

Power to the people ...

Investigating Energy at KS2



CEES in schools

If requested a “mix & match” programme of learning activities from different workshops may be selected.

At KS1 & 2, CEES Day Course themes at Stibbington Centre, Burwell House, Wisbech Castle and Vine House Farm include:

Science

Exploring the environment
Rocks & soils
Energy & renewables
Habitats & food chains
Plants & minibeasts
Crime Scene Investigation

Geography

Map skills & location
Weather & climate
Exploring a locality
Rivers & water

History

Romans Vikings
Victorians WW1
WW2 Evacuation

Art & design

Eco Art & the environment

English & maths

... outdoors

Contact details for further information

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School Workshop Information:

Curriculum focus - Science

Aims

- ✓ To make careful observations and take measurements using a range of scientific equipment.
- ✓ To use scientific evidence to answer questions.
- ✓ To explore electricity as a scientific phenomenon.
- ✓ To compare and give reasons for variations in how components function.

Programme

The actual programme may vary depending on number and needs of pupils, length of workshop, and weather conditions on the day. This is a half day workshop with the option to extend to a full day as described below. Where there are 3 classes involved then three slightly shorter workshops may be arranged on a single day.

Introduction

Explore the differences between conventional and renewable sources of energy using Kung Fu style Coal and Wind power actions.

Solar energy

- Use solar energy mini-kits, to investigate the generation of heat and electricity using two types of mini solar panels.
- Discover the best place to locate solar panels in the school grounds by testing hand held solar PV panels with three components (a bulb, buzzer and fan).

Wind energy

- Take wind measurements using hand held anemometers, windicator sticks and wind vanes.
- Investigate the construction of wind turbines.
- Work in a team with a small scale wind turbine and voltmeter to decide the optimum number of blades for maximum output.

For a full day workshop:

- Using recycled materials, build a simple model wind turbine to investigate two types of rotational movement of the turbine (blade and nacelle)

Risk management

See separate “**Guidance notes for safe and effective Day Courses**”

Supervision: For this workshop our recommended adult:pupil ratio for safety is 1:15 in pre-arranged working groups.

Weather conditions: CEES teachers are aware of daily weather forecasts and may adjust programmes depending on weather conditions on the day. See separate guidance on outdoor clothing and footwear.

Site conditions: CEES teachers will draw attention to any relevant risks.

Equipment: Instructions are given on the safe use of all equipment.