



SKILLS ONTARIO COMPETITION ELEMENTARY CHALLENGE INFORMATION PACKAGE

Skills Ontario

invites you and your students to join us at the

Toronto Congress Centre
May 6, 2019

A Guidebook for Elementary School Board Technology Champions

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The elementary technology challenges are offered in conjunction with the Skills Ontario Competition, Skills Ontario’s cornerstone event. The elementary technology challenges encourage teamwork and friendly competition between school boards. Over 500 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.

This package is designed for you, a school board level administrator and technology champion to help decide which challenges would appeal to your school board to participate in. The information on the following pages will also help you and your students to prepare for the actual challenge.

In addition, pages 9-11 outline the other activities that are held in conjunction with the elementary challenges as part of the larger Elementary Technology Activity Day. These additional activities provide a wonderful opportunity for more students to get involved with learning about the many real-world career applications for the skills they are learning about in school. We hope that you and your teachers and students will participate in the many activities, events and competitions that:

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

In 2018-2019, Skills Ontario will be offering schools 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 your school board for a challenge, the team and the team's advisor should consult the challenge's scope.

Past scopes for each challenge are available as a reference on the Skills Ontario website at skillsontario.com. Scopes for the 2019 challenges will become available beginning in January 2019. Advisors should check the website frequently for any changes to scopes.

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 Ontario will supply**
- **safety requirements**
- **Technical Committee Chair information**
- **challenge agenda**



May 6, 2019 Elementary Technology Challenge Overview

Challenge	Grade Level	# of Team Members
Character Animation Challenge	4 - 6 and 7 & 8	4
Construction Challenge	7 & 8	4
Green Energy Challenge	7 & 8	4
LEGO Mechanical Engineering 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
VEX Robotics Challenge	4 - 6 and 7 & 8	4
Workplace Safety 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.

Green Energy Challenge

Grades 7 & 8

Teams of four (4) will design and construct a green energy project. Teams will be judged on the measurable components (speed, temperature, etc.) of the project as well as teamwork, quality of construction and safety.

LEGO Mechanical Engineering Challenge

Grades 4 - 6 and Grades 7 & 8

Students will be presented with a problem-solving situation. Each team will bring their own LEGO kit, 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 kits provided by teams. 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 team's robot on the official competition playing surface.

Technology Challenge

Grades 4 – 6 and 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 will 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.

VEX Robotics Challenge

Grades 4 - 6 and Grades 7 & 8

The VEX Challenge provides teams of four (4) with exciting, open-ended robotics challenges that enhance their science, technology, engineering, and mathematics (STEM) skills through hands-on, student-centered learning. The VEX Challenge fosters student development of the teamwork, critical thinking, project management, and communication skills required to prepare them to become the next generation of innovators and problem solvers.

Workplace Safety Challenge

Grades 7 & 8

Teams of two (2) will demonstrate their health and safety skills through practical and theoretical application. The teams will be required to complete 2 activities (a) conduct a workplace health and safety inspection of a mock workplace and document the hazards found and (b) deliver a prepared health and safety presentation.

Registration Process

Step One

Using the challenge descriptions above, decide which challenges you would like to enter teams in. Each school board can enter one team per challenge and can request a space in as many challenges as they wish.

Step Two

Teams may only register through their board's designated contact. To begin the registration process the board contact will create a login account at the Skills Ontario registration website, register.skillsontario.com **If you do not know who your board contact is**, please contact Kyla Frankowski at kfrankowski@skillsontario.com

Step Three

On Tuesday, November 13th at 9:00 a.m., the Skills Ontario on-line space reservation system becomes active. At this time, board contacts can reserve a space in the challenges. **NOTE:** Reserved spaces are tied to the school board. You do not need to identify the school or team members/competitors until step six (6). School Boards should be aware that waitlists do occur and spaces should be reserved ASAP – some of the challenges will fill up right away.

Step Four

You must share the scopes, elementary challenge eligibility criteria, elementary challenge competitor rules and regulations and the conflict resolution procedure with all teams from your board who are interested in competing.

Step Five

Notice of confirmed space reservations will be sent to main contacts the week prior to winter break. Each team member/competitor is assigned a username and password. This will be provided to you to distribute to the individual team members/competitors.

Reservations received after the winter break will be confirmed as they are received.

Spaces will be invoiced shortly before the Skills Ontario Competition. The cost per competitor is \$75. Therefore the fee for challenges with teams of four is \$300, while

Priority Registration

Between November 13 and November 30, 2018 school boards will be awarded space reservations in order of request date, **with fully affiliated school boards receiving priority** and placed ahead of boards who are partially affiliated.

Space reservation requests received after November 30, 2018 will be awarded by request date only, regardless of affiliation status.

the fee for challenges with two competitors (Workplace Safety or TV Video Production Challenge) is \$150.

Step Six

Between the first week of January and March 29, 2019 at 11:59 p.m. individual competitors must be identified and registered using the unique online username and password provided to you by Skills Ontario in Step Five. Competitors must register using the website, **register.skillsontario.com**

PLEASE NOTE:

In order to ensure that spaces are filled with students/teams that are invested in competing, we will enforce our registration policies more strictly moving forward.

For challenges that have waitlists, those spaces already accepted into the challenge that have **not been filled by the registration deadline will be cancelled**, reimbursed and offered to the first school board on the waitlist.

Step Seven

Ensure teachers and students review the scope and begin preparations for competing at the Skills Ontario Competition.

Step Eight

Attend the challenges on May 6, 2019 and cheer your students on!

Registration Cancellation Policy:

NO-PENALTY PERIOD: Boards will be permitted to cancel spaces, without penalty, before Friday, February 8, 2019. The \$75 cancellation fee will come into effect after this date.

Spaces that are cancelled before the deadline of March 29, 2019 are subject to a cancellation fee of \$75 per team.

Skills Ontario will invoice the **full registration fees**, if:

- Spaces are cancelled after the deadline of March 29, 2019
- A competitor fails to attend competition

Skills Ontario reserves the right to cancel a challenge if necessary (e.g. low enrolment). In the unlikelyhood that a challenge is cancelled, a full refund will be granted to school boards that have reserved a space in that challenge.

FYI: Did you know that the registration fee covers **less than 7%** of the total cost per student to run each challenge? Skills Ontario gratefully acknowledges the contributions of our sponsors and partners who help us provide these opportunities for our youth.

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 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 Ontario.
- d) Be enrolled in the same school, if students are registered in a team event.
- e) 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 Skills Ontario 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. Those who are late but permitted to compete will not receive any “make-up” time. Competitors requiring clarification of instructions should seek it from a member of the Technical Committee during orientation.
- Competitors must wear their provided ID wrist bands until the close of the Awards Ceremony.
- A minimum score of **60%** will be required to receive any medal.

- **PLEASE NOTE:** It is expected that during sign-in at the contest site, the teacher or an adult representative for the team supply a cell phone number where they can be reached in an emergency and that they routinely check-in on their team(s) throughout the day.
- 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 (e.g. hearing impaired) are permitted in the contest site **only if requested during the online competitor registration process.**
- 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 an 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.
- Media devices, such as cell phones, smart phones, or mp3 players are not permitted on the contest 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 is zero tolerance for cheating. Any competitor found guilty of dishonest conduct will be immediately disqualified.
- 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 Elementary Challenges. 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. It is encouraged that the competitor discusses the informal protest with the Technical Committee Chair **as soon as possible during the challenge**, so a resolution can be determined as soon as possible. Through 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 submit a formal protest he or she may start the conflict resolution procedure.

For questions regarding the Conflict Resolution Procedure, please contact competitions@skillsontario.com.

Skills Ontario hosts a wide variety of events during Elementary Technology Activity Day. If you have questions about any of the following activities, please contact the appropriate staff for information.

ELEMENTARY CAREER AWARENESS WORKSHOPS

Build, design, create and fix are what Elementary Career Awareness Workshops are all about. Ensuring students have the opportunity to explore these actions through hands-on workshops allows them to discover different career possibilities in the skilled trades and technologies. As a group of 20, Grade 7 & 8 classes will experience two hands-on workshops and tour the Career Exploration Showcase.

With close to 40 workshops happening simultaneously, last year's event filled up quickly with well over 2,000 students receiving the spark they needed to learn more about a career in the skilled trades.

Mark your calendar for **Monday, May 6, 2019** and be sure to register early.

ONLINE REGISTRATION PROCESS

The Elementary Career Awareness Workshops registration has been moved to our online system; **paper forms and emails indicating interest will not be accepted.** Teachers can register by going to the Elementary Workshops page of our website and clicking "Register Now". Registration will open Tuesday, January 15, 2019. Be sure to remind your schools to register early, as space is limited!

For more information please visit the Elementary Career Awareness Workshops page on our website skillsontario.com/workshops

*** Payment Policy** – Please note that, to offset the rising cost of materials and to maintain the quality of this program, there is now a small cost associated with sending your group to the Elementary Workshops (\$100 per group of 20 students).

For more details, please contact Kayla Schurman via email at kschurman@skillsontario.com

CAREER EXPLORATION SHOWCASE

The Career Exploration Showcase will allow visiting students to see many of the career options available in the skilled trades and technologies. While viewing the Skills Ontario Competition contests and involving themselves with the interactive display booths, students will gain the inspiration needed to pursue a career that is the right fit for them. Over 50 exhibitors offer hands-on activities to educate, inspire and engage your elementary school students.

With over 20,000 in attendance at last year's competitions, we look forward to featuring more trades and activities to all the students attending the Career Exploration Showcase at the 2019 Skills Ontario Competition.

For students, this is the ideal opportunity to research the many viable career and education opportunities in the skilled trades and technologies and leave knowing that they can make informed decisions.

Mark your calendar for the Skills Ontario Competition Career Exploration Showcase on **May 6 & 7, 2019**.

The best part is that this event is **FREE** for affiliated schools! Further information regarding the 2019 Career Exploration Showcase will be available in January of 2019.

Key Points you need to know about the 2019 Career Exploration Showcase

- The Showcase is open May 6 & 7, 2019
- Admission is free!
- A flyer will be posted online in January 2019

For more details, please contact Solange Saraiva via email at ssaraiva@skillsontario.com

YOUNG WOMEN'S CONFERENCE

The purpose of the **Young Women's Conference** is to introduce young women in Grades 7 – 8 to careers in the skilled trades and technologies through hands-on activities, inspirational guest speakers and informal networking with female role models who work in the skilled trades and technologies. This fun-filled day is complete with a tour of the 30th Skills Ontario Competition and Career Exploration Showcase.

This conference will take place on **Monday May 6, 2019** in the North Building of the Toronto Congress Centre.

Registration opens on Thursday February 14, 2019. Please note – Space is limited and pre-registration for this event is mandatory.

* **Payment Policy** – Please note that the cost per participant is \$20 with a maximum registration of 20 students and 2 teachers per school.

For more details, please contact ywc@skillsontario.com.

WEBSITE AND CONTACT INFORMATION

The Skills Ontario website, 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.

If you have any questions, please review our website to try to find the answer there. If you are not able to find the answer, please email competitions@skillsontario.com