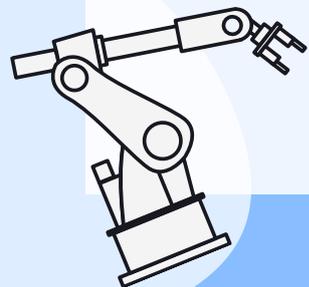
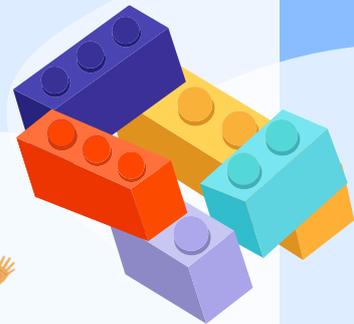




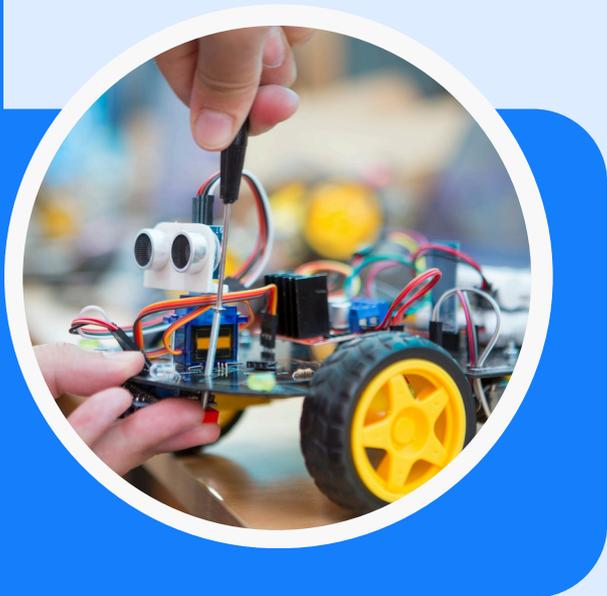
Toronto Region Educational Services

# LEGO Robotics Program



# Program Introduction

LEGO Robotics combines the creativity and fun of LEGO building with the principles of robotics and programming. Through the use of LEGO's specialized kits, users can design and build their own robots, which can then be programmed to perform various tasks. It's a hands-on approach that makes complex concepts accessible and develops skills in STEAM.



## Goals:

- Foster problem-solving
- Encourage creativity
- Build teamwork skills
- Introduce coding concepts

The TRES LEGO Robotics Program supports the organization's mission to provide accessible educational resources in a safe, supportive environment. By offering coding and robotics education for various grade levels, the program helps students build confidence, reflecting TRES's commitment to lifelong learning and personal development.

# Program Overview

Delivery format:

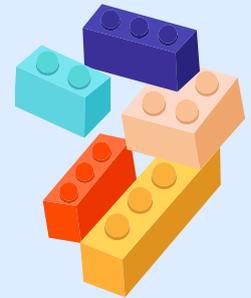
- 1 hour sessions
- In-person at Aaniin Community Centre

Duration: Monthly sessions on Saturday

Who can join: students in Grades 1-12 with any level of coding, robotics, or LEGO experience



## Skills Developed



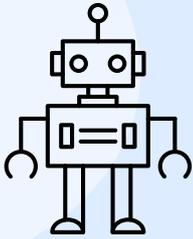
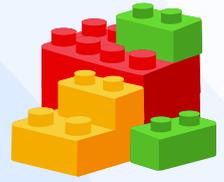
TEAMWORK

PROBLEM SOLVING

CODING (SCRATCH AND PYTHON)

COLLABORATION

# Level Breakdown



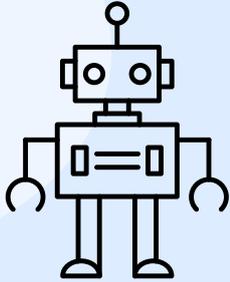
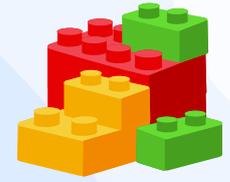
## Introduction to STEAM Program

## Introduction to Robotics Program

## Advanced Robotics Program

	Introduction to STEAM Program	Introduction to Robotics Program	Advanced Robotics Program
<b>AGE</b>	4-6 years old	7-9 years old	10-13 years old
<b>FOCUS</b>	Intro to STEAM concepts	Intro to LEGO Robotics	Intermediate LEGO Robotics skills
<b>KIT</b>	LEGO STEAM Park	LEGO Spike Essentials	LEGO Spike Prime
<b>ASSOCIATED ACTIVITIES</b>	<ul style="list-style-type: none"> <li>• Discover the basics of engineering by creating <b>simple</b> structures with LEGO DUPLO pieces.</li> <li>• Learn the fundamentals of STEAM concepts like gears, tracks, pulleys, and more.</li> <li>• Foster critical thinking skills by exploring solutions to <b>easy</b> challenges.</li> </ul>	<ul style="list-style-type: none"> <li>• Discover the basics of engineering by creating <b>simple</b> robots with LEGO pieces.</li> <li>• Learn fundamentals of coding through <b>short</b> programs on Scratch.</li> <li>• Foster critical thinking skills by exploring solutions to <b>easy</b> challenges</li> </ul>	<ul style="list-style-type: none"> <li>• Discover the basics of engineering by creating <b>useful</b> robots with LEGO pieces.</li> <li>• Learn the fundamentals of coding through <b>guided</b> programs on Scratch.</li> <li>• Foster critical thinking skills by exploring solutions to <b>intermediate</b> challenges.</li> </ul>

# Level Breakdown



	Competition Prep Program	Competition Program
AGE	14-15 years old	16+ years old
FOCUS	Creating complex robots	Showcasing advanced robots in competition
KIT	LEGO Spike Prime Expansion	First LEGO League SUPERCHARGED
ASSOCIATED ACTIVITIES	<ul style="list-style-type: none"><li>• Discover the basics of engineering by creating <b>complex</b> robots with LEGO pieces.</li><li>• Learn the fundamentals of coding through <b>extensive</b> programs on Scratch.</li><li>• Foster critical thinking skills by exploring solutions to <b>difficult</b> challenges.</li></ul>	<ul style="list-style-type: none"><li>• Apply study you have learned to create challenge robots using LEGO.</li><li>• Get creative with coding <b>advanced</b> programs on Scratchsz to tackle specific challenges.</li><li>• Transition from Scratch/Block coding to traditional languages like Python.</li></ul>

# Success Stories



Justin

“I came into the LEGO Robotics program with no coding experience, but I learned so much! The hands-on activities made it fun and easy to understand. I loved working with the robots and now feel way more confident with technology and teamwork.”

“As someone who already had some coding experience, the LEGO Robotics program took my skills to the next level. I loved the challenge of building and programming robots, and it really deepened my passion for engineering and problem-solving through technology.”

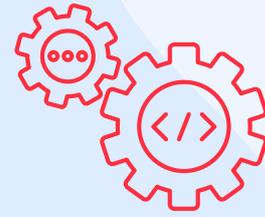


Amanda





# FAQs



## **Can I sign up for multiple days and is it free?**

Yes, you can sign up for more than one day. However, only the first day is free. For any additional days, we require proof of donation to our robotics fund. You can find donation details on our website's donation tab at [torontoeducation.org/donate](https://torontoeducation.org/donate)

## **Are there any additional costs for equipment?**

No. All equipment—including LEGO kits and laptops—is provided.

## **What is the student-to-coach ratio for the program?**

There will be one coach per group of 4-5 students.

## **Is there support for students who may need extra help with the concepts being taught?**

Yes. Our coaches proactively monitor progress and provide one-on-one assistance when a student is struggling.

## **Are there any prerequisites or required skills for the Advanced Robotics Program?**

No prerequisites. Students should be comfortable working in a team, using a computer (such as dragging blocks in a coding interface), and building with LEGO. The program is designed to be accessible and straightforward.

# Information on Donations

All TRES programs are free of charge, which means that we rely on the generous support of our sponsors.

Their contributions help us provide accessible educational opportunities, run engaging community events, and offer meaningful volunteer experiences for youth across the region. Every donation directly supports programming, supplies, and outreach efforts that make a lasting impact. We are deeply grateful for the individuals and organizations who make our mission possible.



## How it Helps



For the lego robotics program, donations go towards:

- Curriculum development
- Purchasing and maintaining LEGO kits
- Computer access
- Enthusiastic instructors



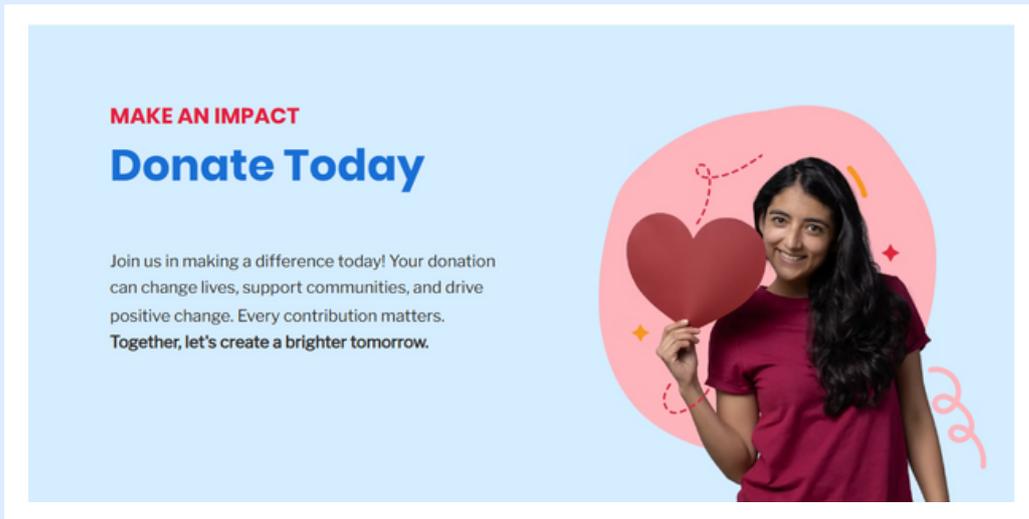
# Community Partners



Thank you for making  
this possible!

# Become a Sponsor Today!

1. Visit [torontoeducation.org/donate](https://torontoeducation.org/donate)
2. Scroll down to donate!



3. Select donation amount and area of focus.

**Donate to this charity**

Donation amount\*

Apply your donation to a fund set up by this charity\*

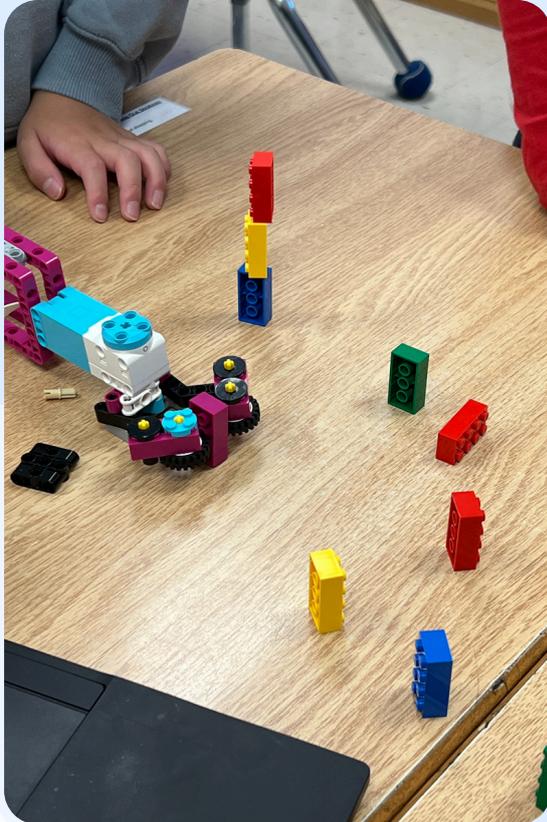
Send a message to this charity (optional)

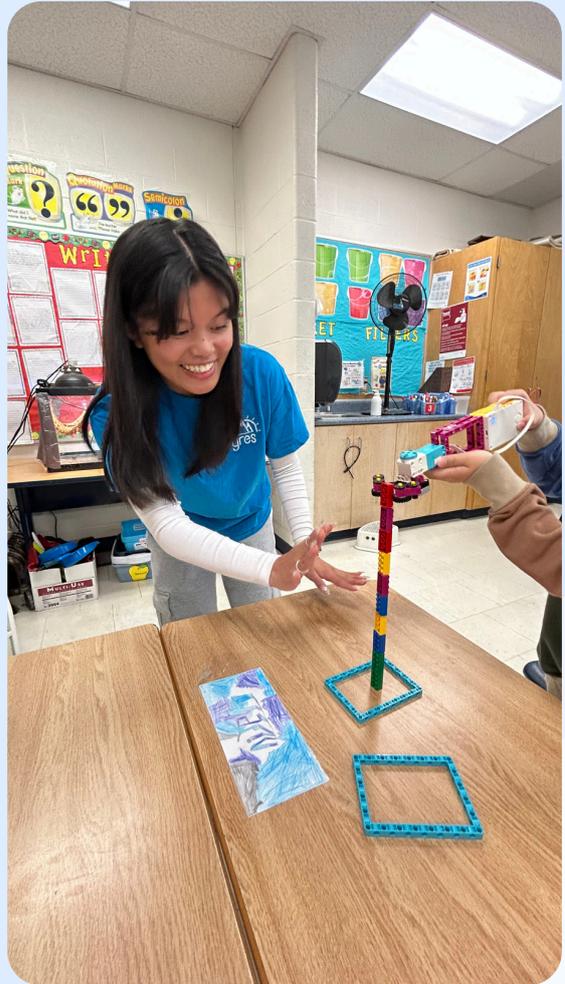
500 characters remaining

Give in honour or send an ecard (optional) [Add a Dedication](#)

4. Watch as your contribution positively impacts the community.

# Photo Gallery





# Contact Us & Sign-up Today!



[info@torontoeducation.org](mailto:info@torontoeducation.org)



647-282-9737



Scan to visit our website and sign-up!

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