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?

Contact our office today!

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 and 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 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: Cipher 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

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.