

Calling Volunteers for the Science and Engineering Challenge

Engage with year 5, 6, 9, & 10 students in this nationwide STEM program as they compete in fun hands-on activities involving the principles of science, technology, engineering and maths.

Share your experience and encourage students. You will work in groups of 2-4 alongside Rotary volunteers. Training material will be provided before the event.

Program details:

Monday 11th Aug, Year 9&10 day, 8am to 3pm

Tuesday 12th Aug, Year 5&6 day, 8:30am to 3pm

Deakin University, Warrnambool Campus

Hopkins River Cafe - Building H

Setup/training afternoon

Sun 10th Aug from 2:30pm (optional)

Tea/coffee station and lunch provided.

Register Via:

<https://forms.gle/kw9E2ggsza2XyUsg9>



Event Partner



deakin.edu.au/sebe/outreach

Deakin University CRICOS Provider Code: 00113B

The Science and Engineering Challenge inspires young people to study STEM

Volunteers will support students in the following activities:

	BRIDGE	JOB JUGGLE	CONFOUNDING COMMUNICATIONS	ELECTRACITY
Aim	Design and construct model bridges to support a trolley carrying 'gold' ingots across a gap in the tracks.	A computer science scheduling activity. Students arrange tasks in the most efficient way possible.	Create functional codes to accurately and efficiently send secret messages using pulses of coloured light.	The power is in your hands, the task is to provide the lowest-cost electricity to ElectraCITY's infrastructure.
Method	Understanding physics and material properties will help transform cardboard, balsa, tape etc. into bridges capable of bearing dynamic loads 200 times their weight!	Students will be scored on how fairly they schedule the activities, with minimal downtime, no clashes and the shortest possible critical path.	Using light boxes that transmit red, green and blue light along a fiber optic rod, students can communicate using up to seven colours in unlimited combinations.	Work out the most efficient pathways while weighing up the cost of cables and their resistance and the cost of leaving some buildings without power!
Careers	<ul style="list-style-type: none"> • Civil Engineer • Surveyor • Mathematical modeller • Architect 	<ul style="list-style-type: none"> • Data scientist • Programmer • Software Engineer • Systems analyst 	<ul style="list-style-type: none"> • Software Engineer • Mathematical modeller • Computer Systems Engineer • Scientific Analyst 	<ul style="list-style-type: none"> • Mathematical modeller • Energy Systems Designer • Electric/comp. engineer • Data cabling technician
				
	FISH TRAPS	HELTER SKELTER SHELTER	FLIGHT	WIND TURBINE
Aim	Use 3D printed rocks to build Fish Traps for various sizes of "fish", represented by marbles.	Design and refine 2 towers to withstand sideways motion as much as possible in a simulated earthquake.	Students construct a plane from balsa and fire it from a launching device.	Students construct fan blades using basic materials to catch wind provided by an electric fan.
Method	Points awarded for meeting the target collection amount in each scenario with a focus on sustainability.	Towers are built using common materials e.g. paper and straws, then tested for strength using small weights under both static and seismic conditions.	The glider will be scored based on the distance travelled, precision of landing and accuracy hitting a target.	Students must consider rotational resistance, balance and stability in their design. Turbines made of cardboard, and wooden sticks around a reusable axle.
Careers	<ul style="list-style-type: none"> • Civil Engineer • Environmental Engineer • Sustainability Scientist • Marine Science 	<ul style="list-style-type: none"> • Civil Engineer • Geologist • Construction Manager • Geophysicist 	<ul style="list-style-type: none"> • Civil Engineer • Aerospace Engineer • Aircraft Engineer • CAD drafter/designer 	<ul style="list-style-type: none"> • Renewable Energy Engineer • Energy Systems Designer • Mechanical Engineer • Electrical Engineer
				