

Model Wind Turbine Competition



What is the Model Wind Turbine Competition ?

Given a set of specific materials to work with, students use their skill and ingenuity to design and construct a working model wind turbine. The turbine needs to be solidly constructed and be able to generate electrical power.



Who is it geared for?

Grade 9 and 10 students who are up to the challenge. Those who participate will have a great time! The experience helps develop new skills, in addition to strengthening their leadership, teamwork and problem solving ability.

Who is Skills Canada Manitoba? Skills Canada Manitoba is a not-for-profit, charitable organization that works with youth, parents, communities, industry and government to increase awareness of the rewarding careers available in skilled trades and technology.



The Challenge

Gender mixed teams of four students (from the same school) will design and construct a model wind turbine.

Design and construction will be judged by a panel of expert judges. Turbine voltage-generating capacity will be measured electronically and competitively in a progressive play down. Students will be given the materials to construct the turbine, and will have approximately 2 hours of building time.



October 30, 2019

What is the cost?

Each team is responsible for a **\$80.00** team entrance fee which includes:

- 1—Small DC motor with mounted LED
- 4 Poster board, 22" x 28", sheets
- 1 Balsa wood, 4" x 36" x 1/8", sheet
- 1 Balsa wood, 4" x 36" x 1/16", sheet
- 1 Particle board base, 12" x 12" x 5/8", piece
- 1 tube adhesive
- 1 roll masking tape
- 3 wood propeller mounts, circles, 1.75" diameter
- 1 retractable utility knife
- 1 pair scissors
- 1 geometry set
- Pencils
- Sandpaper

Note: No other tools or materials will be allowed in the construction of the model wind turbine

Lunch will be provided for each participant and one advisor.

*Please note that this event will be held in the South Gym at Red River College, Notre Dame Campus.

The \$80 team entrance fee must be received by the Skills office by October 16, 2019.



Awards

- **Best Design**—Skills Manitoba trophy
- **Best Construction**—Certified Technicians and Technologists (CTTAM) trophy
- **Highest Voltage**—Red River College trophy

Schedule for the Day

9:00am-9:30am	Arrivals and Registration
9:30am-9:45am	Announcements/Instructions
9:45am-10:45am	Turbine Construction
10:45am-11:00am	Break (advisors may consult with team)
11:00am-12:00pm	Turbine Construction
12:00pm-12:45pm	Lunch (provided).
12:45pm-1:30pm	Final Touch Ups/Turbine Design and Construction
	Judging
1:30pm-2:30pm	Voltage Generation competition play down
2:30-2:45pm	Awards presentations



Send completed registration forms and fees to:

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For any questions contact: Lori Royal at lorir@skillscanada.com