Green STEM Project:
Energy Collection and Conversion

Type	Loan Resource
Purpose	To introduce a learning resource which can demonstrate the technologies involved in the collection and conversion of energy forms. The loan resource will be available to all schools requesting its use for a fixed amount of time.
Description	Through the creation of a free loan box / handling collection, participatory schools will have the opportunity and capacity to foster applied learning with their pupils. The loan boxes will be tailored to suit the age/ability range of the pupils and initially only available to those teachers who have undergone the Green STEM induction training. This involves CPD-related to the box contents and the associated learning. It is planned to that the box content would include: • Wind charger and voltage regulator • Photovoltaic panels • Storage batteries • Inverter 12/230V • Output devices LCD display / motors / water pumps fuel cell car • Fuel cell and hydrogen charger • Learning materials including lesson notes, learning objectives and outcomes, links to NCm POS. links to DCSF eight doorways and National Strategy Key Aspect of Learning The school would utilise the loan resource for a set period and undertake learning from a range of the activities. Comprehensive guidance and training will enable teachers to become confident in using this equipment with their pupils.
Cross-Curricular links:	Engineering, Technology, Science and Maths Pupil Outcomes • Data Monitoring of wind /solar statistics using ICT • Application of generated energy – kinetic/hydrostatic movements • Building fuel cell and solar powered vehicles.
Keystage	KS2
Breakdown of hours	Session 1 Energy use in the home and at school. Session 2 Transport and products that use electricity. Session 3 & 4 Making electricity using the sun and wind. Session 5 & 6 Designing & making vehicles and kinetic sculptures powered by harvested 'clean energy'.
Links to existing materials	Elements of the 'Sustainable Schools 8 Doorways'; 'travel and traffic', 'buildings and grounds' and 'energy and water' and additionally, aspects of the Science and D&T PoS.

If you would like more information regarding this project, please contact Klaus Selke on 01482 372677 or klaus@heta.co.uk.