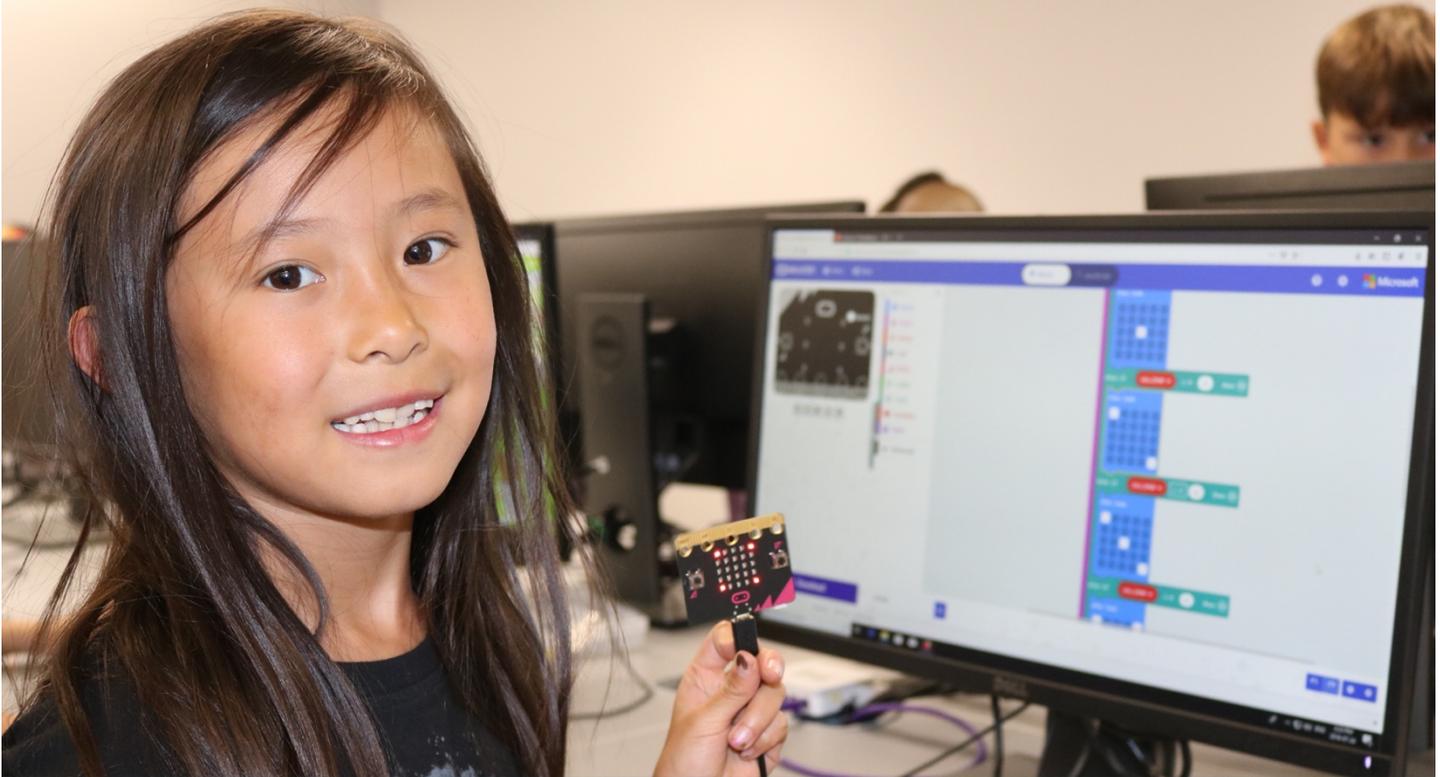




Summer Camps and Programs

"Setting the trend in youth technology education"



WORKSHOP PACKAGE 2021

Virtual Ventures offers a wide range of workshops in Science, Technology, and Engineering. Although our workshops are designed by grade, some accommodations may be made to provide a workshop for grades other than those listed. Please contact us to discuss prior to booking. All workshops will be delivered virtually, led by Instructors who will join remotely.

Virtual Options:

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Online Only Online Only workshops are computer-based lessons that only need a computer or laptop. If your school already has access to this equipment, then you are all set! If your school does not have access to this equipment, then it can be rented through Virtual Ventures.

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Supply Rental Supply Rental workshops are technology-based lessons that require a certain piece of equipment. The equipment required can be rented through Virtual Ventures, will be dropped off and picked up at your location (details below).

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Drop off Supplies Drop off Supplies workshops are engineering or science lessons that need craft or science supplies. All supplies needed will be dropped off by Virtual Ventures and can be kept by the students.

Rental Agreement:

Equipment (laptops and other tech. equipment) is available to rent to equip you for these workshops. Equipment will be lent at no cost; however, a rental agreement must be signed prior to the equipment drop-off. Your school/community centre etc. will be responsible for the replacement value (outlined in the rental agreement) should equipment be lost or damaged.

Pricing:

To receive the multiple booking workshop pricing below, workshops must be booked on the same day.

WORKSHOP PRICING (NO )		
# of workshops	\$/workshop	Total Cost
1	75	75
2-3	70	140 or 210
4+	65	260+

All workshops with a  symbol will be offered for FREE in Spring 2021!

If free workshop(s) and paid workshop(s) are booked on the same day, we will honor the multiple booking prices above.

DIGITAL LITERACY

WORKSHOP	DESCRIPTION	GRADE(S)	ON/OFF COMPUTER	LENGTH (HRS)
 Programming	An introduction to programming concepts with no coding involved! Using Scratch, a visual programming software, students will create games and animations that enhance science and technology knowledge.	2-5	ON Computer (laptops required*)	1.5-2 hours
	Students will learn basic coding by taking simple drawing commands and converting them to coding in Processing.	3-5	ON Computer (laptops required*)	1.5-2 hours
	Using TinkerCAD Codeblocks, a visual programming tool, students will learn the basics of the coordinate system and 3D modelling to create moving designs.	3-6	ON Computer (laptops required*)	1.5-2 hours
	Children will take the basics of programming to the next level and begin to put their logical thinking to the test with Python. Learn about functions, conditional programming and begin to work with the syntax of an industry standard language!	6-10	ON Computer (laptops required*)	2 hours
 Micro:bits	Micro:bits are tiny computers designed for beginners in electronics and coding. Learn the basics of coding to make animations and games!	3-5	ON Computer (laptops required*)	1.5-2 hours
	<i>See Earth & Space Systems workshops for Micro:bits grades 8-11</i>	5-8	ON Computer (laptops required*)	1.5-2 hours

*Laptops can be rented through Virtual Ventures, see the "Rental Agreement" section above

MECHANISMS & STRUCTURES

WORKSHOP	DESCRIPTION	GRADE(S)	ON/OFF COMPUTER	ONTARIO CURRICULUM CONNECTION	LENGTH (HRS)
Engineering Structures 	Civil engineers work to create strong, stable structures that can withstand powerful forces from nature. Students will learn about forces, weight, pressure and motion by participating in an engineering challenge to test constructions to their limits!	3-5	OFF Computer	Strong and Stable Structures; Forces Acting on Structures and Mechanisms	1.5-2 hours
Pulleys and Gears <i>*NEW*</i> 	Modern machinery is a marvel! Students will use Lego to take a look at the fundamentals of how the forces of our universe interact with our machinery to make our lives easier!	4-6	OFF Computer	Pulleys and Gears	1.5-2 hours

MATTER & ENERGY

WORKSHOP	DESCRIPTION	GRADE(S)	ON/OFF COMPUTER	ONTARIO CURRICULUM CONNECTION	LENGTH (HRS)
 Makey Makey	By mimicking a keyboard and mouse the Makey Makey lets you control any computer program with everyday objects. Students will create controllers and emit electrical signals to control the computer	3-6	ON Computer (laptops required*)	Electricity and Electrical Devices	2 hours
		7-10	ON Computer (laptops required*)	Electricity and Electrical Devices	2 hours
 Connecting the Circuit *NEW*	This workshop puts the power of electronics in the hands of everyone! Students will learn about circuits and electronic components like LEDs and resistors. Using an online software, they will discover how electrical devices work by designing and testing their own creations with no soldering or wiring required.	4-6	ON Computer (laptops required*)	Electricity and Electrical Devices	1.5-2 hours
 Chemistry	Students will learn about fundamental principles of chemistry by getting involved in hands-on experiments using household materials. This workshop is an interactive experience to familiarize with magical chemical reactions.	2-4	OFF Computer	Properties of Liquids and Solids	1.5-2 hours
		8	OFF Computer	Fluids	1.5-2 hours

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LIFE SYSTEMS

WORKSHOP	DESCRIPTION	GRADE(S)	ON/OFF COMPUTER	ONTARIO CURRICULUM CONNECTION	LENGTH (HRS)
 Habitats in 3D	Using a 3D design tool, students will strengthen science concepts learned in class by developing their own habitats and communities.	4	ON Computer (laptops required*)	Habitats and Communities	1.5-2 hours
 The Heart in 3D	Using a 3D design tool, students will strengthen science concepts learned in class by developing their own human heart.	5	ON Computer (laptops required*)	Human Organ Systems	1.5-2 hours
 Virtual Ecosystems *NEW*	Using Scratch – an online block-coding software, create a video game while learning about ecosystems! Add in characters and code them to interact with one another!	2-4	ON Computer (laptops required*)	Growth and Changes in Animals, Growth and Changes in Plants	1.5-2 hours

*Laptops can be rented through Virtual Ventures, see the "Rental Agreement" section above

EARTH & SPACE SYSTEMS

WORKSHOP	DESCRIPTION	GRADE(S)	ON/OFF COMPUTER	ONTARIO CURRICULUM CONNECTION	LENGTH (HRS)
Clean Water 	Students will learn about the sources and effects of water contamination in the environment. By building their own water purification systems, students will recognize the importance of water quality around the globe and get inspired to work towards the engineering challenges in water treatment processes.	2-3	OFF Computer	Air and Water in the Environment; Soils in the Environment	1.5-2 hours
		5-8	OFF Computer	Conservation of Energy Resources; Water Systems	1.5-2 hours
 Climate Change with Micro:bits 	Discover the ways Climate Change is affecting the world around you, and with coding, take action and make a difference!	8-10	ON Computer (laptops required*)	Climate Change; Earth's Dynamic Climate	1.5-2 hours

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OUR SUPPORTERS



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and Design**

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Youth · STEM · Innovation

Actua provides training, resources and support to its national network of members located at universities and colleges across Canada in the delivery of science, technology, engineering and mathematics (STEM) education outreach programming. Each year, these members engage over 300,000 youth in 500 communities nationwide. Please visit Actua at www.actua.ca.