

Ontario Technological Skills Competition Elementary Challenges Information Package



A Guidebook for Teachers and Students

Skills Canada – Ontario invites you to come achieve new heights at the
Elementary Technology Activity Day
May 17, 2010

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The elementary technology challenges are offered in conjunction with the Ontario Technological Skills Competition, Skills Canada – Ontario’s cornerstone event. The elementary technology challenges encourage teamwork and friendly competition between school boards. Over 350 competitors from across the province in grades 4 – 8 are represented each year. In addition to promoting the technology programs offered in your schools, these challenges allow the competing students to apply their knowledge of math, science and technology in a fun way, while providing them the opportunity to make the connection between what they are learning in school and possible careers in skilled trades and technologies. When competing students return from the competition, their enthusiasm for the trades and technologies is contagious.

The information on the following pages will also help you and your students to prepare for the actual challenge.

“Promote the skilled trades and technologies as viable first-choice career options to Ontario youth”

In 2010, Skills Canada – Ontario will be offering students from across Ontario the opportunity to compete in the challenges described below. These descriptions will provide a brief overview of the challenges only. Once you have decided to register for a challenge, you should consult the challenge’s scope.

Past scopes for each challenge are available as a reference on the Skills Canada - Ontario website at www.skillsontario.com. Scopes for the 2010 challenges will become available beginning in January 2010. Advisors should check the website frequently for any changes to scopes. **Changes may occur up to March 31, 2010.**

What is a scope?

Scopes are a summary of each Challenge that specify the following information:

- **location and date of challenge**
- **purpose of the challenge**
- **skills and knowledge to be tested**
- **duration and timing of challenges**
- **materials the team must supply**
- **materials that Skills Canada - Ontario will supply**
- **safety requirements**
- **Technical Committee Chair information**



May 17, 2010 Elementary Technology Challenge Overview

Challenge	Grade Level	# of Team Members
Character Animation Challenge	4 - 6 and 7 – 8	4
Construction Challenge	7 – 8	4
Health and Safety Challenge	7 – 8	2
Lego Mechanics Challenge	4 – 6 and 7 – 8	4
Lego Robotics Challenge	4 – 6 and 7 – 8	4
Technology Challenge	4 – 6 and 7 – 8	4
TV/Video Production Challenge	7 – 8	2

CHALLENGE DESCRIPTIONS

Character Animation Challenge

Grades 4 - 6 and Grades 7 - 8

This challenge will evaluate each team's ability to combine their skills and knowledge in the field of character animation. Working in teams of four (4), students will create animated character(s) to be the main focus of their animation. The animation should be long enough to tell a story from the theme given on the day of the challenge.

Construction Challenge

Grades 7 – 8

Teams of four (4) will be given a limited amount of materials and must design and create a structure (i.e. house). Teams will be judged on a number of criteria including design, teamwork, cleanliness and team spirit in addition to how closely the structure meets the criteria established in the challenge. Skills tested will include design, use and knowledge of adhesives and bonding, the principles of structure, strength, rigidity, green technology and leadership.

Health and Safety Challenge

Grades 7 – 8

Teams of two (2) competitors each are required to perform a workplace inspection forensic safety audit of a staged accident as well as inspect a mock workplace location (to be revealed on the day of the competition) for safety hazards. Competitors will present their findings and recommendations on fixing the identified hazards in a short (2-3 minute) presentation. Skills and knowledge tested will include presentation skills, problem solving, critical thinking and health and safety (i.e. WHMIS, ergonomics, safety equipment, tools, machinery and electrical hazards).

Lego Mechanics Challenge

Grades 4 - 6 and Grades 7 - 8

Students will be presented with a problem-solving situation. Using the contents in the Lego kits provided, the teams of four (4) will design, construct and present their solution. The problem situation will be consistent with the expectations from the Ontario science and technology curriculum for each division.

Lego Robotics Challenge

Grades 4 - 6 and Grades 7 - 8

Teams of four (4) students will design, construct and program an autonomous robot using Lego Robolab. Robots compete to accomplish several specific tasks/objectives. Prior to the competition each team will be required to design, build, program and test their robot. Teams should come to the competition with their robot fully designed, constructed and programmed to solve the three challenges. Time will be provided before each event to test and make adjustments to each teams' robot on the official competition playing surface.

Technology Challenge

Grades 4 - 6

This challenge will offer student teams of four (4) a hands-on opportunity to work with hand tools to solve a problem that will require the use of pulleys, gears and gear trains as outlined in the Grades 4 - 6 Curriculum.

Grades 7 - 8

This unique opportunity builds on the skills and knowledge acquired in the science and technology curriculum. The focus of the challenge will have student teams of four (4) designing, constructing and communicating in a collaborative environment to develop a device drawn from a situation. Some design parameters will be set. The situation will be open ended so that students will have the opportunity to use a design process and cross a variety of strands from the curriculum.

TV/Video Production Challenge

Grades 7- 8

Teams of two (2) competitors each are required to produce a 2 - 3 minute informational/promotional video on the theme stated at the beginning of the challenge. Competitors must decide on the best use of their time to plan, script, shoot and edit the final production. All aspects of the production assignment are completed on-site by competitors. Skills and knowledge to be tested include: production planning and design, camera work, audio use, editing, storytelling, teamwork, time management and problem solving.

ELEMENTARY LEVEL COMPETITION ELGIBILITY

Elementary level competitors must meet the following criteria in the current school year:

- a) Attend a public, separate or private elementary institute, which is affiliated with Skills Canada – Ontario.
- b) Be enrolled in the appropriate grade level corresponding with the challenge (Grades 4-6 or Grades 7&8).
- c) Be registered as a competitor with Skills Canada – Ontario.
- d) Compete in only one challenge at the OTSC.
- e) Be enrolled in the same school, if students are registered in a team event.
- f) Possess Canadian citizenship or permanent resident status and reside in Ontario. Competitors are responsible for verifying this information if requested.

ELEMENTARY COMPETITOR RULES & REGULATIONS

- Competitors may compete in only one challenge at the Ontario Technological Skills Competition.
- Attending the competitor orientation is mandatory and will occur at the challenge site prior to the start of the challenge. Competitors who are late for orientation may or may not be permitted to compete at the discretion of the Technical Committee. Competitors requiring clarification of instructions should seek it from a member of the Technical Committee during orientation.
- Competitors must wear provided I.D. badges until the close of the Awards Ceremony.
- A minimum score of 60% will be required to receive any medal.
- Competitors **may not** speak to spectators during their challenge (this includes teachers, advisors and family members). Competitors will be disqualified at the judges' and Technical Committee members' discretion.

- Translators or other assistants (i.e. for the hearing impaired) are permitted in the challenge site only through prior arrangement with the Skills Canada - Ontario office.
- During the challenge, no one will have access to the challenge site except the Technical Committee members, judges and competitors.
- Competitors may be excused for washroom breaks (with escort) at the discretion of the Technical Committee members.
- Books, notes, materials and assisting devices may be permitted at the discretion of the Technical Committee members. These will be identified prior to the competition in the challenge scope.
- Cell phones, smart phones or PDAs are not permitted on the challenge site.
- Any person in a challenge (i.e. competitor, technical committee member, judge) who is found guilty of dishonest conduct will face disciplinary measures. There will be zero tolerance for cheating. Any competitor found guilty of dishonest conduct will be immediately disqualified.
- Competitors must be on time for their challenge; late arrivals may be allowed to compete but no "make-up" time will be given. Penalty will be at the discretion of the Technical Committee members and judges.
- Competitors not wearing appropriate clothing or safety equipment as specified in the challenge scope will not be permitted to compete.

CONFLICT RESOLUTION PROCEDURE

The Conflict Resolution Procedure is in place to ensure all competitors are treated equally and fairly during the Ontario Technological Skills Competition. Competitors are asked to submit an informal protest, either verbally or in writing to the Technical Committee Chair if they feel they have been treated unfairly.

As a first step, competitors are encouraged to discuss any protests with the Technical Committee Chair as soon as possible during the contest, so a resolution can be determined as soon as possible. Through this initial discussion, the competitor and Technical Committee Chair will work to determine a resolution to the situation. If a competitor that is directly affected by the situation would like to appeal the resolution, he or she may start the formal conflict resolution procedure.

To view the complete Conflict Resolution Procedure, please contact Maggie Moniz at maggiem@skillscanada.com.

WEBSITE AND CONTACT INFORMATION

The Skills Canada - Ontario website, www.skillsontario.com, is continually being updated to include current information on all our programs and competitions. Please check the site regularly for any changes in information regarding the competition, including changes to scopes. You will also find the elementary challenge information and registration package and all registration forms and regulations on the website.

For more information contact a member of the Skills Canada – Ontario team:

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