

## GRADE SIX 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.

### AIR AND FLIGHT

#### STRUCTURES AND MECHANISMS

Soar as you explore the science behind powered and non-powered flight! Discover the properties of air and the principles of flight by levitating a ping pong ball, finding the best wing design and angle of attack for lift-off and discovering the correct mechanics of propeller construction. Build your own plane and become an aviator to investigate factors affecting the direction and speed of flight.

### CLASSY CRITTERS

#### LIFE SYSTEMS

Discover the 'Tree of Life' while working as a taxonomist! Create order from the vast diversity of living things using the Linnaean classification system. Examine the microscopic world of protists and monerans and match macroscopic specimens by uncovering similarities and differences. Compare important connections between species to understand why a classification system from 1735 still works today.

### ELECTRICITY: GET CHARGED

#### MATTER AND ENERGY

Step into the physics 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 and learn how a house is wired. Test conductors, insulators and switches. Explore electromagnets, simple motors and use your own energy to power a generator.

## GRADE SEVEN WORKSHOPS

### ADVENTURES IN THE BONE ZONE

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### 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!

## 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 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

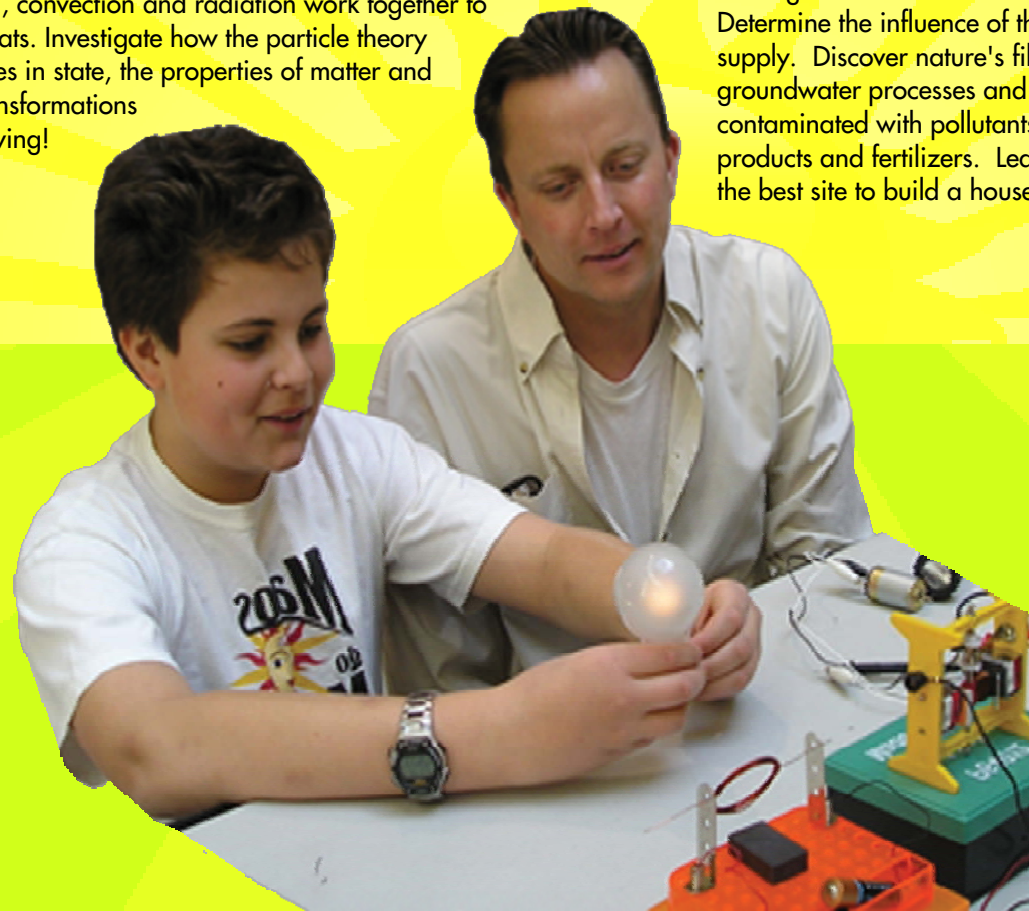
#### MATTER AND ENERGY

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 models of real-life hydraulic equipment.

### GROUNDWATER INVESTIGATIONS

#### EARTH AND SPACE SYSTEMS

Investigate how to become stewards of our water systems! Determine the influence 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.



Making a connection in Electricity: Get Charged

## HOW TO BOOK A WORKSHOP

**Subsidized Workshop Fee: \$160**

(Valid from September 2011 to June 2012)

**Choose your topic:** We have something for everyone: topics which enrich the Science and Technology and Kindergarten Curricula; special interest topics; and workshops which are ideal for combined-grade classes. Our fun, interactive half day workshops accommodate a maximum of 30 students per workshop. For your convenience, workshop descriptions are organized by grade.

**Request your workshop:** Book on-line at [www.scientistsinschool.ca](http://www.scientistsinschool.ca) and 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 or 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:** Your workshop presenter will contact you within 1-2 weeks of receipt of your request to arrange a mutually convenient presentation date.

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

## SCIENTISTS IN SCHOOL

**South Central Ontario: Hamilton, Brantford, Brant, Haldimand and Norfolk Counties**

Box 63083, University Plaza R.P.O.

Dundas, Ontario L9H 6Y3

Tel: 905-218-6684 Fax: 1-866-459-7034

Email: [sco@scientistsinschool.ca](mailto:sco@scientistsinschool.ca)

[www.scientistsinschool.ca](http://www.scientistsinschool.ca)