junior tech challenge

The practical side of science and tech

Rules

2017–2018 EDITION

Take off!

A technology Challenge for elementary students

Within Odyssée des sciences

A program of

RÉSEAU TECHNOSCIENCE
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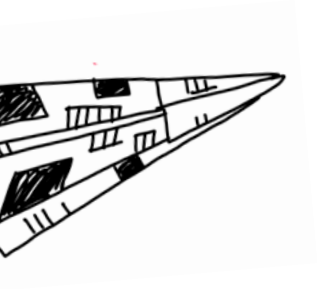

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RÉSEAU TECHNOSCIENCE
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The Challenge

To design paper airplanes that must complete different challenges.

A LES for the class...and much more

The **Junior Tech Challenge** is a LES for the classroom, but it is also a competition that can be experienced at different levels. As a matter of fact, the Réseau Technoscience, through its regional organizations, arranges regional finals this spring throughout Quebec. You can register teams directly for the regional finals, as well as holding in-school competitions to select teams for the final, while creating a bonding event for students and staff. In some areas, school boards also invite their schools to participate in a final.

The rules

In this document you will find useful information as well as the rules to successfully complete this year's **Junior Tech Challenge**.

The rules listed here are for an in class or school challenge. The rules may vary at the regional or school board final, such as how the challenge is presented. However, the rules governing the design of the airplane will remain the same.

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All the information in one place

TECHNOSCIENCE.CA

Teaching tools

The following teaching tools are free and designed to guide teachers step by step, making it easy to prepare the challenge in class. Most of these teaching tools are available at technoscience.ca:

- Teacher's guide
- Student's handbook
- Frequently asked questions (FAQ)
- Certificate
- And many more tools!

Are you are a pedagogical consultant looking to organize a final for your school board?

Contact a member of the Réseau Technoscience in your area to receive all necessary information and support. Contact information is available at technoscience.ca.

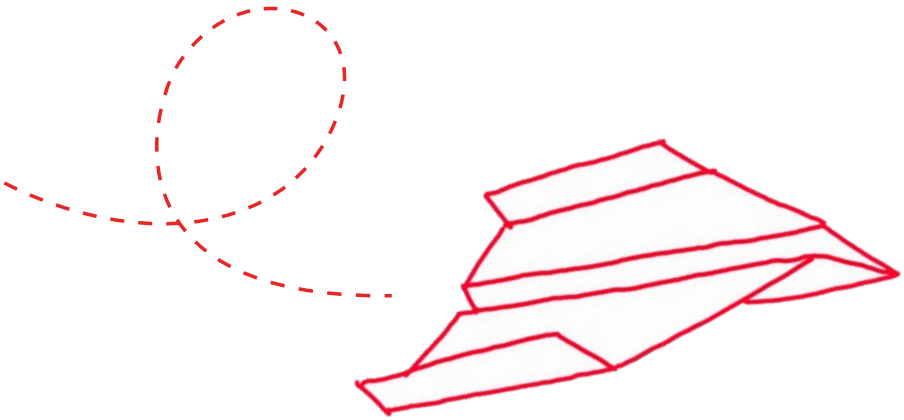
New Challenges at every level of Competition

In order to keep the students interested in participating at several levels of competition, the challenges presented at the regional finals and school board finals will be presented in a different format. Everything will be put in place so that students can review the notions learned in class while continuing to have fun!

How to register

To register teams for the regional final, you must use the online registration forms which are available at technoscience.ca.

However, if your school board is organizing a final, you must register your team with the individual responsible for the final at your respective school board.



To contact the regional Réseau Technoscience member in your area go to

TECHNOSCIENCE.CA

Contact us

for details on costs, registration, scheduling, etc.

The Challenge

To design paper airplanes that must complete different challenges.

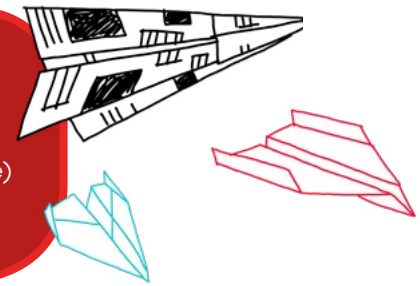
> **Encourage your students to repeatedly practice folding their paper airplanes. Plans, diagrams and models are not allowed on competition day.**

A Challenge with various Difficulty levels

Cycle 1
Design two paper airplanes that must complete two challenges (one challenge per airplane)

Cycle 2
Design two paper airplanes that must complete three challenges (1 or 2 challenges per airplane)

Cycle 3
Design three paper airplanes that must complete three challenges (1 challenge per airplane)



Construction

1.1 The airplanes must look like paper airplanes (e.g. : a ball of paper cannot be considered as an airplane).

1.2 The models must have significant differences in design or folding method.

1.3 Each airplane must complete at least one challenge.

1.4 Authorized materials

- Any type of paper (tissue, tracing, aluminium, printer paper, etc.) of a maximum format of 21.59 cm x 27.94 cm (8 ½ x 11, letter size). The aircraft may be constructed with more than one sheet of paper.
- Sticky tape and stickers.

Note : the airplanes can be coloured.

Forbidden

- Sandpaper, cardboard and all types of coated paperboard (e.g. : construction paper)

Schedule of events

Assembly and inspection

2.1 The airplanes must be made on site the day of the competition. Participants must bring all necessary material. **Plans, diagrams and models are not allowed..*

2.2 Thirty minutes is allotted for assembly of the paper airplanes and testing, if desired.

2.3 The challenge number (or challenges) to be completed must be written on the wing of each airplane.

2.4 Each airplane must be submitted for inspection to verify compliance with the rules.

The competition

2.5 Each team will be allowed two consecutive throws per challenge.

2.6 Each team will be allowed two consecutive throws per challenge.

2.7 The airplanes must be thrown by hand, with both feet on the floor.

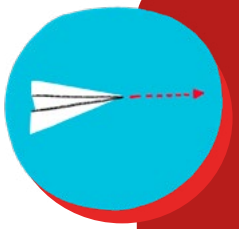
2.8 Only the designated thrower is allowed in the start zone. The thrower has 15 seconds to get ready.

2.9 Teams can make adjustments to their airplanes between throws.

The Challenges

Challenge 1
GREATEST DISTANCE COVERED

The airplane is thrown from within the start zone and must travel the greatest possible distance within the flight corridor.



The point at which the airplane stops will determine the distance covered. That distance is measured in a straight line from the center of the start line to the airplane's nose. If the airplane leaves the flight corridor, the distance will be measured, on the ground, from the point it exits the corridor back to the center of the start line.

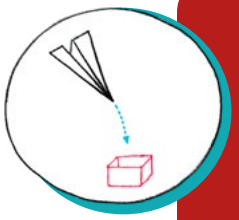
Only the better of the two throws is counted.

1 Cm = 1 Point

maximum of 1000 Points

Challenge 2
LANDING PRECISION

The airplane, thrown from within the start zone, must land in a box of approximately 30 cm by 45 cm.



800 pts | *The airplane lands in the box.*

500 pts | *The airplane stops in the red zone.*

300 pts | *The airplane stops in the dark blue zone.*

200 pts | *The airplane stops in the light blue zone.*

Both throws are counted.

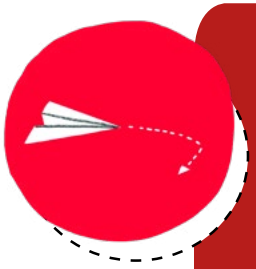
maximum of 1600 Points

Challenge 3
TURNING (for cycles 2 and 3 students)

A cliff stands in front of the airplane.
It must make a turn to avoid it!

Cycle 2
The airplane, launched from the departure zone, must turn right or left.

Cycle 3
The airplane must make two turns: one to the left and one to the right. Two throws are permitted per turn.



800 pts | *The airplane makes a turn in the corridor.*

500 pts | *The airplane avoids the cliff and lands in the field.*

300 pts | *The airplane makes a turn, but before the corridor..*

Cycle Two: Both throws are counted.

Cycle 3: The best throw of each turn is counted.

Note: no point is awarded for an airplane that does not turn or that finishes in the striped area.

maximum of 1600 Points

YOUR BOX IS A LITTLE TOO SMALL OR TOO BIG FOR THE 2ND CHALLENGE ?

Use a cardboard box, normally used to hold 5,000 sheets of letter-size paper (216 x 279 mm).

Competition area

The competition area is 3m X 10m. We suggest a model that allows you to do all three challenges on the same surface.

For challenge 1, if space does not allow you to install a 10 m long corridor, make it as long as possible (up to a wall) on which you can draw horizontal lines, at a distance of one meter from each other. 100 points will be granted per meter of height achieved.

Example

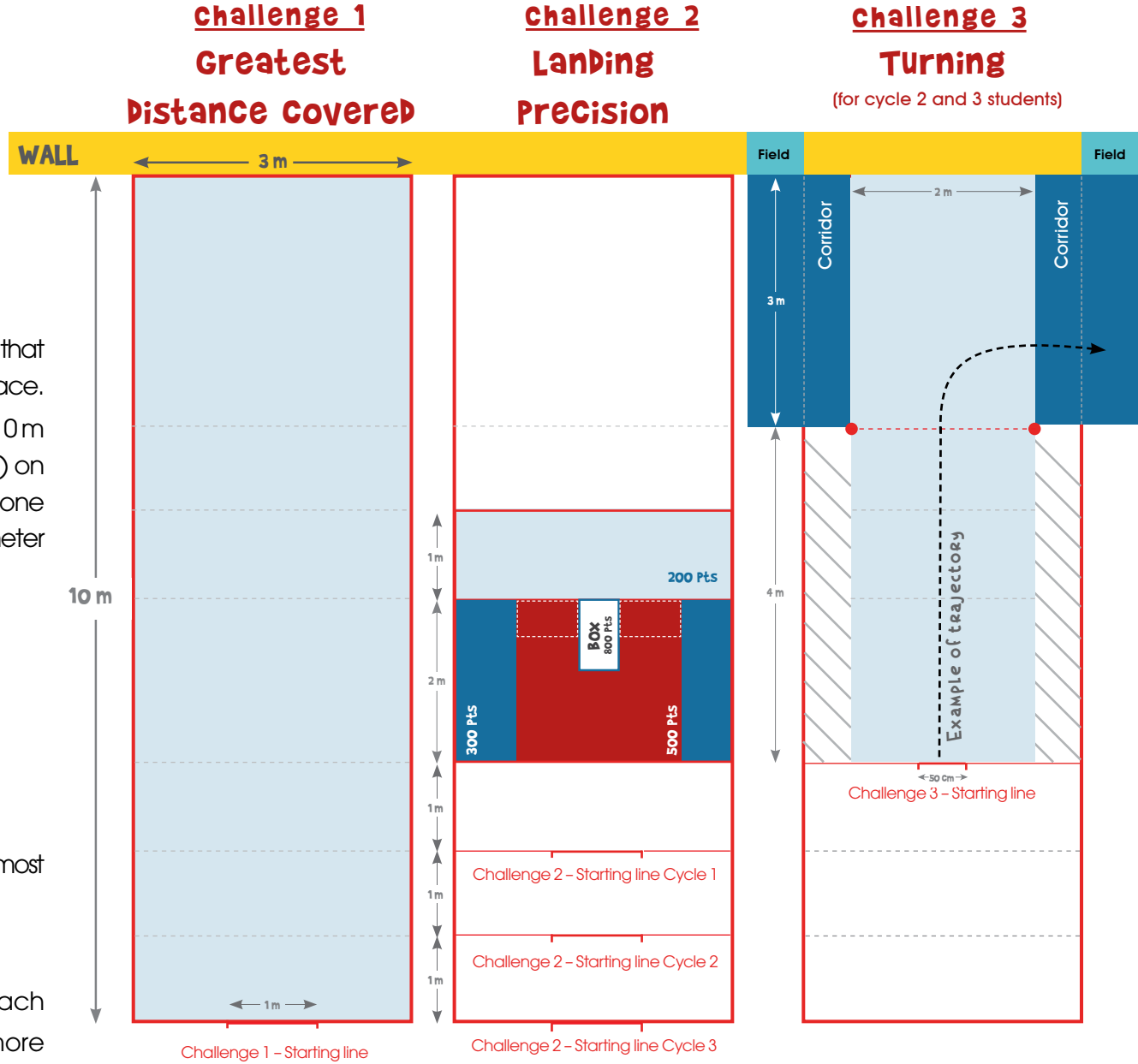
A corridor of 8 m: 800 points
The airplane strikes the 2nd zone of the wall from the ground: 200 points
Total: 1000 points

Winners

For each cycle, the winning team will be the one with the most points following the challenges.

In case of a tie

A challenge will be selected at random and each team involved in the tie will be allowed one more throw. Only that throw will count for the purpose of determining the winners.



You are looking for the Frequently asked questions section?

TECHNOSCIENCE.CA

Specific rules

3.1 The Junior Tech Challenge is a Réseau Technoscience program.

3.2 The Réseau Technoscience is responsible for the implementation of rules in the regional finals.

3.3 The regional finals are open to all elementary students.

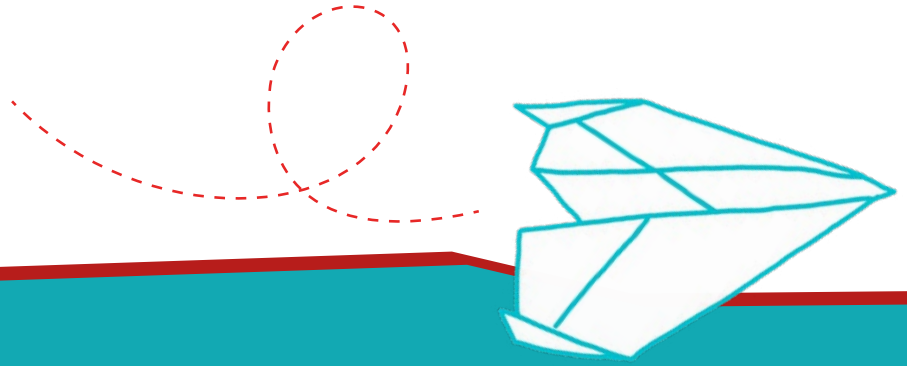
3.4 Each team is comprised of one or two participants.

3.5 The prototype shall be designed and built by the team.

3.6 Failure to observe the rules or any other breach from the organizing committee's directives may result in the disqualification of a team.

Frequently asked questions (FAQ)

The Frequently Asked Questions (FAQ) section is an indispensable tool for answering any questions you may have about the challenge. You will find details concerning the rules of the competition. You can't find the answer to your question? Write to faqdgi@technoscience.ca and the answer will be posted in the next edition of the FAQ. The answers posted serve as official references for interpreting the rules of the challenge, so remember to check the FAQ section often.



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