

Road to Renewables

Primary



This hands-on workshop, linked to the Victorian curriculum 2.0, uses STEAM skills and problem solving to get students excited about renewable energy and the types of jobs and skills required for the energy transition.



Incursion



Years 5–6



Free



45–90 minutes

Workshop scenario

As we progress the renewable energy transition, electric vehicles (EVs) are becoming increasingly popular. Using problem solving and creative and critical thinking, students will code their Ozobots, decide where to place EV charging stations and how to create renewable towns.

Students will:

- learn about renewable energy and the energy transition
- code tiny robots acting as EVs (Ozobots) to plan journeys
- learn about different jobs required for the energy transition
- use problem-solving skills to design renewable energy landscapes.



Workshop format

The workshop is delivered as an incursion at your school and can be scheduled to fit into your timetabling needs. The workshop is also delivered at the SEC Morwell hub. We have two options:

- 90 minute session with town planning activity
- 45 minute session with no town planning activity.

Introduction

- Workshop overview and the role of the SEC in the energy transition.
- Introduce students to Ozobots and how coding can be used to program them. Ozobots will simulate EVs.

Activity

- Working in pairs, students will use problem-solving skills to code the Ozobots to make different journeys on a range of maps.

Discuss the energy transition

- Introduce the role and types of renewable energy supporting the energy transition and meeting our emission targets.
- Discuss the types and number of jobs required for the transition, and ask students to identify jobs they are interested in.

Wrap-up

- Discuss what students learnt, what worked well and areas for improvement.

Options for extension activities

- Students plan where to charge their EVs.
- Students make planning decisions on where to place different renewable energy sources on the map.
- Discuss students' aptitudes and interests and how they link to different careers in renewable energy.

Workshop themes



Renewable
energy



STEAM



Sustainability



Coding



Problem-
solving

Victorian Curriculum 2.0

Earth and space sciences

Sudden geological changes or extreme weather conditions can affect Earth's surface and atmosphere; the impacts of natural hazards, including earthquakes, volcanic eruptions, wildfires and floods, can be reduced by human actions and technological innovations **VC2S6U06**

Futures Thinking

Sustainable futures thinking requires individuals to think creatively, seek information, identify a variety of possibilities, reflect and evaluate actions, and collaborate with and influence others as they work towards desired futures. **VC2CCPSFT3**

Design and Technologies – Technologies and Society

How people in design and technologies occupations consider competing ethical factors including sustainability in the design of products, services and environments. **VC2TDE6S01**

Geographical knowledge and understanding – Management of places

How places and environments are changed and managed by people. **VC2HG6K01**

Materials supplied

- ✓ Worksheets
- ✓ Ozobots, coding stickers and markers

- ✓ 3D objects to build out landscape (blocks, wind turbines, etc)
- ✓ Reflection sheet.

The workshop will require a classroom with AV equipment for PPT

FAQs

How much does this Incursion cost?

All workshops are free of charge.

How many students can attend the workshop?

Workshops can be delivered to two classes at a time and multiple workshops can be scheduled throughout the day. If you would like the workshop to be delivered to a whole year level, workshops can be delivered over multiple days.

What level of supervision is required?

The workshops are delivered by experienced educators. The school is responsible for the duty of care and behaviour management of the students and the teacher must stay in the classroom for the duration of the session. Please discuss appropriate behaviour with your students to ensure that everyone can enjoy their experience.

Which class should we hold the workshop in?

The workshop is best suited to a science or technology class.

What type of classroom and equipment is required?

Students will work in groups. Tables set up for group work is preferable but not essential; students can work on the floor and in break-out spaces. AV equipment for a presentation is required, all other materials are provided.

Does SEC comply with Victoria's Child Safe Standards?

SEC is committed to the safety and wellbeing of all children and young people. All staff have been trained in appropriate ways to work with children, and all have a valid Working with Children Check. Workshop risk assessments are available on request.

