, and 2-inch)	Razor knife with snap off blade	7" or 9" Roller handle
7" or 9" Roller covers (appropriate nap)	Level	Tape Measure
Smoothing brush or plastic smoother	4" - 6" Putty knife and or straight edge	A pencil
8GB Empty Flash Drive or larger		

State Skills:

Part 1: Prepare surfaces to receive finishes, and apply coatings and finishes to various surfaces.

Students will demonstrate proper use of tools and materials for protecting surfaces, and general preparations for substrates. They will demonstrate finish application methods using brushes and rollers on a demonstration module with wallboard and various architectural molding. Students are responsible for the proper clean-up of adjacent surfaces and the proper clean-up and disposal of paints.

Part 2: Apply drywall Finish to a level 2 standard.

Students will demonstrate their ability to apply a drywall Finish to a level 2 standard. All joints and interior angles shall have tape embedded in joint compound and shall be immediately wiped with a joint knife or trowel leaving a thin coating of joint compound over all joints and interior angles and exterior corners. Fastener heads and accessories shall be covered with a coat of joint compound. Surface shall be free of excess joint compound. Tool marks and ridges are acceptable. Joint compound applied over the body of the tape at the time of tape embedment shall be considered a separate coat of joint compound and shall satisfy the conditions of this level.

Part 3: Prepare and apply Wallcoverings to wall surface.

Students will set up a work area with wallcoverings and the tools used to install them. They will apply wallcoverings using proper techniques.

Part 4: Prepare and apply computer cut vinyl graphics to a sign surface according to scaled dimensions.

Students will read measurements on a scaled drawing, prepare vinyl letters for application, layout letters according to scaled measurements, and apply vinyl lettering to substrate.