



presents



Science in Motion is a TELUS World of Science™ - Edmonton exclusive that brings exciting science programs and presentations to your doorstep.

Through experiments, demonstrations and hands-on activities, we make science fun, dynamic and easy to understand. **Science in Motion** is also a valuable resource because it meets the learner objectives set out by the Alberta Science Curriculum.

We offer a variety of classroom, assembly and community presentations customized to fit the applicable grade level's curriculum. We also offer teacher in-services tailored to the specific needs of your staff.

Science in Motion saves you time, travel costs and equipment expenses by bringing our exciting, affordable, and convenient programs to your locale.

Science in Motion is made possible through the generous support of the following sponsors:

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QUICK REFERENCE SUMMARY

Grade Level	Program	Grade Level	Program	Grade Level	Program
Kindergarten	Bubble, Bubble Chilling Out	Grade 4	Simple Machines Light Fantastic Thrill Rides	Grade 7, 8	Simple Machines Thrill Rides
Grade 1	Bubble, Bubble Chilling Out Colour Light	Grade 5	Complete the Circuit Weather Works Who Haz What	Grade 9	Simple Machines
Grade 2	Boats and Floats Bubble, Bubble Chilling Out Magnetic Marvels	Grade 6	All About Flight Heavenly Bodies Who Haz What	Assembly Presentations	Chemistry Cryogenics Electricity Fire & Gas Physics
Grade 3	Gravel, Grit & Grime Simple Machines Sounds Around Thrill Rides				

All of our presentations and offerings are described in detail on pages 3 and 4.

PROGRAM FEES

General Information	Booking a full day (4 programs) qualifies you for a 20% discount based on regular published prices (not to be combined with any other offer). Schools with an Aboriginal student population of 50% or more may be eligible for additional discounts on our regular presentation fees. Please call (780) 451-3344 (press 4, then 1) for details. <i>An \$80.00 per day travel charge will apply to all bookings.</i>
Classroom Presentations (GST exempt)	1-hour presentations cost \$100.00 1.5-hour presentations cost \$130.00 <i>Maximum of 30 students per presentation.</i>
Assembly Presentations (GST exempt)	\$170.00 per presentation for groups up to 250 students. <i>For groups over 250 students add \$0.50 per student.</i>
Teacher In-services	These presentations are tailored to your specific needs. Please call for more information and fee schedule.
Community Presentations (Plus GST)	\$200.00 per program. Bookings for these programs will need to be coordinated with other presentations in your area. Maximum of 30 participants. Discounts do not apply to these courses.
Science Brainteasers	Free when booking a full day of programs, experience a variety of fun and challenging puzzles for the students and staff to enjoy. Brainteasers must be requested at the time of booking.

BOOKING INFORMATION

For more information on booking your *Science in Motion* presentation call our Outreach Coordinators at (780) 451-3344 (press 4, then 1), you may fax your request to (780) 453-1983, or e-mail us at sim@telusworldofscienceedmonton.com.

To ensure effective use of resources, bookings will be organized around a 3-day presentation week (Tuesday to Thursday). For single or two-day bookings, we will try to arrange a full 3 days in your area. All bookings are tentative until the week has been filled.

Science in Motion strives to serve communities further than 100 km from Edmonton. We invite local communities to visit TELUS World of Science and make use of our in-house school programs.

CANCELLATION POLICY

An administration fee of \$50.00 per day will be applied to any full or partial cancellation of a booking.

CLASSROOM PRESENTATIONS

All About Flight – 1 hour

Grade 6 *Air and Aerodynamics*
Flight

How are aircraft able to take flight? As engineers, students build gliders and other flying machines while learning about the properties of air and aerodynamics.

Boats & Floats – 1 hour

Grade 2 *Buoyancy and Boats*

What floats and what sinks? You may be surprised! Students learn the basics of buoyancy and density as they build 2 different boats and test them in our water tanks. Perform an experiment to see how a submarine dives and rises and build a hydrometer.

Bubble, Bubble – 1 hour

Kindergarten

Grade 1 *Creating Colour* Grade 2 *Exploring Liquids*
Building Things *Math - Geometry*
Math – Geometry

Can you blow the biggest bubble? Student ‘bubbleologists’ create amazing bubble masterpieces. Use everyday tools to explore the shapes and colours of bubbles through hands-on experiments.

Chilling Out – 1 hour

Kindergarten

Grade 1 *Seasonal Change* Grade 2 *Hot and Cold Temps.*
Plants and Animals

How do polar bears stay warm in the cold Arctic climate? Students discover some heat keeping secrets and experiment with the effect of heat on cold air molecules. We also make a tasty cool treat using liquid nitrogen.

Colour Light – 1 hour

Grade 1 *Creating Colour*

What is colour and how do we see it? Students discover the spectrum that makes up white light and experiment with colour mixing and separation.

Complete the Circuit – 1 hour

Grade 5 *Electricity and Magnetism*
Mechanisms Using Electricity

Has the house been wired to code? As electricians, students learn how to draw the diagrams for simple, series and parallel circuits. They build each circuit on a special electrical “house” to activate lights, a doorbell and a window alarm.

Gravel, Grit and Grime – 1 hour

Grade 3 *Rocks and Minerals*

How is Graphite different from Galena? As geologists, students learn to identify minerals through observation and testing. They can also examine a variety of rocks to understand their formation

Heavenly Bodies – 1 hour

Grade 6 *Sky Science*
Greece: An Ancient Civilization

What can you see in the night sky? As backyard astronomers, students observe a variety of celestial phenomena during a slide show. The night sky is recreated inside our mobile inflatable planetarium, where students learn to navigate their way through the constellations.

Light Fantastic – 1 hour

Grade 4 *Light and Shadows*

How does light travel? Students use a variety of optical devices to reflect and refract light. They also learn how the eye sees colour and experiment with coloured shadows.

Magnetic Marvels – 1 hour

Grade 2 *Magnetism*

What is attracted to a magnet and what is not? Students explore magnetic forces, observe magnetic fields and build a magnetic levitator to take home.

Simple Machines – 1 hour

Grade 3 *Building with a Variety of Materials*
Testing Materials and Designs
Grade 4 *Wheels and Levers* Grade 8 *Energy and Machines*
Building Devices
Grade 7 *Structure and Designs* Grade 9 *Pressure*
Force and Motion

What are simple machines and how are they useful in our world? As engineers, students construct model machines using LEGO® Technic 1 or Pneumatic Kits and design solutions to mechanical problems.

Sounds Around – 1 hour

Grade 3 *Hearing and Sound*

Can we make noise in outer space? Students explore how sound travels and how it is heard. They learn about sound waves and observe the pitch and loudness of their voices on an oscilloscope.

Thrill Rides – 1.5 hours

Grade 3 *Building with a Variety of Materials*
Testing Materials and Designs
Grade 4 *Building Devices and Vehicles*
that Move
Grade 7 *Structure and Designs*
Force and Motion
Grade 8 *Energy and Machines*
Sr. High *Physics*

Can the team build an exciting ride with the required loops, curves and drops? Students explore the science of energy and motion as they design and construct an elevated roller coaster.

Weather Works – 1 hour

Grade 5 *Weather Watch*

What are the driving forces of weather? Students get a taste of meteorology and the connection between Earth’s orbit, rotation, tilt and weather. They learn how to read a weather map and make a take-home instrument.

Who Haz What – 1 hour

Grade 5 *Classroom Chemistry*
Grade 6 *Evidence and Investigation*

Can the team identify the mystery spill? As members of an emergency response team, students test several “hazardous” substances to determine their physical and chemical properties

ASSEMBLY PRESENTATIONS

These are designed to appeal to a *wide range of grade levels* and to spark students' general interest in each topic.

For the Love of Chemistry – 1 hour

What puts the fizz into soda pop? Prepare yourself for exciting sights and sounds and a tasty treat as we explore the world of chemistry. Students will not be the only things reacting during this presentation!

Cryogenics – 1 hour

Experience the ultimate cool as we explore the effects of liquid nitrogen on matter. Discover "what's the matter" when gases, liquids and solids are exposed to temperature changes.

Electricity – 1 hour

Discover the shocking world of electricity and charged particles. We explore static electricity, current electricity, attraction and repulsion through the use of a Plasma Globe, Tesla Coil, and a Van DeGraaff Generator. We also do a water experiment that's sure to *shock* you!

Fire & Gas – 1 hour

Fire – friend or foe? We explore this fascinating phenomenon with an in depth look into combustion. Observe the creation of a fire cyclone. See flames of bright fuchsia, green, and red. Solve the mystery of the gases. Students are sure to get a *BANG* out of this assembly.

Physics in Motion! – 1 hour

Explore classical physics as we learn about Sir Isaac Newton and his discovery of the laws of motion. Watch as we apply these laws to understanding the motion of everyday objects.

TEACHER IN-SERVICES

In-services complementing the Alberta Science Curriculum are available. We can design a special in-service for your staff. Contact our Outreach Coordinators to discuss your requirements.

COMMUNITY PRESENTATIONS

Science in Motion offers evening presentations to serve the needs of communities across Alberta. These presentations, however, can only be offered when the outreach team is presenting at a local school during the day. Please call us to find out when we are scheduled to be in your area. (\$200, plus GST)

So This Is Science – 1 hour

A bit of this and that... 'So This is Science' tries to spark the imagination and a desire for learning. Participate in a variety of demonstrations for the "fun of science." Maximum capacity is 250.

The Night Sky – 1 hour

Tour the Solar System and its celestial bodies through slides and a visit to our Mobile Planetarium. Maximum capacity for planetarium is 30.

Brownie, Guide and Cub Astronomy Courses – 1 hour

Where applicable, the course qualifies the student for a badge. The course includes: a slide show, a discussion on the Solar System, identifying and drawing constellations, making a star chart and a presentation on the night sky in the Mobile Planetarium. Maximum capacity is 30.

