

## GRADE SEVEN WORKSHOPS

### ADVENTURES IN THE BONE ZONE\*

#### SPECIAL INTEREST

Delve into the diet and digestion of an owl as you discover what an owl eats for breakfast! Join this ecological adventure and dissect an owl pellet, use magnifying glasses to sort and identify bones and assemble a rodent skeleton. Examine a variety of mammalian skulls to determine species and explore similarities and differences between herbivores and carnivores.

### BATTLES IN THE TROPICAL RAINFOREST

#### LIFE SYSTEMS

Join our research team, travel around the world and explore tropical rainforest habitats! Make a rubber ball while discovering the benefits of using renewable rainforest resources. Learn about special adaptations of rainforest plants by constructing a tree from the roots up. Build a rainforest food web, learn the impact of species extinction and examine unusual rainforest specimens!

Using hydraulic power to move a load in Fluid Power

### CLOSE ENCOUNTERS OF A CHEMICAL KIND

#### MATTER AND ENERGY

Become a chemist and discover the differences between pure substances and mixtures! Make a sweet solution and test if it's a true solution using the Tyndall Effect. Investigate ways to separate a mechanical mixture and identify some industrial applications of these processes. Try cleaning up an oil spill in the most environmentally friendly way. Finally, make your very own ooey gooey worms using polymer science.

### ENGINEERING CHALLENGES STRUCTURES AND MECHANISMS

Discover the secrets of structural strength and stability! Design and build a functioning cantilever able to withstand a substantial load. Investigate how to fortify beam, truss, arch and suspension bridges. Join a class-wide challenge to build a truss bridge resistant to static and dynamic loads and internal forces using only newspaper and masking tape!

### HOT STUFF!

#### EARTH AND SPACE SYSTEMS

Join our Research and Development team at the 'SiS Toy Company'. Challenge yourself to discover the secret workings behind a candle-powered putt-putt boat. Analyze how conduction, convection and radiation work together to propel these boats. Investigate how the particle theory explains changes in state, the properties of matter and how energy transformations keep things moving!

"Close Encounters Of A Chemical Kind is one of the best programs out there for intermediate students. The experiments were engaging and fun and build an interest towards learning in science. It was great to see students remain on task and motivated to learn."

- Grade 7 Teacher commenting on Close Encounters Of A Chemical Kind

## GRADE EIGHT WORKSHOPS

### 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 animal and 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 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! Study density to determine the composition of mystery cubes. Use hydrometers to investigate the relative density of a variety of liquids and join a liquid race in viscosity tubes. Move a load with dump trucks to compare hydraulic and pneumatic systems and analyze the compressibility of fluids. Build and operate models of real-life hydraulic equipment including a robotic arm.

### 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.

"Wow, Science is fun when it's not in a text book!"

- Grade 7 student during a Hot Stuff presentation

A PDF version of this catalogue is available at: [www.scientistsinschool.ca](http://www.scientistsinschool.ca)

## 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 on-line, 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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