

# CANADA SCIENCE AND TECHNOLOGY MUSEUM

School Programs 2014-2015



Preschool to  
Secondary School  
[sciencetech.technomuses.ca](http://sciencetech.technomuses.ca)



CANADA SCIENCE AND  
TECHNOLOGY MUSEUM

A FASCINATING WORLD



Canada

# General Information

Programs are available weekdays from September 23, 2014, to June 24, 2015, and are scheduled between 9:15 a.m. and 5 p.m.

## Planning Your Visit

We strongly recommend the following ratios for student supervision (by adults) when visiting the Museum.

Level	Student-Adult Ratio
Preschool to Grade 8 • Preschool to Cycle 1 (secondary)	10:1
Grades 9 and up • Cycle 2 (secondary) and up	15:1

During programs, Museum educators encourage teachers and accompanying adults to participate and assist. Proper supervision during free time is also essential to creating a safe and fun atmosphere at the Museum. **Teachers and supervisors are expected to remain with their students at all times.** Teachers may preview the Museum at any time at no cost by presenting proof of their teaching status at the admission desk.

## Reservations

Please reserve as early as possible to avoid disappointment. We recommend **a minimum of one month** in advance.

### Four ways to request a program:

**By telephone** 613-991-3053 or 1-866-442-4416

**By fax** 613-993-7923

**By Internet** [sciencetech.technomuses.ca](http://sciencetech.technomuses.ca)  
"School Zone"

**By email** [cts@technomuses.ca](mailto:cts@technomuses.ca)

Confirmation of your scheduled program will be sent to you via the means by which you registered. It is helpful to prepare your students for the program using the pre-visit package that will be sent to you.

**Space is limited — please reserve early!**

## Program Fees

Program	Fee per Student (taxes included)
<b>Museum in a Bag</b>	\$6.50
<b>Elementary and Intermediate Programs</b>	\$7
<b>Secondary School Programs</b>	\$8
<b>Guided Tours of Exhibitions</b>	\$8
<b>Time-Limited Programs</b>	
Biotechnology Lectures	\$6
Curriculum Days	\$7
Summer Fun Days	\$7
What Museums Do*	\$8
Energizing Program Package	\$15

\*Due to the nature of this program, groups must have a minimum of one adult supervisor per 10 students; maximum group size: 25 participants (larger groups can be divided).

### Minimum Fees

A minimum fee will be charged to groups under 20 students.

### Method of Payment

Fees may be prepaid or paid upon arrival, by cash, credit card, or cheque made payable to the *Canada Science and Technology Museum*.

### Cancellation Fees

For cancellations with more than 48 hours notice, a \$30 administration fee will apply unless the program is rescheduled within the same school year. No refunds for cancellations with less than 48 hours notice.

### Parking Fees

Hourly rates are in effect; free for buses

[sciencetech.technomuses.ca](http://sciencetech.technomuses.ca)

### Canada Science and Technology Museum

1867 St Laurent Boulevard  
P.O. Box 9724, Station T  
Ottawa, Ontario K1G 5A3

### Let's Talk Energy — Engaging Ideas for Canada's Future

This national multi-year initiative explores Canada's energy production, distribution, and consumption, and the greening of the country's energy network. School programs featuring this symbol  are components of this initiative.



**Let's Talk Energy**  
Engaging ideas for Canada's future  
[energy.technomuses.ca](http://energy.technomuses.ca)

# An exciting adventure in hands-on learning

The Museum's programs and workshops are designed to inspire students and bring your curriculum to life. Support materials, available upon reservation, help you make the most of these unique educational experiences.



## Browsing the Museum

All levels  
Duration: 60 minutes

Explore the Museum's main attractions and discover lesser-known treasures from the collection. This guided program provides participants with an overview of the amazing artifacts that the Museum has on display. Marvel at the fascinating technologies, past and present, that have shaped Canadian society. (ST24)

## Preschool to Grade 3 • Preschool to Cycle 2 (primary)

### An Invisible Attraction

Preschool to K  
Duration: 60 minutes

Explore the wonderful world of magnets in this hands-on workshop. Discover which materials are magnetic and which are not. Investigate the strength of magnets through fun, hands-on activities. Discover how to move an object using magnetic force, and learn the many ways in which magnets are used in our daily lives. (ST2)

## Museum in a Bag **New!**

Preschool to JK  
Duration: self-guided

This is a fun and engaging way for young inquiring minds to explore the Museum. Equipped with a bag of resources, you will lead students through a set of hands-on activities that complement your visit to the exhibitions. (ST58)

## Earth's Daily and Seasonal Cycles

K to Grade 3 • K to Cycle 1 (primary)  
Duration: 60 minutes

What is our primary source of heat and light? How do Earth's daily and seasonal cycles affect everyday life? Sun and Earth globes, and various activities, introduce concepts of heat, light, day, and night. Explore the changing seasons through hands-on activities in the Museum's **inflatable planetarium**. (ST37)

## Exploring Objects and Materials

K to Grade 3 • K to Cycle 1 (primary)  
Duration: 60 minutes

Can objects be made of more than one material? Use your senses to identify objects by how they look and feel. How do you make paper, plastic, and glass? Where do they come from? Hands-on activities illustrate how materials are produced, recycled, and how they can be fastened together to form objects. (ST4)

## Pushing and Pulling Forces

Grades 1 to 3 • Cycle 1 (primary)  
Duration: 60 minutes

What happens when you push or pull an object? Hands-on activity stations illustrate how gravity, static, magnetic, and muscular forces cause objects to move. Apply different levels of force to objects and see them move, attract, repel, or change direction. Find out which forces are applied through direct contact and which interact at a distance. (ST51)

## Liquids and Solids

Grades 1 to 3 • Cycle 1 (primary)  
Duration: 60 minutes

Investigate the properties of materials through an exploration of liquids and solids. Probe the differences between the three states of matter, interactions between liquids of different densities, solids that dissolve in liquids, and buoyancy. Design a boat and see how much weight it can support. (ST5)

## Energy and Forces ●

Grades 1 to 3 • Cycle 2 (primary)  
Duration: 60 minutes

Explore the role that the Sun, air, and water play in energy production. Discover how these natural forces are harnessed and their impact on our everyday lives. Hands-on activities reinforce the understanding that everything that happens is the result of some form of energy. (ST8)

## Science Seesaw and Simple Machines

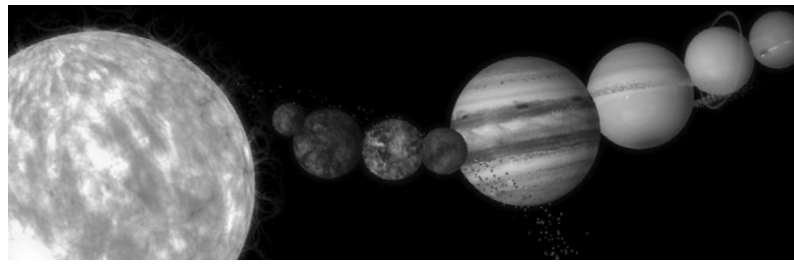
Grades 1 to 3 • Cycle 2 (primary)  
Duration: 60 minutes

Explore the principles of force and movement with this introduction to simple machines. Explore the terms *work* and *load* as you look at the basic principles of levers and inclined planes. Investigate a multitude of mechanical devices that have changed the way we live. (ST7)

## Structures and Shapes

Grades 1 to 3 • Cycle 2 (primary)  
Duration: 60 minutes

Experiment to discover the characteristics of different structures and how they are designed to meet specific needs. Try building a tower or bridging a river to learn which geometric shapes are the strongest. This workshop encourages students to use their problem-solving skills while building structures. (ST9)



## Grades 4 to 8 • Cycle 2 (primary) to Cycle 1 (secondary)

### Probing the Skies

Grades 4 to 6 • Cycle 2 (primary) to Cycle 1 (secondary)  
Duration: 75 minutes

Explore the components of our Solar System — touch real meteorites and compare the relative size of planets and asteroids. See the motions of the planets, Sun, Moon, and constellations in the Museum's **inflatable planetarium**, and discover their effects on cycles of day, night, seasons, and eclipses. See the tools of astronomy exploration in the **Helen Sawyer Hogg Observatory**. (ST10)

### Introduction to Electricity ●

Grades 4 to 6 • Cycle 3 (primary) to Cycle 1 (secondary)  
Duration: 75 minutes

What are current and static electricity? Discover how electrons move through an electrical conductor. Learn the role of simple circuit components and draw circuit diagrams. Use circuit boards to see how series and parallel circuits work, and how each is used. Measure the amount of electricity various light bulbs consume, and use devices that produce electricity. (ST13)

### Looking at Light

Grades 4 to 6 • Cycle 3 (primary)  
Duration: 75 minutes

Discover how light is produced and transmitted as you move through activity stations. Experiment with different materials to study reflection, refraction, and absorption. View the world through instruments such as microscopes, telescopes, periscopes, and kaleidoscopes, and use special filters to explore the world of colour. (ST12)

## Properties of and Changes in Matter

Grades 4 to 6 • Cycles 2 and 3 (primary)  
Duration: 75 minutes

Explore the properties of, and explain the changes in, the three basic states of matter through hands-on experimentation. Amusing scientific experiments and demonstrations illustrate the differences between reversible physical changes and non-reversible chemical reactions. (ST15)

## Sound Energy ●

Grades 4 to 6 • Cycle 2 (primary)  
Duration: 75 minutes

See, feel, and hear sound vibrations, echoes, and the absorption of sound energy with hands-on activities. Measure sound levels, create music with science, and learn how whales and other animals use pitch and loudness to communicate through water and air with sound. (ST16)

## Pulleys and Gears: Wonderful Machines

Grades 4 to 6 • Cycles 2 and 3 (primary)  
Duration: 75 minutes

Discover why pulleys, gears, the wheel, and the axle are such clever inventions, and how they reduce the force required to do work. Build gear trains using hands-on activity boards. Using model cranes, create a block and tackle to lift a heavy weight with minimal effort. Examine various applications of these devices as you discover pulleys and gears in everyday objects. (ST17)

## The Many Faces of Energy ●

Grades 4 to 6 • Cycles 2 and 3 (primary)  
Duration: 75 minutes

Discover the principle of energy conservation in this hands-on program. Experiment with devices that produce light, sound, and wind energy to identify energy transformations. Measure electrical energy consumption and discuss ways to consume less. What impact do renewable and non-renewable sources of energy have on our natural resources? What impact have developments in technology had on energy use in the home? (ST19)

## Prime Science

Grades 4 to 6 • Cycle 2 (primary)  
Duration: 75 minutes

Hands-on activities link measurement, geometry, and numeration to explore the science behind steam locomotives. Students investigate, calculate, and experiment with math and science surrounded by the Museum's giant locomotives. This is a great option for math and science classes alike. (ST57)

## Forces Acting on Structures

Grades 5 to 7 • Cycle 3 (primary) to Cycle 1 (secondary)  
Duration: 75 to 90 minutes

Explore the concept of force in this hands-on workshop. Learn the difference between tension and compression, and the ways that simple machines can reduce the force necessary to move an object. Build load-bearing cantilever, suspension, and arch bridges, and test your construction using different loads. See a crushing machine in action as it tests different materials to spectacular failure! (ST38)

## Zap, Zoom, Kaboom!

Grades 5 to 8 • Cycle 3 (primary) to Cycle 1 (secondary)  
Duration: 60 minutes

Participate in experiments that are just too big for a classroom in this electrifying science show. Make a hypothesis, experiment with energy, matter, and mechanisms, and cast your vote as we journey through the scientific method. For groups of 50 to 200. (ST47)

## Canadian Inventions and Innovations to Discover

Grades 5 to 8 • Cycle 3 (primary) to Cycle 1 (secondary)  
Duration: 75 minutes

Take pride in your heritage as you learn about Canadian inventions, discoveries, and innovations. Take part in a challenging Museum treasure hunt, in which small groups explore, in depth, one of the many contributions made by Canadians to science and technology internationally. Follow up by designing a new product or service, and discover the steps involved in becoming an inventor. (ST45)



## Grades 9 and up • Cycle 2 (secondary) and up

### Electricity: Characteristics and Applications ●

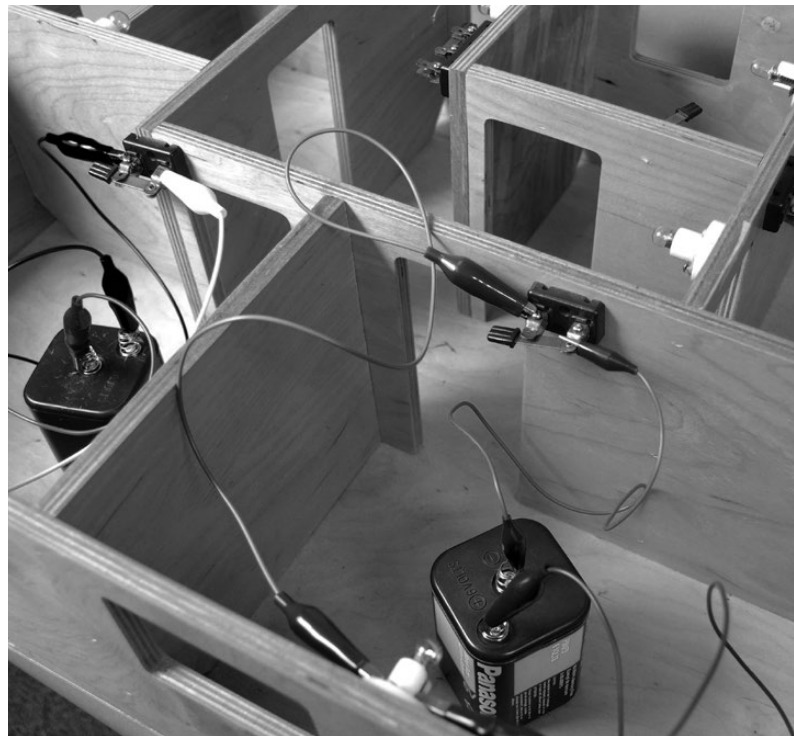
Grades 9 and 10 • Cycle 2 (secondary)  
Duration: 90 minutes

A hands-on introduction to electrostatics, circuits, and measuring devices. Use custom-designed activity boards to design, draw, and construct serial and parallel circuits. Use voltmeters and ammeters to learn about the various SI units of measurement, and to collect measurements on circuit boards. Explore electrical applications through an introduction to fuses and circuit breakers. (ST35)

### Criminal Science Investigation

Grades 9 and 10 • Cycle 2 (secondary)  
Duration: 90 minutes

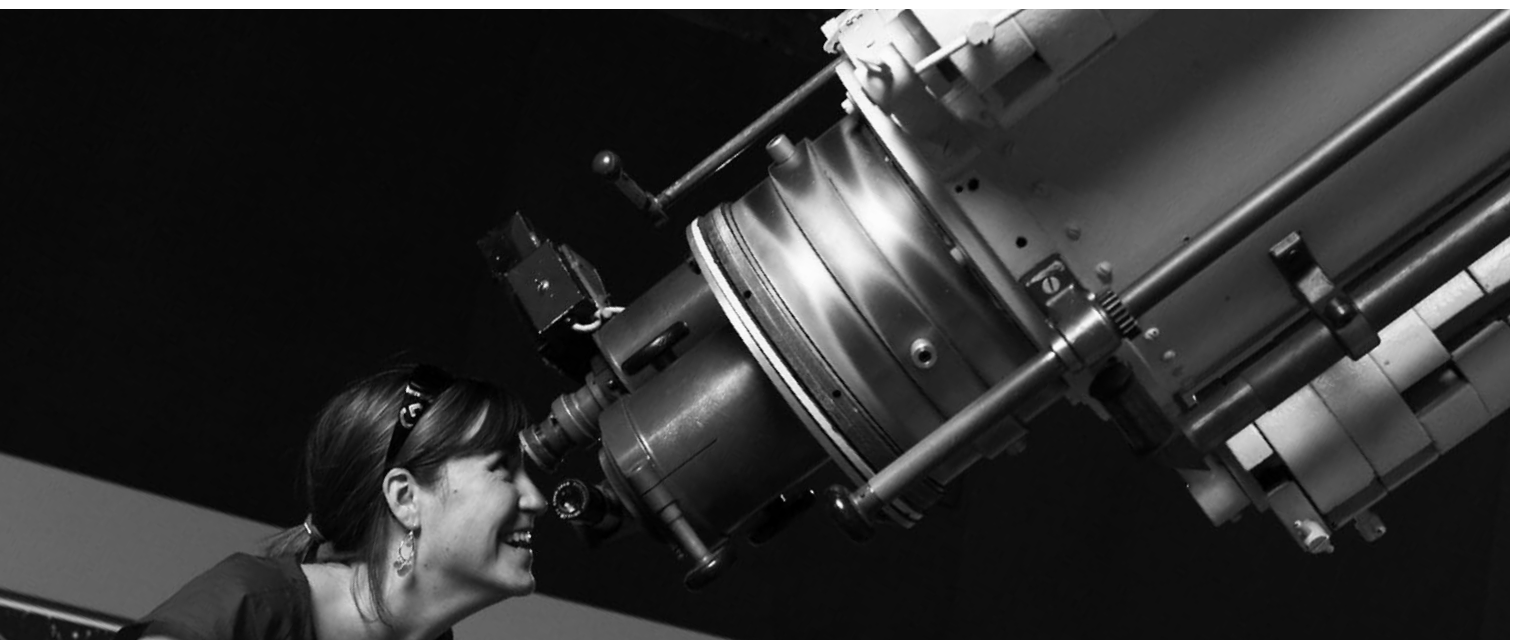
One of the conservators at the Museum has disappeared! Follow a trail of clues to determine what has happened. Discover how forensic science is used in real police investigations. Narrow the list of suspects through the use of fingerprinting, DNA testing, blood-splatter analysis, and more. (ST49)



### Studying the Universe

Grades 9 to 11 • Cycle 2 (secondary)  
Duration: 90 minutes

Learn about the life cycle of stars, from nebulae to black holes, galaxies, and beyond. Explore celestial motions in the Museum's **inflatable planetarium**, use a telescope to safely observe the Sun (weather permitting), and visit Canada's largest refracting telescope in the **Helen Sawyer Hogg Observatory**. (ST32)



# Time-Limited Workshops

Each workshop lasts 40 minutes and includes hands-on experiments and amazing demonstrations.

## Curriculum Days Workshops—

the perfect way to introduce or review your science units

**Choose two workshops for one great price: \$7 per student**

Grades 1 to 6 • Cycles 1 to 3 (primary)  
November 4 to 7, 11 to 14, 18 to 21, 2014

### Grade 1

**Objects and Materials:** Use your five senses to explore connections in the material world.

**Everyday Structures:** Build strong and stable structures, then test them in the Museum's construction challenges.

### Grade 2

**Liquids and Solids:** Experiment with density and buoyancy by designing and building your own boat.

**Simple Machines:** Explore force, movement, and work as you look at the basic principles of levers and inclined planes.

### Grade 3

**Pushing and Pulling Forces:** Explore forces that cause movement, including magnetism, static electricity, and gravity.

**Stability:** Build strong and stable structures using different materials, and test their ability to support a load.

### Grade 4

**Light:** Discover the properties of reflection and refraction using optical devices such as periscopes, telescopes, and microscopes.

**Pulleys and Gears:** Learn how these simple machines can provide mechanical advantage using changes in speed, direction, and force.

### Grade 5

**Forces Acting on Structures:** Construct different types of bridges that will support a load, and investigate the forces of tension and compression.

**Properties and Changes in Matter:** Explore reactions that absorb or release heat, reactions that are permanent or reversible, and the states of matter.

### Grade 6

**Electricity:** Explore insulating and conducting materials, static and current electricity, and construct your own series and parallel circuits.

**Space:** Explore the Earth and the Solar System, touch real meteorites, and observe the constellations in the Museum's inflatable planetarium.

## Summer Fun Days Workshops—

the perfect way to end the school year

**Choose two workshops for one great price: \$7 per student**

Grades 1 to 8 • Cycle 1 (primary) to Cycle 1 (secondary)  
June 8 to 12, 15 to 19, 22 to 24, 2015

### Grades 1 to 3

**Movie Making:** Explore your sense of sight through optical illusions and movies.

**The Magic of Colour:** Discover how we use colour to learn about the world around us.

**Boat Building:** Find out what floats and what doesn't. Build your own boat and test its buoyancy.

**Junior Detectives:** Use basic forensic skills such as fingerprinting, footprint identification, and microscopic examination to help solve a mystery.

### Grades 1 to 8

**Rockets:** Launch rockets while learning about forces and gravity.

### Grades 4 to 6

**Bridges:** Learn about the different types of bridge structures, and construct your own for a bridge-building contest.

**Catapults:** Design and build a catapult or trebuchet out of gears and levers, then test your creation on the target range.

### Grades 4 to 8

**Roller Coasters:** Learn about different forms of energy by constructing a working roller coaster track.

**Planetarium and Space:** Discover the scale of the Solar System, handle real meteorite rocks, and explore the summer sky in the Museum's inflatable planetarium.

**Liquid Nitrogen and Chemical Wonders:** Investigate the realm of the super-cold with liquid nitrogen, and play with polymer "Gak" and other slimy substances.

# Special School Programs and Events

8

## Celebrate National Science and Technology Week in Canada

October 17 to 26, 2014

Visit [science.gc.ca/nstw](http://science.gc.ca/nstw) for more information, or follow @SciTechWeek on Twitter.

## Energizing Program Package New!

October 21 to 24, 2014 — Celebrate National Science and Technology Week with your class

December 2 to 5, 2014

February 24 to 27, 2015 — Celebrate Let's Talk Energy Week with your class

Come to the Museum for a day packed with exciting curriculum-linked energy activities. Your package includes one 75-minute hands-on program — choose to learn about energy conservation with The Many Faces of Energy (page 5), or to explore circuits and electrostatics with Introduction to Electricity (page 4). The rest of your day includes the electrifying educational show Zap, Zoom, Kaboom! (page 5), one of the Museum's amazing stage demonstrations, and the EnerQuest scavenger hunt.

## What Museums Do: Behind the Scenes

Grades 5 and up • Cycle 3 (primary) and up  
October 24, 2014  
May 15, 2015

This Did you know that less than 2% of the Museum's collection is on display at any one time? Go behind the scenes and find out what exciting work is being done. Discover how artifacts are collected, restored, preserved, and stored as you visit the reserve collection and meet the people who work there. Learn what the collection reveals about the transformation of Canada. Reserve early — space is limited. (ST54)

## Science and Engineering Olympics

Grades 7 and up • Cycle 1 (secondary) and up  
February 18, 2015

This fun, hands-on, cross-curricular competition is designed to inspire students to consider careers in various science and engineering disciplines. Students work in teams, in one of six events, to conceptualize, create, design, build, and test their projects. On Olympics Day, teams bring their entries for testing before a panel of judges.

## Biotechnology Lectures

Grades 9 and up • Cycle 2 (secondary) and up  
May 5 and 6, 2015

Don't miss the Museum's popular Biotechnology Lecture Series, featuring two days of dynamic presentations by Canadian researchers and scientists. (The full lecture schedule will be available online in February 2015.) This annual lecture series is an opportunity for high school students to engage with prominent researchers and explore science, technology, and their impact on society.





# Virtual Programs

Downloadable activities to enrich your classroom



[sciencetech.technomuses.ca/english/schoolzone](http://sciencetech.technomuses.ca/english/schoolzone)

## Astronomy

Activities for Grades 2 to 12 • Cycle 1 (primary) to Cycle 2 (secondary)

Explore the night sky, Earth's daily and seasonal changes, and astronomical technologies that make modern astronomy possible.

## Cycle-ology

Activities for Grades 4 to 6 • Cycles 2 and 3 (primary)

Examine the science of bicycles and how they have changed through history, evolving from pastime to serious mode of transportation.

## Canadian Science and Engineering Hall of Fame

Activities for Grades 4 to 7 • Cycle 2 (primary) to Cycle 1 (secondary)

Discover how contributions in science and engineering affect our everyday lives, and their impacts on Canadian society.

## Weather Wise

Activities for Grades 4 to 7 • Cycle 2 (primary) to Cycle 1 (secondary)

Explore temperature, precipitation, air pressure, the greenhouse effect, climate change, and other common elements of weather.

## The Science of Sports

Activities for Grades 4 to 7 • Cycle 2 (primary) to Cycle 1 (secondary)

Discover how force, movement, and energy are involved in your favourite sports, and apply science theory to physical activities.

## Transportation, Energy, and the Environment

Activities for Grades 9 to 12 • Cycle 2 (secondary)

Put scientific and technological theory into practice as you explore contemporary transportation and energy issues.

9



Check out free online resources for teachers offered by affiliate Museums:

**Canada Agriculture and Food Museum**

[cafmuseum.techno-science.ca/en/education/educational-activity-kits.php](http://cafmuseum.techno-science.ca/en/education/educational-activity-kits.php)

**Canada Aviation and Space Museum**

[casmuseum.techno-science.ca/en/education/teacher-student-resources.php](http://casmuseum.techno-science.ca/en/education/teacher-student-resources.php)

# For Teachers

## Educational Web Videos

Discover the large number of short educational online videos for your classroom. Curriculum-linked themes include magnetism, astronomy, chemistry, sound, optics, fluids, and much more.

## Discover the Museum Days

Faculties of education, co-ordinators, and principals: help teachers rediscover the Museum as a teaching resource. **Free** sessions at the Museum are available for groups of **20** or more teachers who also book a guided tour of the Museum. Sessions familiarize teachers with the Museum's exhibitions, programs, online resources, and educational services (available September to January).

## Teacher Appreciation Evening

Wednesday, October 22, 2014, 5:30 p.m. to 7:30 p.m.

Teachers enjoy an exclusive after-hours visit to the Museum to explore the newest exhibitions and activities. Learn about the Museum's school offerings and teacher resources available for all grades.

If you would like to be invited to this and other teacher events, please email [education@technomuses.ca](mailto:education@technomuses.ca).

## ENRICH YOUR EXPERIENCE

The Museum knows you want your class visit to the Museum to include rich **curriculum connections** that build on and **enhance classroom learning**. Find pre-visit activities and planning tips for your visit at [sciencetech.technomuses.ca](http://sciencetech.technomuses.ca).



## Be the first to know!

Want to be the first to hear about new classroom resources and school programs?

Subscribe to the Museum's teacher mailing list — email [education@technomuses.ca](mailto:education@technomuses.ca) and include the word *subscribe* in the subject line.



# Curriculum Connections

The Museum's school programs meet many learning objectives for students from preschool through Grade 10/Cycle 2 (secondary). Profiling how **science** and **technology** affect **society** and the **environment**, these programs have a unique Canadian perspective, and offer students rich opportunities to explore, discover, and appreciate scientific achievement, with links to curricula in **history**, the **social sciences**, and **math**, as well as **science and technology**.

11

## Ontario

### Kindergarten

Exploring Objects and Materials (p. 3)  
An Invisible Attraction (p. 3)  
Earth's Daily and Seasonal Cycles (p. 3)



Level	Structures and Mechanisms	Matter and Energy	Earth and Space Systems
1	<b>Material Objects and Everyday Structures</b> Exploring Objects and Materials (p. 3) Structures and Shapes (p. 4) Curriculum Days (p. 7) Summer Fun Days (p. 7)	<b>Energy in Our Lives</b> Energy and Forces (p. 4) Curriculum Days (p. 7)	<b>Daily and Seasonal Changes</b> Earth's Daily and Seasonal Cycles (p. 3)
2	<b>Movement</b> Science Seesaw and Simple Machines (p. 4) Curriculum Days (p. 7)	<b>Properties of Liquids and Solids</b> Liquids and Solids (p. 4) Curriculum Days (p. 7) Summer Fun Days (p. 7)	<b>Air and Water in the Environment</b> Energy and Forces (p. 4) Liquids and Solids (p. 4)
3	<b>Strong and Stable Structures</b> Structures and Shapes (p. 4) Curriculum Days (p. 7) Summer Fun Days (p. 7)	<b>Forces Causing Movement</b> Pushing and Pulling Forces (p. 4) Energy and Forces (p. 4) Curriculum Days (p. 7)	
4	<b>Pulleys and Gears</b> Pulleys and Gears: Wonderful Machines (p. 5) Prime Science* (p. 5) Curriculum Days (p. 7)	<b>Light and Sound</b> Looking at Light (p. 4) Sound Energy (p. 5) Curriculum Days (p. 7)	

Continued on next page...

# Ontario

Level	Structures and Mechanisms	Matter and Energy	Earth and Space Systems
<b>12</b>			
<b>5</b>	<b>Forces Acting on Structures and Mechanisms</b> Forces Acting on Structures (p. 5) Prime Science* (p. 5) Zap, Zoom, Kaboom! (p. 5) Curriculum Days (p. 7) Summer Fun Days (p. 7)	<b>Properties of and Changes in Matter</b> Properties of and Changes in Matter (p. 5) Zap, Zoom, Kaboom! (p. 5) Curriculum Days (p. 7) Summer Fun Days (p. 7)	<b>Conservation of Energy and Resources</b> Introduction to Electricity (p. 4) The Many Faces of Energy (p. 5) Curriculum Days (p. 7) Summer Fun Days (p. 7)
<b>6</b>	<b>Electricity and Electrical Devices</b> Introduction to Electricity (p. 4) The Many Faces of Energy (p. 5) Zap, Zoom, Kaboom! (p. 5) Curriculum Days (p. 7)		<b>Space</b> Probing the Skies (p. 4) Curriculum Days (p. 7) Summer Fun Days (p. 7)
<b>7</b>	<b>Form and Function</b> Forces Acting on Structures (p. 5) Canadian Inventions and Innovations to Discover (p. 5) Zap, Zoom, Kaboom! (p. 5) Summer Fun Days (p. 7) Science and Engineering Olympics (p. 8)	<b>Pure Substances and Mixtures</b> Zap, Zoom, Kaboom! (p. 5) Summer Fun Days (p. 7)	<b>Heat in the Environment</b> Zap, Zoom, Kaboom! (p. 5)
<b>8</b>	<b>Systems in Action</b> Zap, Zoom, Kaboom! (p. 5) Canadian Inventions and Innovations to Discover (p. 5)	<b>Fluids</b> Zap, Zoom, Kaboom! (p. 5) Summer Fun Days (p. 7) Science and Engineering Olympics (p. 8)	

\*In addition, Prime Science supports the Ontario mathematics curriculum for Grades 4, 5, and 6.

Level	Chemistry	Physics	Biology	Earth and Space Systems
<b>9</b>	Criminal Science Investigation (p. 6) Science and Engineering Olympics (p. 8)	Electricity: Characteristics and Applications (p. 6) Science and Engineering Olympics (p. 8)	Biotechnology Lectures (p. 8)	Studying the Universe (p. 6)
<b>10</b>	Criminal Science Investigation (p. 6) Biotechnology Lectures (p. 8) Science and Engineering Olympics (p. 8)	Science and Engineering Olympics (p. 8)	Biotechnology Lectures (p. 8)	



# Quebec

## Kindergarten

Exploring Objects and Materials (p. 3)  
An Invisible Attraction (p. 3)  
Earth's Daily and Seasonal Cycles (p. 3)

## Primary

### Mathematics, Science and Technology

#### Science and Technology

**Competency — To explore the world of science and technology**

#### The Material World

Exploring Objects and Materials (p. 3)  
Liquids and Solids (p. 4)  
Pushing and Pulling Forces (p. 4)

#### Earth and Space

Earth's Daily and Seasonal Cycles (p. 3)  
Summer Fun Days (p. 7)  
Curriculum Days (p. 7)

### Mathematics, Science and Technology

### Social Sciences

#### Science and Technology

**Competency 1 — To propose explanations for or solutions to scientific or technology problems**

**Competency 2 — To make the most of scientific and technological tools, objects, and procedures**

#### The Material World

Structures and Shapes (p. 4)  
Science Seesaw and Simple Machines (p. 4)  
Looking at Light (p. 4)  
Sound Energy (p. 5)  
Pulleys and Gears: Wonderful Machines (p. 5)  
Prime Science (p. 5)  
Forces Acting on Structures (p. 5)  
The Many Faces of Energy (p. 5)  
Properties of and Changes in Matter (p. 5)  
Introduction to Electricity (p. 4)  
Zap, Zoom, Kaboom! (p. 5)

#### Earth and Space

Energy and Forces (p. 4)  
Probing the Skies (p. 4)  
Summer Fun Days (p. 7)  
Curriculum Days (p. 7)

#### Geography, History, and Citizenship Education

**Competency 2 — Interpret change in a society and its territory**

Browsing the Museum (p. 3)  
Canadian Inventions and Innovations to Discover (p. 5)  
What Museums Do: Behind the Scenes (p. 8)

In addition, *all* of the Museum's programs support the objective of Cycles 2 and 3, Competency 3 — To communicate in the languages used in science and technology.

Continued on next page...

# Quebec

14

## Secondary



### Mathematics, Science and Technology

### Social Sciences

## Cycle 1

#### Science and Technology

**Competency 1 — Seeks answers or solutions to scientific or technological problems**

**Competency 2 — Makes the most of his/her knowledge of science and technology**

#### The Material World

Zap, Zoom, Kaboom! (p. 5)

Summer Fun Days (p. 7)

#### Earth and Space

Probing the Skies (p. 4)

Introduction to Electricity (p. 4)

Summer Fun Days (p. 7)

#### The Technological World

Canadian Inventions and Innovations to Discover (p. 5)

Forces Acting on Structures (p. 5)

Summer Fun Days (p. 7)

#### History and Citizenship Education

**Competency 1 — Examines social phenomena from a historical perspective**

**Competency 3 — Constructs his/her consciousness of citizenship through the study of history**

Browsing the Museum (p. 3)

Canadian Inventions and Innovations to Discover (p. 5)

What Museums Do: Behind the Scenes (p. 8)

## Cycle 2

#### Science and Technology

**Competency 1 — Seeks answers or solutions to scientific or technological problems**

**Competency 2 — Makes the most of his/her knowledge of science and technology**

#### The Material World

Electricity: Characteristics and Applications (p. 6)

#### The Living World

Criminal Science Investigation (p. 6)

Biotechnology Lectures (p. 8)

#### Earth and Space

Studying the Universe (p. 6)

#### History and Citizenship Education

**Competency 1 — Examines social phenomena from a historical perspective**

**Competency 3 — Strengthens his/her exercise of citizenship through the study of history**

Browsing the Museum (p. 3)

What Museums Do: Behind the Scenes (p. 8)

In addition, *all* of the Museum's programs support the objective of Competency 3 — To communicate in the languages used in science and technology.

