

ATTACHMENT 2

Topics Incorporating Citizenship and Sustainability into Science Activities

ASE Science *Global Dimension* www.ase.org.uk suggest a wide range of activities for Sc1-4 with some class illustrations.

Health topics could include:

- Comparing promotion of cigarettes in different countries as part of a study of tobacco.
- How the cost of medicine affects its access to poor people and what strategies might be used to increase access.
- Possibilities of developing immunisations and vaccines to control or even eradicate diseases such as HIV/AIDS, malaria, polio & TB.

Biological studies could include:

- Considering the advantages and disadvantage of different agricultural procedures in controlling soil erosion and use of pesticides including biological control.
- Considering the advantages and disadvantages of genetically modified plants as part of studies in variations of resistance.
- Researching the advantages and disadvantages of cloning and designer babies including discussing related social issues.
- Chemistry studies might include:
- Learning about the economic and social impact of mining and refining ores as part of the chemistry of extraction.
- Examining the importance of developing alternatives to oil based products to solve political problems of importing oil from unstable countries or via very long pipelines.
- Discussing international agreements to combat global warming as part of work in the Greenhouse effect.

Physics units could include:

- Comparing processes and social and environmental effects of different methods of generating electricity including micro-hydro projects compared to large dams.
- Strategies for overcoming lack of mains electricity and limited number of batteries by using foot driven generators to charge laptops and wind up radios.

Environment Matters website has some comprehensive information relating to current energy issues, www.enmatt.com

The Qualifications and Curriculum Authority www.qca.org.uk suggest that links to Citizenship and Sustainable Development can particularly be made in Key Stage 3 QCA Units:-

Unit 7D Variation and classification

Unit 7I Energy resources

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Unit 8I Heating and cooling
Unit 9C Plants and photosynthesis

Unit 9D Plants for food
Unit 9G Environmental chemistry
Unit 9I Energy and electricity
Unit 8G Rocks and weathering

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