

# Creative ENCOUNTERS

with science

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## 2014 Workshop Package

### What is Creative Encounters?

Creative Encounters is an entirely student run, not for profit Science, Engineering and Technology organization run out of the University of Guelph's School of Engineering. Our main objective is to provide a fun, safe, non-discriminatory and stimulating environment that inspires young people to explore their love of science in an interactive and hands-on manner.

In the months of May and June, Creative Encounters travels to deliver workshops to elementary schools in Guelph and the surrounding area. Creative Encounters also offers a variety of Science, Engineering and Technology summer day camps for students entering grades 2-9. Additionally, we are happy to announce that our workshops are now also taught in French!

### What is a Creative Encounters workshop?

Each workshop is presented by 2 of our enthusiastic science instructors (University of Guelph Undergraduate students) and includes a curriculum based presentation followed by a fun hands-on project! There is a **maximum of 30 students** per workshop. Creative Encounters is offering **10 different workshop topics** in 2014.

### Cost:

- Only \$65.00 per workshop, except Robotics 101 (\$85)

### When are Creative Encounters workshops offered in 2014?

- May 5<sup>th</sup> to May 23<sup>rd</sup>, and June 2<sup>nd</sup> to June 24<sup>th</sup>
- We can run up to three workshops at one time and a total of 12 workshops in one day!

### Workshop Times:

- Workshop slot 1: before morning recess
- Workshop slot 2: after morning recess
- Workshop slot 3: before afternoon recess
- Workshop slot 4: after afternoon recess

\* Note: You will be asked to specify the times your school follows

### 2014 Workshop Overview

- \* See the Seasons: JK–Gr. 3
- \* Habitats around Home: JK-Gr. 3
- \* Everything Environment : Gr. 2-8
- \* Physical Wonders: JK-Gr. 8
- \* Exciting Engineering: Gr. 3-8
- \* Power Hour: Gr. 6-8
- \* ORGAN-ize your Body (Gr. 4-8)
- \* Magnificent Materials: Gr. 4-8
- \* Fun with Forces: Gr. 4-8
- \* Robotics 101: Gr. 4-8

### How to Register:

At the back of this package is a registration form for our workshops and more detailed instructions on how to register! Alternatively you can visit <http://creativeencounters.info/Workshops.html> and sign up online!

### Robotics 101 (Gr. 4-8)

Whether it is to change the TV channel remotely or quickly assemble a car, robots play a vital part in our ever-changing world. But what exactly constitutes a robot? Students in this workshop will dissect this question in detail to better understand the inner-workings of these machines. They will then apply this knowledge by building their very own Lego NXT robots from the ground up!

\*note: there is a **maximum of 30 students**, due to LEGO kits. Workshop duration is 3 hours and school breaks will be accommodated.

Curriculum ties: electricity and electrical devices, systems and interactions, technology

**Everything Environment (Gr. 2-8)**

The environment is a hot topic in today's scientific community and this workshop touches on many of the key concepts. Students will learn about air and water quality, water systems, and soil. In addition students will learn about how humans impact the environment and how changes in the environment affect ecosystems.

Curriculum ties: interactions in the environment, soils, water systems, air and water in the environment

**See the Seasons (JK- Gr. 3)**

Ever wonder why the leaves change colour or why bears hibernate in the winter? Or how come the seasons in Canada are different than other places in the world? In this workshop students will learn everything about the seasons from what they are and why they happen to how it affects animals and ecosystems.

Curriculum ties: earth and space, daily and seasonal changes, changes in ecosystems

**Habitats around Home (JK-Gr. 3)**

In this workshop students will learn all about the local the habitats and ecosystems that surround them as well as some other unique habitats in Canada. They'll learn about the plants, animals and water systems that make habitats unique.

Curriculum ties: Ecosystems; habitats and communities, growth and changes in plants and animals, climate, needs and characteristics of living things

**Fun with Forces (Gr. 4-8)**

Every day we use simple machines to make tough tasks easier sometimes without even knowing it! In this workshop students will learn all about forces and how simple machines reduce the forces we are required to exert. Concepts will include pulleys, gears, levers, hydraulics and pneumatics.

Curriculum ties: forces, simple machines,



**ORGAN-ize your Body (Gr. 4-8)**

In this workshop student will learn about the cells, tissues and organ systems that we're made of. They'll investigate the function of each organ system and learn about how they are needed for us to live. They will also learn how other animals differ from humans

Curriculum ties: cells, human organ systems, human functions

**Magnificent Materials (Gr. 4-8)**

Ever wonder how a bridge is strong and sturdy but a straw is thin and flimsy? Learn all about the unique types of matter that surround us every day! With emphasis on common elements and minerals, students can grasp properties and applications of daily materials.

Curriculum ties: strong and stable structures, materials, properties of solids

**Exciting Engineering (Gr. 3- 8)**

Teamwork and problem solving are the keys to this workshop! Just like real engineers, students will team up and go through the design process necessary to complete the building challenge, all while taking into account different constraints and criteria! This workshop is a great opportunity for students to think critically and be creative!

Curriculum ties: forces causing movement; energy in movement; structure and function; systems in action

**Physical Wonders (JK- Gr.8)**

Always a hit with any age group, the Physical Wonders workshop is a combination of the coolest chemical and physical science demonstrations available to classrooms. Concepts will include fluids, pure substances and mixtures, chemical reactions and physics of light and sound. Students will learn about the different scientific phenomena they see by level-appropriate explications and real-life example of these concepts. This exciting workshop will really get the kids stoked about science!

Curriculum ties: energy and matter; properties of liquids & solids; forces causing movement; conservation of energy, pure substances and mixtures

**Power Hour (Gr. 5-8)**

When we think of circuitry, most people picture a jumble of wires, funky devices and complex circuit boards. In this workshop, students will use our brand new snap circuit kits to see that circuits aren't as complex as one may think! Applying electrical concepts to hands-on circuit activities will help students understand the interesting properties of electricity and make them see electronics in a whole new way!

Curriculum ties: Electrical energy, electrical devices, circuits.





# Creative Encounters Workshops 2014

(If you require additional space, please duplicate this form)

## How to Register:

Simply fill out the registration form and email or fax it to us. Once the form is received you will be contacted to confirm your requests. Shortly after confirmation, your school will be sent an invoice. There is a rolling acceptance for all workshop registrations, but **workshops should be booked at least a week in advance of the actual workshop date.**

School Name: \_\_\_\_\_

Full Address: \_\_\_\_\_  
(Number & Street City Postal Code)

Phone Number: \_\_\_\_\_ Contact Person: \_\_\_\_\_  
(all workshop calls directed to this person)

E-mail Address: \_\_\_\_\_ Fax: \_\_\_\_\_

Workshop Date Requested: \_\_\_\_\_

Second Choice if this date is unavailable: \_\_\_\_\_

### <sup>st</sup> 1 Workshop:

Workshop Title: \_\_\_\_\_

Teacher's Name: \_\_\_\_\_

Grade Level: \_\_\_\_\_

Number of Students in Class: \_\_\_\_\_

Workshop Slot (please circle one and mark time of this period below:

1 (before morning recess) 2 (after morning recess) 3 (before afternoon recess) 4 (after afternoon recess)

Time this slot falls at: \_\_\_\_\_  
(Start Time – End time\*)

### 2<sup>nd</sup> Workshop:

Workshop Title: \_\_\_\_\_

Teacher's Name: \_\_\_\_\_

Grade Level: \_\_\_\_\_

Number of Students in Class: \_\_\_\_\_

Workshop Slot (please circle one and mark time of this period below:

1 (before morning recess) 2 (after morning recess) 3 (before afternoon recess) 4 (after afternoon recess)

Time this slot falls at: \_\_\_\_\_

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**3<sup>rd</sup> Workshop:**

Workshop Title: \_\_\_\_\_

Teacher's Name: \_\_\_\_\_

Grade Level: \_\_\_\_\_

Number of Students in Class: \_\_\_\_\_

Workshop Slot (please circle one and mark time of this period below:

1 (before morning recess) 2 (after morning recess) 3 (before afternoon recess) 4 (after afternoon recess)

Time this slot falls at: \_\_\_\_\_

(Start Time – End time\*)

\*\*\*\* Please note that all workshops run for ONE (1) hour, excluding Exciting Engineering which has a duration of ONE AND A HALF (1.5) hours. Also, up to THREE (3) workshops can run simultaneously.

**Please don't hesitate to email us at [cse@uoguelph.ca](mailto:cse@uoguelph.ca) , visit [www.creativeencounters.info](http://www.creativeencounters.info) or give us a call at 519-824-4120 ext 53045 if you have any questions!**