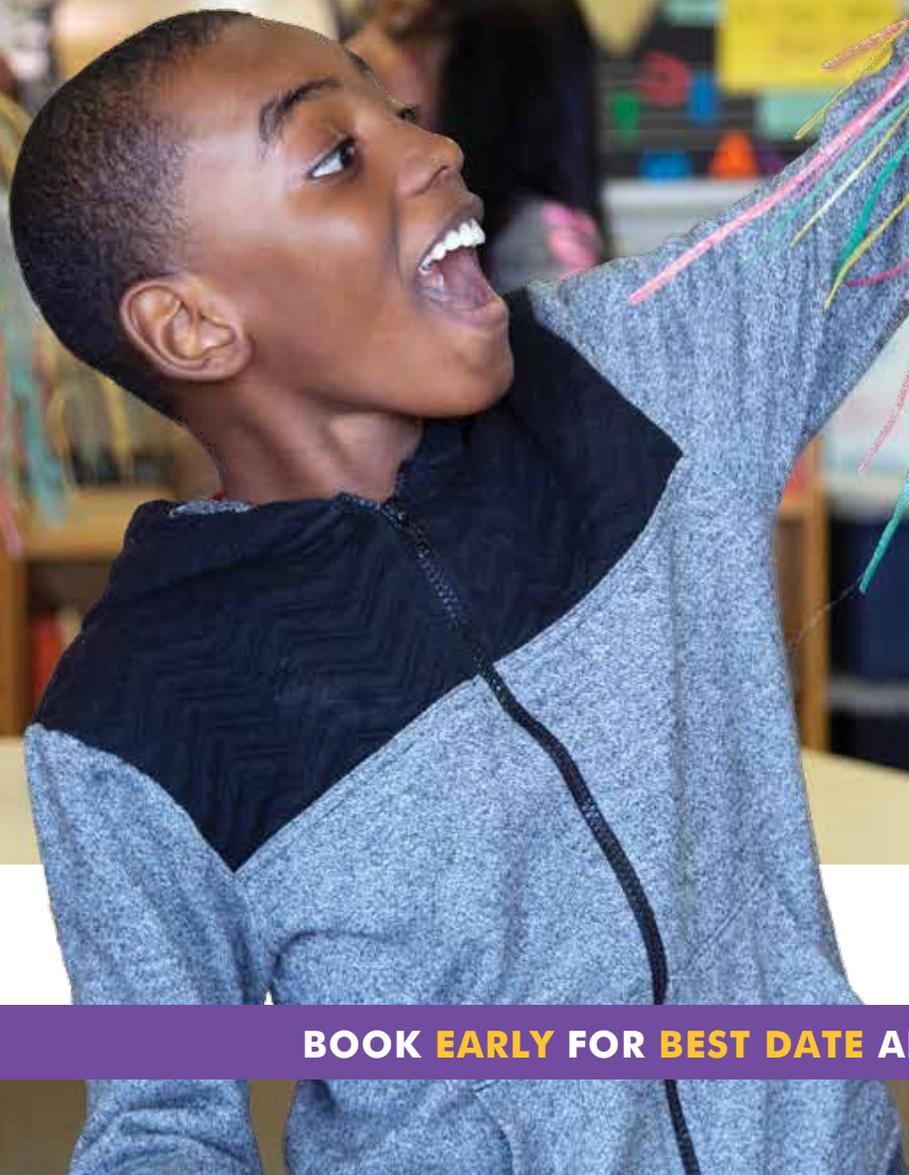




## SCIENTISTS IN SCHOOL PROGRAM CATALOGUE

Curriculum-aligned STEM workshops for Kindergarten to Grade 7

2019  
2020



**CALGARY AND THE SURROUNDING AREA**

**BOOK EARLY FOR BEST DATE AND TOPIC CHOICE!**

## SCIENTISTS IN SCHOOL

A non-profit offering experiential science, technology, engineering, math (STEM), and environmental workshops.

Your inquisitive students, under the guidance of experts, will become scientists, engineers and environmental stewards while developing the global competency skills they need for tomorrow's workforce.

### Our workshops offer:

- ~ An inquiry-based, real-world experience with plentiful scientific materials and equipment
- ~ Local presenters who are scientists, engineers, technologists and more
- ~ The opportunity to highlight STEM careers, helping students see themselves as future STEM professionals
- ~ Post-workshop extension packages to support your lessons
- ~ Fun and relevant investigations that build critical thinking, collaboration, creativity, communication, and problem-solving skills

We work with teachers, school administrators and school boards to ensure that our program aligns with curriculum, student and educator needs. Like you, our goal is to inspire all children to realize their dreams, regardless of their future aspirations.

## 30 YEARS STRONG



Thank you! Together, we have shaped the curious minds of more than nine million students since 1989.

We're here because of your dedication to providing your students with life-shaping opportunities. Here's to 30 more years of exploration, discovery, and meaningful collaboration. Let's continue to ensure that all children believe they can dream big and achieve the impossible.

## OUR ANNUAL IMPACT BY THE NUMBERS

(2018-2019: Organization-wide)



**700,000+**

Children and youth inspired through workshops



**24,872**

Half-day classroom workshops delivered



**62,000+**

Parent volunteers joined in the classroom



**2,000,000+**

Face time hours of investigation



**10,000,000**

Young scientists across Alberta and Ontario since 1989!

## COLLABORATORS IN EDUCATION

We use an evidence-based approach to provide high-impact workshops that enhance curriculum and provide real-world experiences for your students. A recent post-workshop survey\* showed:



**97%**

of teachers said Scientists in School was very to extremely effective in encouraging students to make discoveries



**92%**

of teachers said Scientists in School was very to extremely effective in enhancing students' understanding of scientific principles



**92%**

of teachers said Scientists in School was very to extremely effective in enhancing students' interest in STEM

\* Post-workshop survey completed by over 5,000 teachers across Alberta and Ontario in 2019.

## ABOUT SCIENTISTS IN SCHOOL

**Our Mission** is to ignite scientific curiosity in children so that they question intelligently; learn through discovery; connect scientific knowledge to their world; are excited about science, technology, engineering and math; and have their interest in careers in those fields piqued.

**Our Vision** is for all young Canadians to be actively engaged in the seeing, doing and understanding of science.

For information about our booking terms, conditions, and cancellation policy, please visit [www.scientistsinschool.ca/policies/](http://www.scientistsinschool.ca/policies/)

## KINDERGARTEN WORKSHOPS

Fee: \$190.00

Maximum 30 students/workshop

### Backyard Bugs

Meet some fascinating backyard bugs including members of the insect family. As an entomologist, investigate how bugs eat, see, hear and protect themselves. Create your own model insect to take home. Develop a new appreciation for the wonderful world of bugs.

### I Can Be A Scientist

Become a working scientist in the Scientists in School lab. Explore the weather while making it rain in the classroom! Discover the Big Dipper in our constellation tent. Put on a lab coat and goggles and explore solutions. Experience the interesting things that meteorologists, astronomers, paleontologists, chemists, and marine biologists do every day.

### Winter Wonders

Delve into the wonderful world of winter and embrace the cold. Conduct cool experiments and learn frosty facts about how people adapt to winter. Explore how local animals survive Canada's harsh climate. Identify winter birds, listen to their songs, and construct a bird feeder. Be a meteorologist and investigate winter weather.

"I think it dissolved. What do you think?"



**“By engaging our students so deeply, they begin exploring the world around them and asking questions, taking them on a path of discovery that they pursue with passion. This is science at its very best!”**



"I used real tools to explore fasteners!"

## GRADE ONE WORKSHOPS

Fee: \$190.00

Maximum 30 students/workshop

### Reasons For The Seasons

#### Topic B: Seasonal Changes

Adapt, hibernate or migrate? Investigate the variety of strategies people and wildlife use to survive the Canadian winter. Explore the insulating properties of animal coverings and discover some of the astounding distances animals travel to escape the cold. Uncover clues that the seasons are changing as you discuss the reasons for the seasons.

### Sensational Science

#### Topic D: Senses

Explore the power of your senses and how they help you experience the world. Discover sound waves, 'see' with your hands, trick your sense of taste and investigate the impact of light on vision. Challenge yourself to communicate without speaking, and identify how different animal's senses help them survive.

### Structures: Under Construction

#### Topic C: Building Things

Join our engineering team and build a structure capable of supporting your teacher. Discover the role of fasteners, the properties of materials, and the use of three-dimensional shapes in structural strength, all important concepts in building a successful structure.

## GRADE TWO WORKSHOPS

Fee: \$190.00

Maximum 30 students/workshop

### Looking At Liquids

Topic A: Exploring Liquids, Topic B: Buoyancy and Boats

Explore the three states of matter and use this knowledge to create a delicious treat. Use a thermometer to discover an amazing fact about melting and temperature. Investigate buoyancy and solubility. Take up the challenge to produce the world's biggest bubble.

### Magnet Mysteries

Topic C: Magnetism

Discover some powerful information about the world of magnetism and static electricity. Investigate magnetic and non-magnetic materials, different types of magnets, and magnetic strength. Create a temporary magnet, participate in magnetic car races and cause a magnetic field to become visible right before your eyes. You will be astonished at the role magnets play in our everyday lives.

### Never Say Ugh To A Bug

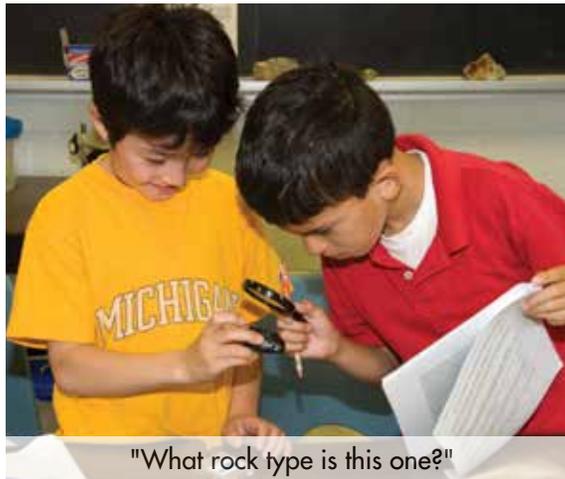
Topic E: Small Animals

Develop a new appreciation for small animals as an entomologist. Examine a variety of living and preserved specimens. Explore behaviour, habitat, adaptations and food sources. Discover and compare the benefit and beauty of small crawling and flying animals.

"Exploring solutions is so much fun!"



**“Scientists in School is always active, always hands-on, always about inquiry and exploration and gets the students excited and fired-up about learning. Scientists in School makes learning, discovery, and inquiry fun.”**



"What rock type is this one?"

## GRADE THREE WORKSHOPS

Fee: \$190.00

Maximum 30 students/workshop

### Don't Take Rocks For Granite

Topic A: Rocks and Minerals

Become a geologist as you learn about geological forces while making a metamorphic rock to keep. Test water erosion and observe how sediments settle in a Sedimentator. Use clues and tests to identify a mystery mineral. Explore igneous (extrusive and intrusive) rocks, use a soil sieve to analyze soil characteristics, and prepare a soil profile to take home.

### Life's Like That

Topic E: Animal Life Cycles

Discover the life story of a variety of small animals including their changing needs and environmental relationships. Meet living animals and examine preserved specimens. Identify what an owl has eaten by dissecting an owl pellet. Take away a new appreciation for the beauty and fragility of life.

### Structures: Stable and Strong

Topic B: Building Things, Topic C: Testing Materials

Build up your knowledge of structural strength and stability as junior engineers. Investigate forces and their impact on structures. Discover that the strength of a given material can be altered by its shape. Apply these concepts to design and build a successful bridge.

## GRADE FOUR WORKSHOPS

Fee: \$190.00

Maximum 30 students/workshop

### Light Up Your Life

Topic D: Light and Shadows

Join us on this optical adventure and discover how to see around corners and over walls. Discover the law of reflection. Explore how light travels, and split light into the colours of the rainbow. Check out interesting optical devices like periscopes, binoculars, and kaleidoscopes. Meet Ralph the very pink optical illusion.

### Plants Do Amazing Things

Topic E: Plant Growth and Changes

Join this botanical adventure and explore how a plant breathes, grows and stores its food. Examine leaf characteristics, explore plant adaptations and make your own recycled paper. Use a CO<sub>2</sub> indicator to investigate what leaves need for photosynthesis.

### What A Waste!

Topic A: Waste and Our World

Become an ecological steward! Investigate waste production and management, and discover the roles of natural processes and human technologies. Explore the impact of waste on our planet, and how consumer choices affect the environment. Build a mini composter and add some backyard friends to explore their role in waste management.

### Wheels In Motion: Pulleys, Gears, and Levers

Topic B: Wheels and Levers

Get your wheels moving in the physics lab with pulleys, gears, and levers. Build your own gear train and alter the direction of a force. Design and construct drive and pulley systems to discover the secrets of mechanics. Race your mousetrap car and discover the power of moving a fulcrum point.

"Another drop and we'll figure out the substance!"



**“Scientists in School is invaluable in supporting and promoting science. The workshops are fun, challenging, competitive and promote cooperation. The most reluctant student is always drawn in - who wouldn't be?”**



"Exploring how to close a circuit is fun!"

## GRADE FIVE WORKSHOPS

Fee: \$190.00

Maximum 30 students/workshop

### Electricity: Get Charged

Topic A: Electricity and Magnetism

Step into the engineering lab and build a human battery. Explore the nature of electricity, its generation and use. Investigate how static electricity makes objects move. Design and build circuits. Test conductors, insulators and switches. Explore electro-magnets, simple motors and use your own energy to power a generator.

### It Really Matters

Topic C: Classroom Chemistry

Unravel the mysteries of matter in our chemistry lab. Perform a variety of chemical reactions that involve both physical and chemical changes. Use your problem-solving skills to determine the identity of a mystery compound. Explore solids, liquids, gases and changes in state.

### Weather Watch

Topic D: Weather Watch

Nothing has more impact on our everyday lives than weather! Students will explore how air movement, water and the sun affect local and global weather conditions. Your meteorologists will recreate weather phenomena such as clouds and tornados and will take away a new understanding of the impact their actions have on our climate.

## GRADE SIX WORKSHOPS

Fee: \$190.00

Maximum 30 students/workshop

### Clued Into Forensic Science

Topic D: Evidence and Investigation

Be an amateur detective or forensic scientist and collect clues to investigate the scene of a crime. Discover evidence in your shirt sleeve when you analyze fibre samples. Test a mysterious white powder found at the scene. Test a mysterious white powder found at the scene. Analyze a ransom note using chromatography to identify the ink used to create it. It's a real whodunit.

### Let's Take Flight

Topic A: Air and Aerodynamics, Topic B: Flight

Explore the science behind powered and non-powered flight. Uncover the properties of air and the principles of flight. Find the best wing design and angle of attack for liftoff and experiment with the mechanics of propeller construction. Build a paper plane and become an aviator to investigate the speed of flight.

### Space: Above And Beyond

Topic C: Sky Science

Space: the great unknown. Together with your colleagues from the Canadian Space Agency, this is your mission: explore space and all the bodies that it holds - the sun, stars, moons, and the planets, navigate using the constellations, survive by building and using the Canadarm End Effector, explore human reaction times, and taste a space treat. See our world from a whole new perspective!

"My first propeller design is ready to test!"



**“Scientists in School has been an integral part of my students' curriculum for many years. The workshops are engaging, motivating and spark critical thinking while integrating STEM skills.”**



"Are your fingerprints loops too?"

## GRADE SEVEN WORKSHOPS

Fee: \$190.00

Maximum 30 students/workshop

### What On Earth!

Unit E: Planet Earth

Become a geophysicist and discover the relationship between tectonic plates, and volcano and earthquake locations. Calculate the cost of exploration as you drill for oil. Using chocolate, discover the processes of heating, cooling, and compression as you create "sedimentary", "metamorphic", and "igneous" rocks. Analyze mystery minerals, and identify rocks to construct a geological map.



**BOOK ONLINE AND SIGN UP TO RECEIVE STEM ACTIVITIES IN OUR E-NEWSLETTER AT [WWW.SCIENTISTSINSCHOOL.CA](http://WWW.SCIENTISTSINSCHOOL.CA)**

# SCIENTISTS IN SCHOOL

Workshop Booking Form for Calgary  
and the Surrounding Area

## To Book A Workshop Online:

Choose your topic(s) and book online at  
[www.scientistsinschool.ca](http://www.scientistsinschool.ca)

## By Fax or Mail:

1. Choose your topic(s), complete this booking form and copy for your files.
2. Fax or mail this booking form to:  
Scientists in School™  
47 Rutgers Road West  
Lethbridge, Alberta T1K 5Y4  
Fax: 403-394-9997
3. Your presenter will contact you within 1-2 weeks to schedule a date.

## Other Information:

1. Maximum class size: To ensure every child gets a hands-on experience, the maximum number of students is 30.
2. Allergy Advisory: Our presenters bring many different materials into the classroom. While we regularly maintain our workshop kits for cleanliness and safety, we cannot guarantee they are free from all allergens. Please advise us of any known allergies or special restrictions.
3. Booking Terms, Conditions and our Cancellation Policy can be found at [www.scientistsinschool.ca](http://www.scientistsinschool.ca).

## 2019–2020 Workshop Fee: \$190.00

Book early to ensure that you get your preferred day!

Application Date: \_\_\_\_\_  
Board: \_\_\_\_\_  
Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_  
School: \_\_\_\_\_

### Booking #1

Teacher: \_\_\_\_\_  
Grade: \_\_\_\_\_ Class Size: \_\_\_\_\_  
Email: \_\_\_\_\_  
Preferred Month: \_\_\_\_\_  
Topic: \_\_\_\_\_  
Time: \_\_\_\_\_ A.M. \_\_\_\_\_ P.M.  
Alternate Topic: \_\_\_\_\_  
Time: \_\_\_\_\_ A.M. \_\_\_\_\_ P.M.  
Special Notes: \_\_\_\_\_  
\_\_\_\_\_

Yes! Please add me to your email database to receive updates from Scientists in School.

### Booking #2

Teacher: \_\_\_\_\_  
Grade: \_\_\_\_\_ Class Size: \_\_\_\_\_  
Email: \_\_\_\_\_  
Preferred Month: \_\_\_\_\_  
Topic: \_\_\_\_\_  
Time: \_\_\_\_\_ A.M. \_\_\_\_\_ P.M.  
Alternate Topic: \_\_\_\_\_  
Time: \_\_\_\_\_ A.M. \_\_\_\_\_ P.M.  
Special Notes: \_\_\_\_\_  
\_\_\_\_\_

Yes! Please add me to your email database to receive updates from Scientists in School.

### Booking #3

Teacher: \_\_\_\_\_  
Grade: \_\_\_\_\_ Class Size: \_\_\_\_\_  
Email: \_\_\_\_\_  
Preferred Month: \_\_\_\_\_  
Topic: \_\_\_\_\_  
Time: \_\_\_\_\_ A.M. \_\_\_\_\_ P.M.  
Alternate Topic: \_\_\_\_\_  
Time: \_\_\_\_\_ A.M. \_\_\_\_\_ P.M.  
Special Notes: \_\_\_\_\_  
\_\_\_\_\_

Yes! Please add me to your email database to receive updates from Scientists in School.

### Booking #4

Teacher: \_\_\_\_\_  
Grade: \_\_\_\_\_ Class Size: \_\_\_\_\_  
Email: \_\_\_\_\_  
Preferred Month: \_\_\_\_\_  
Topic: \_\_\_\_\_  
Time: \_\_\_\_\_ A.M. \_\_\_\_\_ P.M.  
Alternate Topic: \_\_\_\_\_  
Time: \_\_\_\_\_ A.M. \_\_\_\_\_ P.M.  
Special Notes: \_\_\_\_\_  
\_\_\_\_\_

Yes! Please add me to your email database to receive updates from Scientists in School.

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**Thank you for inviting us  
into your classroom. Contact us  
at any time to check on the  
status of your booking.**

# SCIENTISTS IN SCHOOL™

47 Rutgers Road West, Lethbridge, Alberta T1K 5Y4 | 403-394-9804 / 1-844-794-9804 | Fax: 403-394-9997 | calgary@scientistsinschool.ca | www.scientistsinschool.ca

## PARTNERS IN STEM

Across our organization we are dedicated to engaging children, teachers and families through high-quality STEM enrichment. As a charity, donors help us to subsidize the cost of our 24,872 annual classroom workshops by approximately 15%, and provide over 2,000 complimentary workshops to schools serving low-income communities.

## CATALYST

Natural Sciences and Engineering Research Council of Canada - TD Friends of the Environment Foundation  
Toronto Pearson International Airport

## INNOVATION

Amgen Canada - John and Deborah Harris Family Foundation - Nuclear Waste Management Organization  
Ontario Power Generation

## IMAGINATION

ArcelorMittal Dofasco - General Motors Canada - McMillan LLP - Superior Glove Works Ltd. - TELUS

## DISCOVERY

Alectra Utilities - Aviva Community Fund - Cadillac Fairview - CAE - Canadian Nuclear Safety Commission  
Cameco Corporation - Carolyn Sifton Foundation - Celestica - Hamilton Community Foundation - MilliporeSigma  
Modern Niagara - Niagara Community Foundation - Pendle Fund at the Community Foundation of Mississauga  
Purdue Pharma - Society of Petroleum Engineers Canadian Educational Foundation - S.M. Blair Family Foundation  
Syngenta Canada Inc. - Systematix Inc. - The McLean Foundation

## EXPLORATION

Ajax Community Fund at Durham Community Foundation - Brant Community Foundation - Cajole Inn Foundation  
City of Brantford - Community Foundation Grey Bruce - Dwight and Karen Brown Family Fund - Ottawa  
Community Foundation - Elexicon Energy (Formerly Veridian Connections) - LabX Media Group Charity Fund  
at the Huronia Community Foundation - Siemens Millitronics Process Instruments - The Community Foundation  
of Orillia and Area - The County of Wellington - The Source - The Township of Tiny  
Whitby Mayor's Community Development Fund



**SCIENTISTS**  
IN SCHOOL

