

# GRADE EIGHT WORKSHOPS

## AND THE BAND PLAYED ON

### SPECIAL INTEREST

Join the classroom orchestra. Compose and perform a unique piece of music on instruments you have designed and built! Along this musical journey, discover the fundamental concepts of sound and factors affecting frequency and amplitude. Examine good tone production, discover the rich history of musical instruments and explore music from around the world.

## BRAINSTORM: JOURNEY TO THE CENTRE OF THE MIND

### SPECIAL INTEREST

Travel the information highway to uncover the properties and functions of the human brain! On this journey, discover which side of your brain is dominant, learn how neurons send messages and explore strategies that improve memory. Examine and categorize optical illusions and explore how the brain works together with the sensory organs to help us understand our world.

## CELL EXPLORERS: INVESTIGATING CELL STRUCTURE AND FUNCTION

### LIFE SYSTEMS

Become a cell biologist and examine a variety of plant and animal cells using compound microscopes and a videoscope. Examine your own cheek cells and other human body cells to determine their structure. Make wet mounts of plant cells and compare their structure to animal cells. Get absorbed in the study of osmosis and, if the season permits, explore pond water samples for living organisms.

## FLUID POWER

### MATTER AND ENERGY

Let the ideas flow as you explore fluids and their application in mechanical systems! Investigate the physical properties of a variety of fluids. Use hydrometers to determine relative density and join a liquid race to investigate viscosity. Move a load with dump trucks and forklifts to compare hydraulic and pneumatic systems and analyze the compressibility of fluids. Explore the magnification of power achieved in our hydraulic hockey stick cranes.

Using hydraulic power to move a load in Fluid Power

## GENE: HOW DO YOU PASS IT ON?

### SPECIAL INTEREST

Work as a geneticist to learn how traits are passed from one generation to the next. Meet some of the world's genetic pioneers and explore cell reproduction through mitosis and meiosis. Discover where your eye colour came from by delving into dominant and recessive genes!

## GROUNDWATER INVESTIGATIONS

### EARTH AND SPACE SYSTEMS

Investigate how to become stewards of our water systems! Determine the impact of the environment on our water supply. Discover nature's filtration system while exploring groundwater processes and how these systems can become contaminated with pollutants such as salt, petroleum products and fertilizers. Learn how to evaluate and choose the best site to build a house.

## MATH!

## MATH IS MY BUSINESS

### MATH

Become a financial wizard! Create your own bank account; earn money as you learn about probability and percentages. Build a dream team for the hockey or basketball playoffs, calculate cap space and the probability of losing your star players to injuries. Invest the money you earn to build equity with low, medium or high risk investments. Will you earn your first million or break the bank?

## SYSTEMS AT WORK

### STRUCTURES AND MECHANISMS

Join our trolls on an exciting journey to Trollstock! Discover the mechanical advantage of a variety of simple machines brought along to overcome obstacles they encounter. Explore the use of wedges, pulleys, an inclined plane and levers to overcome hurdles with the help of a small pixie. Investigate the effect of friction, calculate the amount of work done and participate in a final challenge as you reach your destination.

## HOW TO BOOK A WORKSHOP

**Choose your topic:** We have something for everyone: topics which enrich the Science and Technology, Kindergarten or Math Curriculum; special interest topics; and workshops which are ideal for combined-grade classes. For your convenience, workshop descriptions are organized by grade.

**Request your workshop: We accept workshop requests throughout the year.** Book on-line at [www.scientistsinschool.ca](http://www.scientistsinschool.ca). You will receive a confirmation email acknowledging receipt of your request. Or fax/mail a completed booking form, found at the back of this catalogue.

**ALLERGY ADVISORY:** Our workshop kits contain a wide variety of diverse items and are handled by many students. While we regularly maintain our kits for cleanliness and safety, we cannot guarantee they are free from all allergens. Please advise us of any known allergies in your classroom or special restrictions in your school.

**Send in your deposit:** A \$25 deposit per workshop is required to process your request. Please send in your deposit cheque by mail attached to your booking form, or if booking online, attached to your email confirmation. An invoice for the balance of the workshop fee will be sent to your school following completion of your workshop. Please visit our website for booking terms and conditions.

**Reserve your date:** A presenter will contact you to schedule a specific date for your workshop

- at the beginning of September if your request was received during the summer months
- within 3-4 weeks of receipt of your request during the school year

Please do not hesitate to contact us at any time to check the status of your request. Thank You!

## SCIENTISTS IN SCHOOL

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