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1. GENERAL CONTEST INFORMATION

1.1: Purpose of Contest

This challenge is offered for Limestone schools to showcase the talents of their students in building and programming with LEGO robotics materials. The format for this year's event will be robotics challenges featuring LEGO Mindstorms EV3 or SPIKE Prime, and LEGO licensed software. Teams will feature 4 students representing their school who will collaborate and innovate as they modify a design to their robot to solve a series of challenges.

1.2: Objective/Description of event

Teams will be expected to demonstrate their innovative programming skills through dead reckoning and sensory input as they work through a timed series of challenges. Each team's robot **may** be required to push and pull items, accurately travel around obstacles (straight movements and turns), detect colours, and lift items from one level to another.

1.3: Technical Committee

Chair: Patrick Large, largep@limestone.on.ca

Judges: Patrick Large, secondary school volunteers (TBD), community volunteers (TBD)

Any questions regarding this scope should be directed to the Chair.

1.4: Contest Schedule: Wednesday, February 25, 2026

9:00-9:30 – Introduction to Challenges

9:30-12:00 – Open Practicing

12:00-12:30 – LUNCH (Challenges closed to all Teams)

12:30-3:00 – Official Scoring Rounds

3:30 – Awards Ceremony

1.5: Additional Information

One of the two Challenges will be released to all registered Teams on Monday, January 26, which will include diagrams with dimensions of the 'Field' and an explanation of scoring.

It is the intention of the Chair and the Limestone Skills organizing team to include as many teams as possible. However, there are capacity limitations given the physical space at St. Lawrence College, scheduling limitations (ensuring there is enough time for all Teams to have their scoring rounds), and human resource limitations (judges). As such, priority will go to including as many schools as possible. If there are spaces for more than one team per school, those additional teams will be selected by random draw.

LDSB has applied for a place at the Provincial Skills competition, but this is yet to be confirmed.

2. SKILLS AND KNOWLEDGE TO BE TESTED

2.1: Specific Requirements

The LEGO Robotics Challenge (7-8) will have a rubric scoring system. Overall team score will be the sum of the points awarded for each of the components. Points are awarded as the robot successfully meets/completes certain performance criteria, which are structured so as to provide a range of tasks from easy to complex for each category.

Teams are expected to demonstrate:

- autonomous programming using LEGO software (EV3 or Spike Prime)
- construction and engineering skills using LEGO brick and technic components
- collaboration as a team of 4

3. JUDGING CRITERIA

3.1: Rubric

There will be two separate 'Fields,' each with a number of tasks to complete for points.
The points available on each Field will total 50, so that a Team's overall achievement will be out of 100. For the Field released on January 26, the scoring rubric will be provided at the same time. For the second Field, which will only be revealed on the day of the competition, the scoring rubric will be distributed at the same time.

3.2: Tie Breakers

In the event of a tie, the score for the unreleased Field will be used as the tiebreaker.

4. EQUIPMENT AND MATERIALS

4.1: Supplied by Competitor

- SPIKE Prime set or EV3 set (including 'brick,' motors, connecting cables, sensors)
- Laptop/Chromebook or Tablet/iPad enabling teams to design, edit and download programs; there will not be additional devices available to borrow
- LEGO licensed software
  (All software must be able to successfully operate without internet access.)
- Additional batteries, charging cables, USB connection cables
- Additional stock LEGO as desired

NOTES:

- IR Remotes and Bluetooth devices to control the robot are not authorized to be used at any time during the Challenge. Teams will not be allowed to remotely control robots. Robots are expected to be under autonomous control.
- Robots may be engineered to include up to 4 motors. The size/strength of the motor(s) is at the team's discretion.
- Teams should arrive with a working drive train, attached sensors, and additional pieces to build attachments.
- Each team member should be intimately familiar with the connection process using either USB and/or a Bluetooth device. Teams will be expected to be able to troubleshoot pairing and brick difficulties on their own without adult intervention. Officials will assist teams at the discretion of the Chair to encourage participation, however the Chair will not adjust match schedules in the event of pairing complications.
- Teams should be charging all of their equipment between rounds.
- IMPORTANT: For wireless downloading, it is important that teams give their robot a unique name to prevent accidental connections from other teams.

4.2: Supplied by Competition

- Playing surface for each challenge, complete with objects
- Critical equipment and materials for all relevant challenges

5. SAFETY

Safety is a priority at the Limestone Skills Competition. At the discretion of the Chair, any competitor can be removed from the competition site for not having the proper safety equipment and/or not acting in a safe manner.