

Humberside Engineering  
Training Association

Supported by



The Region's  
Development Agency

**HETA**

# Green STEM for the future

Project Overview



This project is funded by Yorkshire forward and is designed to link the highly topical theme of the environment together with its problems and opportunities with the teaching and learning in the STEM subjects. This makes the content of the lesson or activity relevant to the pupils and encourages them to take up these subjects, thus impacting on their level of attainment through a raised level of interest.

*Key features of the project:*

- Developing and deploying new and exciting teaching materials in STEM subjects based on environmental themes by a set of core teachers
- Linking core teachers with companies and/or academic institutions for them to access the latest thinking in environmental problem solving
- Engaging the developers of the material in the training to cascade their resources to colleagues mainly in their Local Authority
- Main expected topics to be addressed:
  - Energy Generation, conventional and alternative
  - Energy Conservation in industry, homes and schools
  - Waste Management, e.g. energy recovery, landfill sites, biomass remediation etc
  - Shaping of the environment, i.e. influence of climate change on the geographical features and biodiversity

*Educational materials being developed:*

- For both primary and secondary sector
- Subject specific topics, i.e. Maths, Science, D&T
- Cross-curricular approaches
- Transition project between primary and secondary
- Out-of-school activities (Extended Schools, Clubs, Parental Engagement etc)
- Loan resources

- Improving the participation and achievement rates of pupils by installing a process of empowerment in which the STEM subjects acquire a high degree of relevance supported by reinforcement in everyday life, including the popular media
- Applying recognised, educational quality criteria in the development and delivery of the new training materials and methods (e.g. RSLC, TLA)
- Focussing evaluation through pre and post SATs attainments, attitudinal surveys and customised questionnaires

#### *Supported by*

- Local Authorities, Engineering Diploma Development Group, Extended Schools Co-ordinators
- University of Hull, Professor Lynne Frostick, Dept. of Geography, Head of HERI and ETCIC  
Chair of the Government Advisory Committee on Women into Science
- Education Business Link Organisation
- HOSHIN
- RSLC Outpost at John Leggott College
- Centrica, BP, CORUS, Ideal Caradon, Enertek, Houltons, plus other companies engaged in aspects of the environment
- CHEF (City of Hull and Humberside Environmental Forum), JIVE, Greenpeace Volunteers in Humberside
- STEMNET and STEMPOINTS in Yorkshire

#### *Further features*

- Improved possibility for overcoming the gender bias
- Improved parental perception
- Improved teacher engagement
- Recognition of importance of environmental behaviour
- Empowerment of pupils and parents
- Persistence of the resources and methods developed
- Persistence of changed attitude “I can make a difference”

*Projects:*

Energy Collection and Conversion	Loan Resource	KS2
Consumer Ecological Footprint	Lesson Plans (D&T)	KS3
Solar Energy	Design and Build Activity	KS3
Reducing Carbon Footprint	Club Activity	KS2
Energy Conservation and Insulation	Lesson Plans	KS4
Solar and Heat Energy	Lesson Plans	KS3
Green Issues in Science	Lesson Plans	KS3
Conserve your Water	Lesson Plans (D&T)	KS3
Energy Generation	Lesson Plans	KS3/4
Sustainability	Project	KS3/4
Responding to Climate Change	Club	KS2
Wind Power	Club	KS3(2)
Control for Greenhouse	Lesson Plans/Project	KS4
Hydroponics	Lesson Plans/Project	KS3/4
Making Schools Sustainable	Transition Project	KS2/3

For further information or how you can take part in this exciting venture and make use of the CPD training in the above topics, please contact:

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