



## DSBN REGIONAL LEGO MECHANICS CHALLENGE 2010 ELEMENTARY LEVEL SCOPE

<b>CHAIR:</b> Todd Thorne E-mail: <a href="mailto:todd.thorne@dsbn.edu.on.ca">todd.thorne@dsbn.edu.on.ca</a> Ph: 905-687-4192
---

### PURPOSE OF THE CONTEST:

The design and engineering team will be given a situation ( the challenge ) and asked to submit a proposal, complete with a working prototype, design sketches and written documentation. The team must design and construct a working prototype of the solution and demonstrate its effectiveness. Each team will be asked to discuss features and mechanical devices used in the prototype. Each team will be asked to demonstrate their mechanical aptitude by completing a mechanism test.

### EVENT DETAILS:

Date: Wednesday, Feb 24, 2010  
Time: 9:00 -3:30  
Location: Brock University

### SKILLS AND KNOWLEDGE TO BE TESTED:

Assembly and manipulation of mechanical systems using lego/dacta. Team work. Various curriculum expectations from the Ontario Science and Technology document. Special emphasis on **gears** and **pulley systems** and **mechanical advantage**.

### SAFETY REQUIREMENTS:

Competitors are required to follow all industry safety standards during the competition.

### EQUIPMENT, MATERIALS, TOOLS AND SUPPLIES:

**Equipment Supplied by the Contest Coordinator:** Dacta 9630 kits, Dacta 1032 kits, various lego elements

**Equipment Supplied by the Competitor:**  
none

### CLOTHING REQUIREMENTS:

Casual school attire must be worn.



### **PROJECT AND COMPETITION EXPECTATIONS:**

The project will be completed on site and completed that day. Projects will be tested and evaluated at the end of the build time.

**JUDGING CRITERIA:** Performance of prototype criteria will be given at the time of the competition, completion of the mechanism test and brief presentation of prototype explaining the mechanical processes involved including hand drawings and prototype name.

### **ENTRY:**

Students must register online at: [www.dsbn.org/TechEd/skills\\_challenge.html](http://www.dsbn.org/TechEd/skills_challenge.html) with all of the required information completed to be eligible to participate. Teachers should also forward a list of competitors participating from their school to the contest Chair, Todd Thorne, 7days prior to the date of the contest.

Most importantly, the registration process will generate a link to the [Parent Consent and Release Form](#) that **MUST** be printed and signed by parents/guardians and collected. Events are photographed and these photographs can be, and often are used for “good news” publication. The signed forms are to be faxed to the DSBN Skills Development Coordinator at 905-227-4731

Spaces are limited and will be awarded on a first come first served basis.

### **TRANSPORTATION:**

Students are responsible for their own transportation.

### **TEACHER’S ROLE:**

Instructors are expected to acquaint their student participants with all of the enclosed guidelines. Teachers may accompany their students or visit any time during the competition, but may not assist the competitors during the challenge.