



# The Ontario Technological Skills Competition Elementary Challenge Information Package

Skills Canada - Ontario  
invites you and your students to join us  
April 30, 2012



A Guidebook for Elementary School Board Technology Champions

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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 400 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, the appendix outlines 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 2012, Skills Canada – 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 teams’ advisor 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](http://www.skillsontario.com). Scopes for the 2012 challenges will become available beginning in January 2012. Advisors should check the website frequently for any changes to scopes. **Changes may occur up to March 31, 2012.**

### 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**
- **challenge agenda**



### April 30, 2012 Elementary Technology Challenge Overview

<b>Challenge</b>	<b>Grade Level</b>	<b># of Team Members</b>
Character Animation Challenge	4 - 6 and 7 – 8	4
Construction Challenge	7 – 8	4
Green Energy 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**

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### **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 working model of a wind turbine that will produce electricity. Materials will be provided for teams from which to construct their turbine and teams will be judged on design, construction and voltage created in the testing of the turbines.

### **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 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 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.

## Registration Process

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### Step One

Using the challenge descriptions above, decide into which challenges you would like to enter. 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 designated contact. To begin the registration process the board contact will create a login account at the Skills Canada – Ontario registration website, <https://register.skillsontario.com>

### Step Three

On Tuesday, November 15<sup>th</sup> at 9:00 a.m., the Skills Canada – 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 until step six.

### 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 Christmas break. Each team member is assigned a username and password. This will be provided to you to distribute to the team members.

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

Once reservations are confirmed competitor registration fees will be invoiced. The cost per competitor is \$50. Therefore the fee for challenges with teams of four is \$200, while the fee for challenges with two competitors (Health and Safety or TV Video Production Challenge) is \$100.

#### Priority Registration

Between November 15 and December 9, 2011 school boards will be awarded space reservations in order of request date, **with fully affiliated school boards receiving priority** and placed ahead of those partially affiliated.

Space reservation requests received after December 9, 2011 will be awarded by request date only, regardless of affiliation status.

## Step Six

Between January 2, 2012 – 9:00 a.m. and March 23, 2012 – 11:59 p.m. individual competitors must be identified and registered using the unique on-line username and password provided to you by Skills Canada – Ontario in Step Three. Competitors should register using the website, <https://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 OTSC.

## Step Eight

Attend the challenges on April 30, 2012 and cheer your students on.

### Registration Cancellation and Refund Policy:

Space reservations cancelled after December 16<sup>th</sup> will forfeit the associated non-refundable deposit of \$50 per team.

Skills Canada – Ontario will not refund any portion of competitor fees under the following circumstances:

- Spaces that are cancelled after the deadline of March 23, 2012
- Competitor fails to attend competition

Skills Canada – 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 or registered a contestant in a competition that is cancelled by Skills Canada - Ontario.

**FYI:** Did you know that the registration fee covers **less than 7%** of the total cost per student to run each challenge? Skills Canada – 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 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) 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

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- 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 their provided ID wrist bands 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.
- Media devices, such as cell phones, smart phones, mp3 players or PDAs 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 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**

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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 Maggie Moniz via email at [maggiem@skillscanada.com](mailto:maggiem@skillscanada.com).

**Skills Canada – 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**

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Monday, April 30, 2012

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 32 workshops happening simultaneously, last year's event filled up quickly with over 1,800 students receiving the spark they needed to learn more about a career in the skilled trades.

Mark your calendar for **Monday, April 30, 2012** and be sure to register early.



### **ONLINE REGISTRATION PROCESS**

The Elementary Career Awareness Workshops registration has been moved to our online system; **paper forms will no longer be accepted.** Teachers can register by going to the Elementary Workshops page of our website and clicking "Register Now". Registration will open Tuesday January 17, 2012. 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 [www.skillsontario.com/workshops](http://www.skillsontario.com/workshops)

This event is FREE for affiliated schools! Space is limited!

For more details please contact Shannon Skinner via email at [shannons@skillscanada.com](mailto:shannons@skillscanada.com)

## CAREER EXPLORATION SHOWCASE

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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 OTSC 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 30,000 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 2012 OTSC.

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 OTSC Career Exploration Showcase on **May 1, 2012**.

The best part is that this event is **FREE** for affiliated schools! Further information regarding the 2012 Career Exploration Showcase will be available in January of 2012.

### Key Points you need to know about the 2012 Career Exploration Showcase

- The Showcase is open May 1, 2012
- Admission is free!
- Each affiliated school will receive details in the January 2012 mailing.

## YOUNG WOMEN'S CONFERENCE

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Monday, April 30, 2012

The purpose of the “**Think Skills...Think Future!**” **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 23<sup>rd</sup> Ontario Technological Skills Competition and Career Exploration Showcase.

This conference will take place in Kitchener on **Monday, April 30, 2012.**

Registration opens in mid-January so be sure to watch for further details in the Skills Canada – Ontario January mailing. Please note – Space is limited and pre-registration for this event is mandatory.

This event is **FREE** for affiliated schools!

For more details please contact Karen Throupe via email at [karent@skillscanada.com](mailto:karent@skillscanada.com).

## WEBSITE AND CONTACT INFORMATION

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The Skills Canada - Ontario website, [www.skillsontario.com](http://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:

### **Elementary Challenge Questions:**

Barry Harrison  
Competition Manager  
(519) 749-9899 ext. 239  
[barryh@skillscanada.com](mailto:barryh@skillscanada.com)

### **Registration and Affiliation Questions:**

Maresa MacAskill  
Competition Coordinator  
(519) 749-9899 ext. 228  
[maresam@skillscanada.com](mailto:maresam@skillscanada.com)

### **Young Women's Conference Questions:**

Karen Throupe  
Program Manager, Young Women's Initiatives & Summer Camps  
(807) 684-8853  
[karent@skillscanada.com](mailto:karent@skillscanada.com)

### **Elementary Career Awareness Workshop Questions:**

Shannon Skinner  
Provincial Liaison Officer  
(416) 675-6622 ext. 78031  
[shannons@skillscanada.com](mailto:shannons@skillscanada.com)

### **Career Exploration Showcase Questions:**

Brianna Holm  
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[briannah@skillscanada.com](mailto:briannah@skillscanada.com)

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