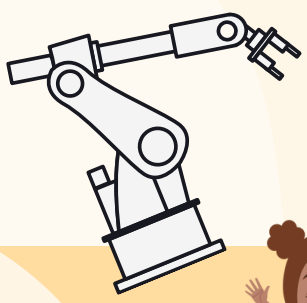
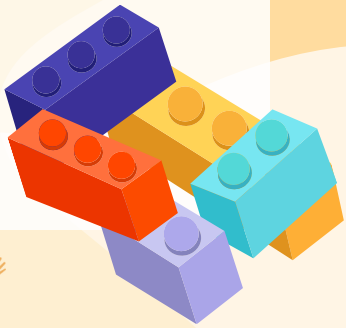
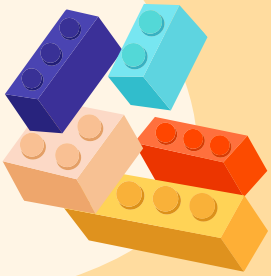
YORK REGION EDUCATIONAL SERVICES

LEGO Robotics Program







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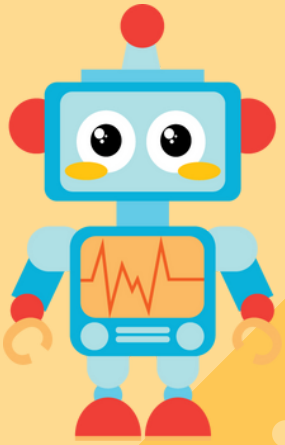
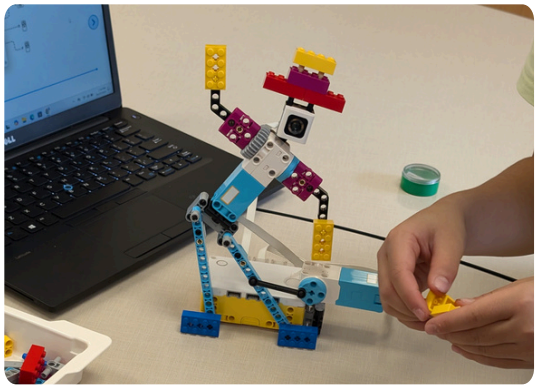


What is LEGO Robotics?

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. By incorporating sensors, motors, and controllers, LEGO Robotics offers an interactive way to learn about engineering, technology, and problem-solving. It's a hands-on approach that makes complex concepts accessible, empowering users—especially students and beginners—to develop skills in STEAM (Science, Technology, Engineering, Art, and Mathematics) in an engaging and enjoyable way.



Level Breakdown

	Introduction to STEAM Program	Introduction to Robotics Program	Advanced Robotics Program
AGE	**4-6 years old**	**7-9 years old**	**10-13 years old**
FOCUS	Intro to STEAM concepts	Intro to LEGO Robotics	Intermediate LEGO Robotics skills
KIT	LEGO STEAM Park	LEGO Spike Essentials	LEGO Spike Prime
ASSOCIATED ACTIVITIES	• Discover the basics of engineering by creating **simple** structures with LEGO DUPLO pieces. • Learn the fundamentals of STEAM concepts like gears, tracks, pulleys, and more. • Foster critical thinking skills by exploring solutions to **easy** challenges.	• Discover the basics of engineering by creating **simple** robots with LEGO pieces. • Learn fundamentals of coding through **short** programs on Scratch. • Foster critical thinking skills by exploring solutions to **easy** challenges	• Discover the basics of engineering by creating **useful** robots with LEGO pieces. • Learn the fundamentals of coding through **guided** programs on Scratch. • Foster critical thinking skills by exploring solutions to **intermediate** challenges.

Level Breakdown

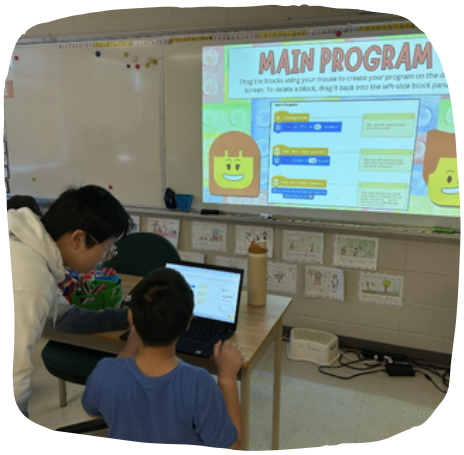
	Competition Prep Program	Competition Program
AGE	**14-15 years old**	**16+ years old**
FOCUS	Creating complex robots	Showcasing advanced robots in competition
KIT	LEGO Spike Prime Expansion	First LEGO League SUPERCHARGED
ASSOCIATED ACTIVITIES	• Discover the basics of engineering by creating **complex** robots with LEGO pieces. • Learn the fundamentals of coding through **extensive** programs on Scratch. • Foster critical thinking skills by exploring solutions to **difficult** challenges.	• Apply study you have leaned to create challenge robots using LEGO. • Get creative with coding **advanced** programs on Scratchsz to tackle specific challenges. • Transition from Scratch/Block coding to traditional languages like Python.

Previous Initiatives

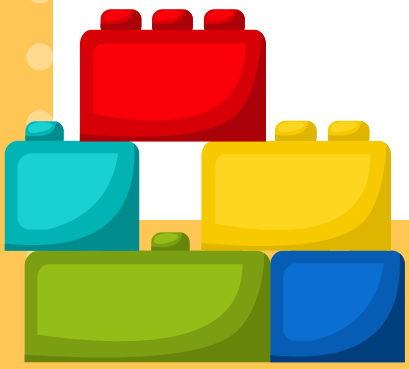
Parkview Public School

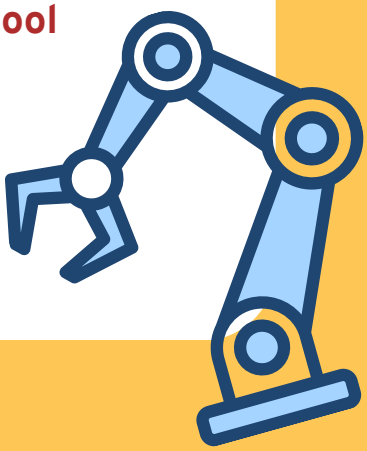
Stonebridge Public School

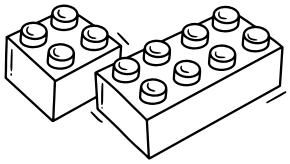
Julliard Public School



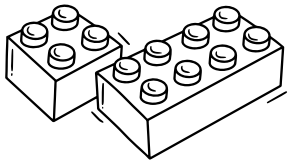
Castlemore Public School







FAQ



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 https://yorkeducation.org/donation/

Are there any additional costs for equipment?
No. All equipment—including LEGO kits and laptops—is provided.

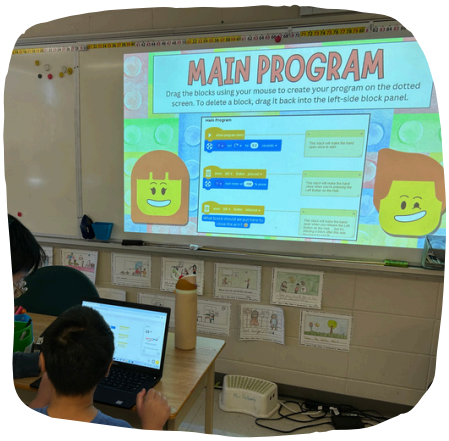
What is the student-to-coach ratio for the programs?
There will be one coach per group of 4-5 students.

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.

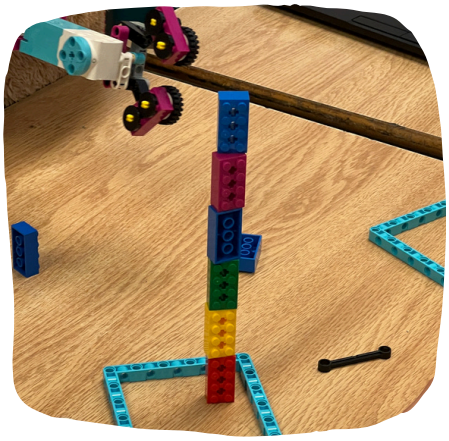
Transferable Skills

Teamwork and Collaboration



Coding skills using Scratch and Python

Hands-on experience with STEAM concepts



Problem-solving skills

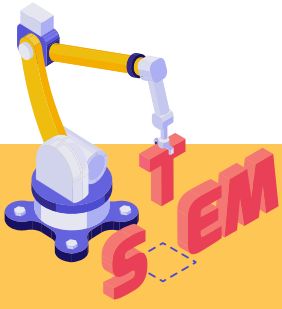
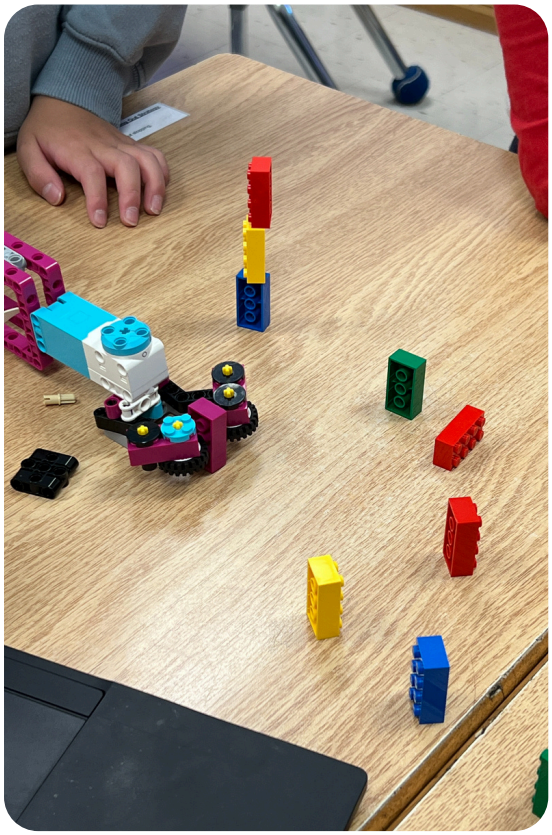
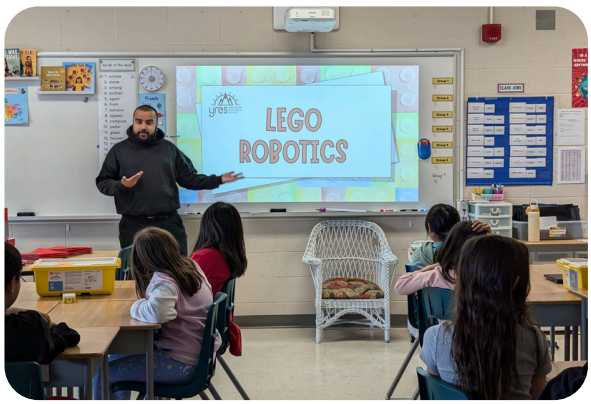


Photo Gallery





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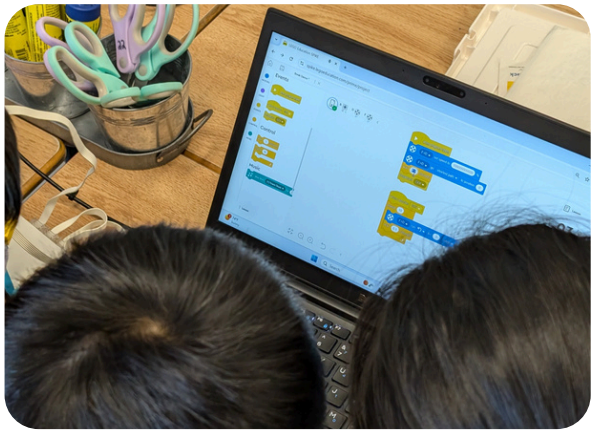
PENALTY

LEGO



Contact Us & Sign-up Today!

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