

Product Information Sheet

Green Technology Teaching Set



Our STEM learning packages have been designed to provide practical real world problem solving tasks and activities within the classroom or lab environment.

These activities will provide an engaging approach that helps instructors show contextualized linkages between Science, Technology, Engineering, and Mathematics.

This resource is supplied with a curriculum CD containing practical tasks and activities that offer a wide range of interactive learning opportunities via the easy to use software and hardware resources included.

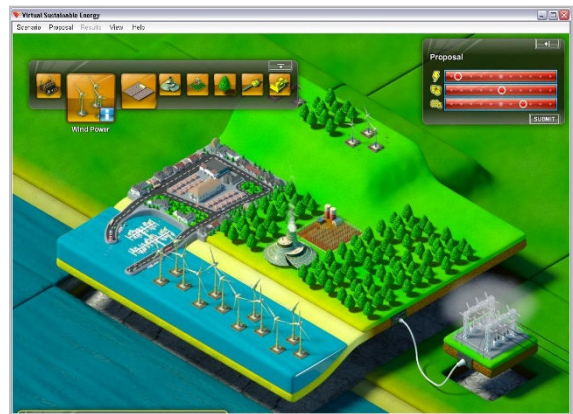
The trainer can also be used in conjunction with our optional cloud-based software packages. These offer online practical tasks as well as interactive theory presentations, investigations, and assessments, which link directly to the practical activities carried out using this resource.

Students will start out investigating the technology and methods behind both fossil fuel and sustainable energy production techniques.

Using an interactive games based app, students will design their own energy production solution for a range of geographical situations, employing the most appropriate green energy production systems.

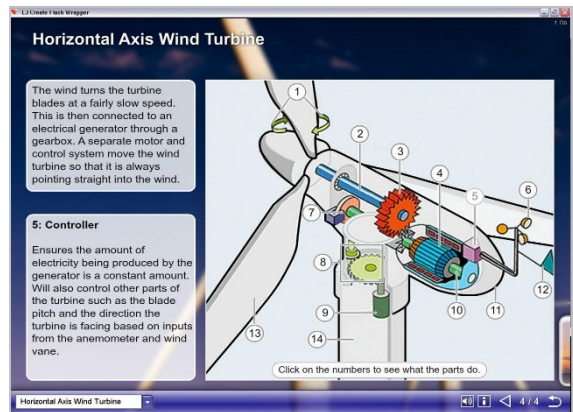
Once submitted, the student's proposal is analysed by the app, and given a gold, silver, or bronze award for the performance of their solution.

Worksheets are also provided to allow learners to document, record, and report upon their findings, justifying their decisions throughout their work.



Example – Wind Energy Production Solution for Port City

During the activities the learner has access to interactive study guides. These allow them to investigate some of the technologies available, and help inform them while they consider their proposal.



Example – Wind Turbine Cut Away Model

LJ Create –Product Information Sheet (Continued)

Green Technology Teaching Set



Once learners have an understanding of how energy can be created and distributed, the focus can then turn to methods used to reduce energy consumption in the home.

The eco-house model lets the class explore the energy requirements of a range of home appliance including electric heating, air conditioning and lighting.

Students can then learn about the ways in which energy can be saved, including the use of insulation, efficient lighting and double glazing.



Eco-house – Controlled and monitored via a computer and whiteboard

Renewable energy generation devices are included in the form of solar water heating, a solar electric (PV) system and a wind turbine. These devices help students to recognise the benefits and limitations of different forms of renewable energy.

The included interface software provides a real time graphical display of power and energy use (from the grid and from renewables), room temperatures, light levels and hot water system temperature.



Example – Showing power usage and temperatures in the eco-house

Typical Simulator Activities Include:

- Harnessing Solar and Wind Power
- Hydroelectric Power for an Island
- Creating Power from Biomass
- Geothermal Challenge
- Nuclear Power
- National Grid Challenge

Typical Practical Activities Include:

- Investigating Energy Use in Buildings
- Home Wind Turbines
- Solar Electric Systems
- Energy for Heating Buildings
- Solar Water Heating
- Insulation and Glazing Performance
- Heat Pump Principles

Items Included:

- Eco-house
- Wind turbine
- Sun simulation lamp
- 3-speed desk fan
- Interface software, USB lead and power supply
- Curriculum CD

Other Items Required:

- Computer with DVD Drive and Spare USB Port

Also Recommended:

- EXS-AL Exploring STEM Software Library - Annual Site License

General Information:

Dimensions: 650 x 510 x 490 mm (W x H x D) Max Height with lamp assembly 1030 mm
Power Requirements: 110 – 240V 50-60Hz
Packed Volume: Approx. 0.36 m³
Packed Weight: Approx. 25 kg

Order Code: 125-00

P8772-B

For more information visit www.ljcreate.com