



ENERGY, ENQUIRY AND EXPERIMENT

KS 2 PHSE, CITIZENSHIP, GEOGRAPHY and SCIENCE

<p>Learning Objectives During this Day Course pupils should learn:</p> <ul style="list-style-type: none"> ü To apply scientific enquiry skills, to evaluate experimental processes and to record results. ü To investigate ways of using renewable energy. ü To gain 'hands on' experience with renewable energy kits. ü To understand their responsibility to maintain a sustainable environment for future generations.
<p>Pupils will also:</p> <ul style="list-style-type: none"> ü Learn safely in a new environment; ü Gain an appreciation of the environment and understand their role in caring for it.

<p align="center">Day Course Programme</p> <p align="center">Where 2 classes are attending the course the introductory session will be common to both. Classes will then separate and sessions A and B will be interchangeable am and pm.</p>
<p>Introduction: On arrival a member of CEES staff will welcome your group to the Centre and describe the day's programme and the learning objectives. An introduction will briefly consider the ways in which human activities are impacting on the planet and will introduce renewable energy.</p>
<p>Session A: This session is based at the Stibbington Centre, which has gained the National Eco-Centres Award in recognition of its work for a more sustainable future. The session will focus on what pupils can do themselves to bring about a more sustainable future, concentrating on the theme of energy. Pupils will follow an Eco Trail around the Centre grounds, viewing solar and wind power installations. This session will then focus on solar energy. In groups, pupils will investigate the generation of heat and electricity using two types of mini solar panels. They will consider how to generate the most energy by choosing suitable locations for the panels. There may be an opportunity to cook marshmallows using solar energy.</p>
<p>Session B: During this session pupils will work in small groups on an open investigation using model wind turbines. This activity will give pupils the opportunity to discover the optimum conditions for electricity generation.</p>
<p>Plenary: Finally pupils will be encouraged to write their own energy pledge and to reflect on their day and consider how well the learning objectives have been met.</p>
<p>Note: The actual programme may vary depending on number and needs of pupils, length of visit and weather conditions.</p>

<p>Adult : Pupil ratios</p> <p>For this course CEES' recommended ratio for safety is 1 : 8</p> <p>For most classes, 4 pre-arranged working groups, each with an adult, is ideal. Additional adults may be needed with classes where individual pupils need 1 : 1 support.</p>
<p>Other information</p> <p>Please see separate guidance notes on safe and effective day courses, including information on clothing and equipment.</p>

Relevant extracts from CEES risk assessments	
See also guidance notes relating to health and safety overleaf	
Hazard	Control measures
Extreme weather conditions	<ul style="list-style-type: none"> • CEES staff are aware of daily weather forecast. • Alternative venues or activities are substituted if weather conditions are particularly unfavourable. • In extreme cases, where guidance notes on clothing (see overleaf) have not been complied with, pupils may be excluded from activities.
Using scientific equipment	<ul style="list-style-type: none"> • Instruction is given in safe use of equipment, for example using goggles when using wind turbines, taking great care not to touch lamps and fans. • Pupils are closely supervised at all times.
Unfamiliar surroundings	<ul style="list-style-type: none"> • Adults supervise directly, for example, walking beside the group and regularly checking that all are present.