

Skills Competition 2026 (Elementary) - Construction Challenge

(Team of 4)

GENERAL CONTEST INFORMATION

**** Spaces are first-come, first-served, and limited to 8 teams ****

If you have more than one team from your school, you will be required to have an "in-house" competition to pick your one best team.

Purpose of the Contest

Individual teams are asked to construct a to-scale model of a modest and affordable house for a well-deserving family based on the design they arrived with. Team construction projects will be judged on a number of criteria including creativity, quality, teamwork, and demonstration of basic practical and theoretical knowledge of Residential House Design and Construction. The following is what will be required of each team during this challenge:

- 1) Each team will arrive at the challenge with a small-scale house design on 11 x 17 (ledger) pieces of paper providing actual dimensions of what they will construct. House designs must include a floor plan, showing perimeter dimensions, and a front elevation drawing. Please label the drawing with dimensions for the scale model. Drawing should be properly proportioned. Please consider scale when designing projects with the team. The design details will be limited by the types, size, and quantity of materials provided for this project (see material list and tool list below).
- The house must have four exterior walls, a floor, and a roof.
- Maximum size of actual model shall be: 600mm x 900 mm
- At least one operable opening must be included in the house design (and final construction) intended for viewing the interior and assembly of the structure. The opening must also comply with the testing criteria described below.
- Special decorative design features are allowed, but teams must consider the time associated with actual construction and the ability of these features to withstand the testing process and criteria.

2) Each team will construct the model house considering all aspects of their design along with the tools and materials provided. (Deviation from original design may result in loss of points)

- Teams may choose to build the structure using a panelized approach or install individual components one at a time (stick framing).
- Teams will be judged based on the efficient use of materials and so, special attention must be paid to measuring and checking before cutting (no extra materials will be provided to replace errors)

Any questions can be directed to:

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Additional Information

- Information regarding rules, regulations, and conflict disputes:
<https://www.skillsontario.com/skills-ontario-competition#CompetitorRules>
- Information on competitor eligibility: <https://www.skillsontario.com/skills-ontario-competition#CompetitorEligibility>
- Visitor information such as parking, busses, and hotels:
<https://www.skillsontario.com/competition-visitors>
- Information on Closing Ceremonies, scholarships, bursaries, or other prizes for this contest: <https://www.skillsontario.com/closing-ceremony>
- Additional Safety from that listed in the scope: <https://www.skillsontario.com/skills-ontario-competition?na=302#Safety>

2. SKILLS AND KNOWLEDGE TO BE TESTED

- Design – The final design must show dimensions and provide the judges with an understanding of what is to be constructed. Final designs must consider the size and amount of rough materials provided.
- Conformance to Design – The final production must closely resemble the original design in both appearance and scale.

- Quality of Construction - All sides of the building must be closed to prevent entry of exterior elements (Openings in the designed envelope must include a means of securely closing the opening to prevent entry of wind and other elements). Note: Judges will use specific devices to test the integrity of the building.
- **Structural Integrity - The roof and wall structure must be constructed to withstand the weight of a 10 lb. bag of sand for a period of at least 2 minutes (representing snow load capability).**
- Safety – Teams will be judged based on their attention to safety throughout their project.
- Teamwork – Teams will be judged on their ability to work together and share different tasks.
- Creativity – Teams will be scored on their creative features incorporated into the final product.
- Quality, Efficiency and Process – Teams will be judged on the quality of their workmanship (closed joints, clean/straight cuts), their maximum use of materials, their understanding and application of a basic building process, and their ability to resolve conflicts or mistakes.
- Cleanliness – Teams will be judged on their ability to keep their worksite clean and organized throughout the competition.
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3. JUDGING CRITERIA

Criteria Possible Score

Design 10

Conformance to Design 20

Quality of Construction 30

Structural Integrity 5

Safety 10

Team Work 10

Creativity 5

Efficiency and Process 10

Total 100 (100%)

There can be no ties – if the score is even after the contest, the conformance to design component will be used as the tie breaker.

Rule infractions will result in appropriate mark deductions at the discretion of the Technical Committee. Any disqualifications will be reviewed by the Director of Competitions.

4. EQUIPMENT AND MATERIALS

Supplied by Competitor:

Competitors must bring their own toolboxes, containing only the following:

- Safety Glasses
- Work gloves for hand protection
- Measuring tapes
- One (1) Manual hand drill (optional)
- Two (2) pair of scissors (heavy duty shear type recommended for cardboard cutting)
- Two (2) small hammers
- Two (2) #6 (green) Robertson screw drivers
- One (1) junior construction stapler and staples
- Drill bits for pre-drilling holes
- Straight edge ruler
- Four (4) pencils
- 1 pad of 8 1/2 x 11 white paper
- Special finishing materials for their house that can be applied with tools and adhesive materials

provided above.

- No additional tools or adhesives may be supplied by team members.
- Utility knives are NOT permitted, please do not include a knife of any kind in the toolbox
- Refillable water bottle

Supplied by Competition:

Material & Tools (per team):

- 10 pieces of 3/4" x 1 1/2" x 8' boards (19mm x 38mm x 2438mm)
- One large sheet of cardboard approximately 48" x 96" (1.2 M x 2.4 M)
- One bottle of wood glue
- One roll of duct tape
- Box of 2" standard nails (not finish nails)
- Box of 30mm standard #6 wood screws
- One cordless power drill
- Hand Mitre Box and Saw (with 45- & 90-degree angles)
- 2 – quick clamps

Please Note: Tools and materials may change based on availability.

5. SAFETY

Safety is a priority at the Skills Ontario Competition. At the discretion of the Technical Committee, any competitor can be removed from the competition site for not having the proper safety equipment and/or not acting in a safe manner.

1. Eye protection will be provided by the event organizers
2. Jewelry such as rings, bracelets and necklaces or any items deemed unsafe by competition judges shall be removed. *
3. Proper shop attire is to be worn (no loose straps, baggy sleeves). Any attire that is deemed unsafe by competition judges will not be permitted. *