

DiscoverE Workshops

DiscoverE delivers engineering and science classroom workshops in a fun and interactive way! Workshops are presented by a pair of enthusiastic, highly-trained University of Alberta student instructors who bring in all the materials and take care of the clean-up. Student participants will get a take home project to keep or complete an engineering challenge. Our instructors also act as role-models in higher education to the youth in workshops.

All of our workshops are designed to enhance Alberta Learning Curriculum topics through exciting demonstrations, interactive experiments, and a fun hands-on activity. Workshops function as excellent unit introductions or reviews.

Delivery Options

In-Class

We will travel to any school within the greater Edmonton area to deliver the workshop in your own classroom!

Video Conference

We will mail most supplies to you and deliver a workshop via live Video Conferencing! Classes require both a SMART Board connected to SMART Bridgit and a television/projector to view the instructors.

Campus Visit

We can host your workshop on University of Alberta's North Campus! Contact us for more details.

Remote & Rural Communities

We travel to remote and rural communities in Northern Alberta and the Northwest Territories to deliver workshops in May and June. Check our website in 2018 for more info!

Ready to book?

2 Workshops: \$150

4 Workshops: \$250

We can accommodate a maximum of 32 students per workshop. No supplies or volunteers are required other than the classroom teacher. Workshops can be booked online at discovere.ualberta.ca or by email at discovere@ualberta.ca

Topics

Kindergarten

Shapes & Senses

Take Home: Robot Puppet

Students will learn how to observe the world around them by looking for shapes and using their senses - just like a scientist or engineer!

Grade 1

Learning to Build

Take Home: Catapult

This workshop highlights breaking objects down into basic shapes and analyzing the purpose of each part.

Needs of Plants & Animals

Take Home: Self-Watering Bean Plant

This workshop highlights the difference between domesticated and wild animals as well as the requirements for plants and animals to maintain life.

Grade 2

Boats & Buoyancy

Eng Challenge: Popsicle Stick Boat

Students will analyze the buoyancy of different objects as explore how to make non-floating objects float.

Small Crawling & Flying Animals

Take Home: Small animal model

Students will explore the differences between insects and non-insects, looking at the different types and different techniques used by these animals.

Grade 3

Sound

Take Home: Popsicle Stick Kazoo

This workshop highlights vibrations, volume, pitch, the difference between sound travelling through solids, liquids, and gases, and how the humans hear sound.

Structures & Design

Eng Challenge: Popsicle stick bridge

This workshop highlights the pros and cons of various building materials, strong shapes, and the design and purpose of different types of bridges.

Grade 4

Light & Shadows

Take Home: Periscope

Students will explore the difference between luminous and non-luminous objects, shadows, colour, and reflection.

Simple Machines

Eng Challenge: Moving Wood with Simple Machines

Students will dive into the world of engineering by looking at wedges, inclined planes, screws, levers, wheels and axles, and pulleys.

Grade 5

Classroom Chemistry

Experiment: Baking soda and calcium chloride chemical reaction

This workshop explores states of matter, physical and chemical changes of materials, and signs of a chemical reaction.

Electricity

Take Home: Conductivity testing circuit

This workshop highlights static and current electricity, conductors, insulators, resistors, and circuits.

Grade 6

Evidence & Investigation

Mystery: Lottery Ticket Owner

Students will solve a mystery by analyzing fingerprints, ink (chromatography), handwriting, and footprints.

Flight

Take Home: Paper Glider

Students will explore air pressure, Bernoulli's principle, and how planes fly.

Sky Science

Take Home: Planisphere

This workshop highlights the sun and how its light is seen on Earth, the moon and its phases, and stars and their constellation groups.

Grade 7

Heat & Temperature

Eng Challenge: Building a thermos

This workshop explores the particle model of matter, change of state, thermal energy, temperature, and heat transfer.

Grade 8

Light & Optical Systems

Take Home: Spectroscope

Students will explore reflection, refraction, mirrors, and optical device.

Multi-Grade Tech Workshops

Grades 1 to 3

Tiny Tech

Take Home: Ciper Decoder

Students will dive into the exciting world of computers and programming, without requiring a computer lab!

Grades 7 to 12

Microelectronics

Take Home: Circuit Board

Students will solder their own circuit board and learn about various components of a circuit. Complexity varies by grade level.



"Wow! I've never seen the kids this engaged before. What you guys did here today was awesome! I can't wait to have you back here again."

— Grade 5 Teacher

Science
Technology
Engineering
Math



DISCOVER^e

Fall 2017

**Classroom
Workshops**



About DiscoverE

DiscoverE is a student-delivered initiative of the University of Alberta Faculty of Engineering in Edmonton, AB. We focus on fun, accessibility, and mentorship! We deliver high-impact classroom workshops, unique clubs and events, and engaging summer camps to more than 27,000 youth every year, and our programs reach over 80 communities across northern Alberta and the Northwest Territories.



Brochure valid until December 31st, 2017

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