WWF/Scottish Hydro-Electric
BRIGHT SPARKS awards

WWF SCHOOLS' CASE STUDIES SERIES
Working towards Education for Sustainable Development

How can changes in the behaviour and attitudes of children and adults in school be sustained? Is it possible to deliver an Environmental Studies topic grid that runs on a four year cycle and ensure that energy conservation remains a high priority beyond the term in which this is the focus?

Read on to discover how Largue Primary School in rural Aberdeenshire has risen to the challenge of delivering Education for Sustainable Development in a small school. The aim was not an exciting flashy project, but something that would encourage everyone at school to adopt a more sustainable lifestyle.

Making a start – energy saving in school

Setting the scene

The idea of children's involvement in monitoring the environment is not new. Many schools regularly make records of the weather, especially temperature and rainfall. Such environmental monitoring is recognised as an excellent way of developing skills in collecting and analysing data.

In line with many Primary schools, one of our themes is energy. We felt that it would be relatively easy to involve pupils in monitoring energy consumption of the building at Largue Primary School. At the same

time, the energy theme would provide excellent opportunities to focus on attitudes, behaviour and sustainable lifestyles.

The school building consists of two sections. The older part, used now for a lunch servery, hall, office and staffroom, was built in the 19th century. Its granite walls keep it cool even in the middle of summer. A newer, double, relocatable unit houses the classroom and cloakroom areas. All lighting and heating is by electricity, and we are therefore always very conscious of the high cost of heating – in the old building in particular.

The recent floods in the nearby town of Elgin were a timely reminder of why saving energy is a globally important issue. The increase in severe weather events throughout the world is convincing scientists that global warming is having an effect on our ocean and weather systems. An important contributor to global warming is the production of 'greenhouse gasses' being emitted into the atmosphere – a large proportion coming from our fossil-fuelled power stations.

As we were approaching the time when we were about to study energy again with the senior class – a composite P4-7 (8-12 year olds), we recognised that there was little practical evidence of the children being aware of energy conservation. We also had to admit that the adults in the school were not good role models. It was clear that the enthusiasm generated during our topic on energy was not sustained, despite the fact that it was reinforced during occasional visits to Ballater Environmental Education Centre. Something would have to be done throughout the year. The question was, if this was to be a long-term commitment, how could it be designed to be manageable? Further, we knew that whatever approach we decided to adopt would have to fit with our current planning grid. This has an added challenge since the P4-7 class is made up of four year groups, so we have a four year cycle of Environmental Studies projects (see 'Background' on the back page).

Just as these concerns were being raised, details of the WWF/Scottish Hydro-Electric Generators Scheme arrived in school (see 'Background' on the back page). It was perfect timing, providing just the focus we needed to make a start on raising awareness of the need for energy conservation in school. It would also address issues related to our planned review of 5-14 Environmental Studies contained within our School Development Plan.

Sustainability Sue's activity ideas

- Make a list of as many things as possible in school running off electricity; have a look at the quarterly electricity bills for the school - consider ideas for saving electricity.
- Find out where the nearest power station to the school is located, what fuel it uses and how the fuel reaches the station; consider the implications for global warming. What is the National Grid?
- Choose an item running on electricity in school - carry out a 'cradle to grave' audit of all its components, and at what stages energy has been/will be required in its manufacture, use and disposal. What forms of energy, apart from electricity, have been used?

What's this got to do with Education for Sustainable Development?

The following knowledge, skills and attitudes implicit in Education for Sustainable Development were encouraged through the project:

Knowledge and understanding

- **what is involved in different methods of providing for human needs and wants (energy, raw materials, human impact, environmental impact)**
- **how the processes of decision-making work and how to take part in them.**

Skills

- **co-operation and conflict resolution**
- **critical thinking**
- **negotiation**
- **problem-solving**
- **reasoned debate; the ability to argue effectively**
- **informed decision-making**
- **research and data handling.**

Values and attitudes

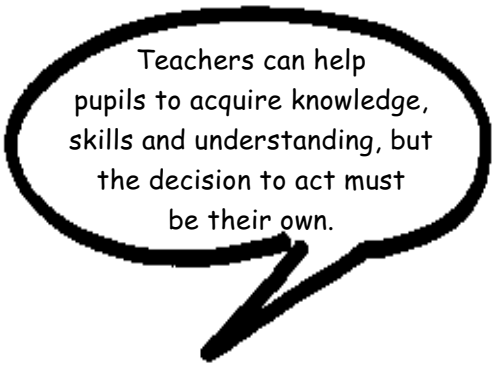
- **a sense of identity and self-esteem**
- **an understanding of the place of individual and collective rights and responsibilities**
- **a desire to participate**
- **a belief that, working with others, they can make a difference**
- **a belief in a positive future.**

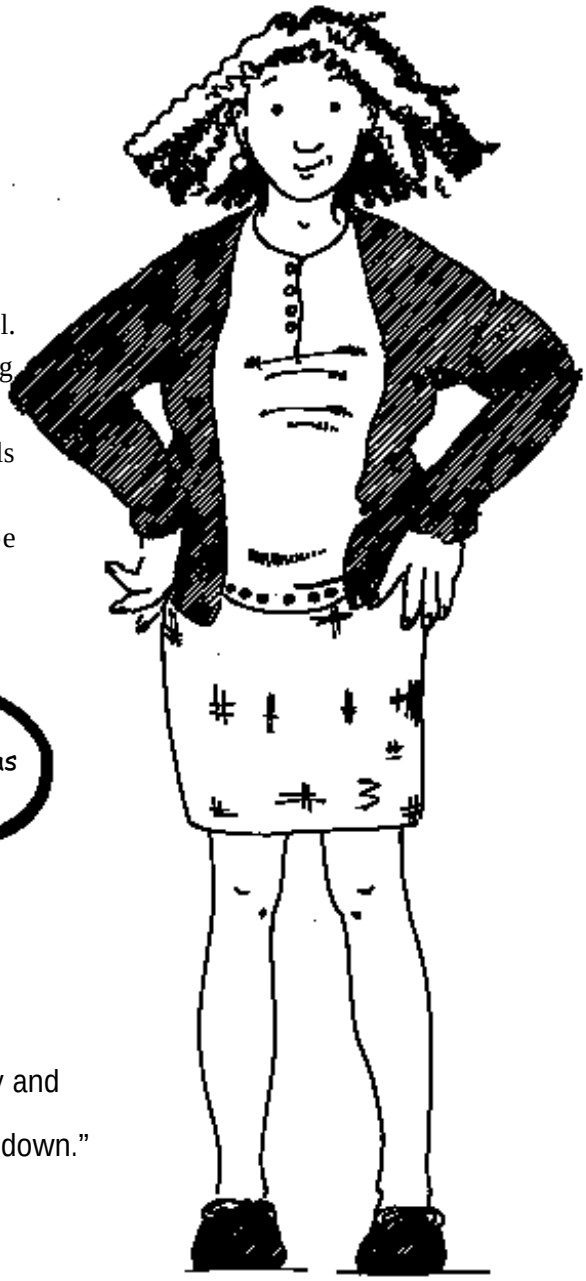
Involving the children

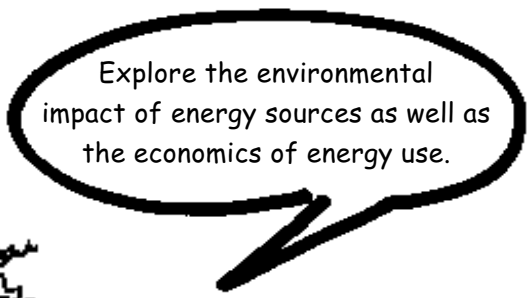
The aim of the project was to help the children to develop informed attitudes to energy conservation that could be sustained and disseminated throughout the school and community. As teachers, we recognised that it was important for the children to identify the need to monitor energy consumption in school and to be involved in the design of a survey. We hoped that this approach would give the pupils a sense of ownership of the project. It would also allow them to appreciate that surveys are something that they can initiate themselves, rather than something always designed by adults.

Towards the end of the summer term, as our project on energy was reaching its conclusion, we gave the class information on the cost of heating the school. We hoped that the knowledge and understanding gained in the previous weeks would encourage them to take action. However, it was important that it should be their decision!

By June the class had decided to look at ways of saving energy in school. They came up with a number of energy-saving strategies such as closing windows and doors, turning off taps, and using heat sensibly. The suggestions were picked up again after the summer holidays. The pupils recognised that if these were put in place in the autumn term, any changes would show up in the meter readings in November. It would be simple to make a comparison with the units used the previous year.







"We set a target to try and get our electricity bill down."

Donald (age 9)

Involving others

The campaign started on September 15th with a special assembly for P1-P3 (5-7 year olds) to explain why it is important to save energy and what everyone can do about it. A press release resulted in a visit from our local newspaper, the *Huntly Express.*

LARGUE'S BRIGHT SPARKS

Pupils at Largue School have embarked on an ambitious energy saving 'Generators' initiative as part of the Bright Sparks Awards sponsored by WWF and Scottish Hydro-Electric.

The classroom project… will see pupils and staff maintain a policy of saving energy throughout the school year.

The Primary 4-7 class will be monitoring energy use and ensuring that there is no wastage of non-renewable resources in Largue School…

Head teacher Eleanor Anderson said…"What we are trying to do is make this an integral part of school life as well as our contribution to education for sustainable development"…

Linda Cracknell, Education officer for WWF Scotland, said: "Many of the Bright Sparks projects submitted pioneered work across subject areas in schools and helped children to develop a critical awareness of the forces that shape their environment and its future."

Source: *Huntly Express*,
24 September 1999

Courtesy of the *Huntly Express*

Jayne and David became celebrities for the day when they read their specially composed rap on Peterhead local radio.

The pupils also designed some colourful posters that could be displayed in a prominent position in the school. This helped to raise awareness with visitors and prevent us all from absent-mindedly forgetting to close doors and switch off lights after a week or so.

Our janitor, Mr Ross, has to read the electricity meters each week so that we know how much we have used. He's the only person in the school who is tall enough to reach the meters and even he has to use a ladder! His commitment to the initiative is also valuable because all the other adults involved in the life of the school are women.

Using a variety of methods of dissemination (eg local press and radio, posters and assemblies) increases awareness both in the school and in the broader community.

Making a difference!

The long awaited electricity bill arrived in November. We were delighted to discover there had been a saving of almost 5 per cent compared to the same period in the previous year. This encouraged us to make further savings. We use the booster heaters in the hall after everyone is inside and switch them off again when we have finished dinner. At the end of the day it is Martin's job to remember to close the blinds in the classroom before we go home.

At the beginning of the next term the class discussed what they had done and decided that they wanted to continue with the project. Their enthusiasm and commitment has made us feel that the initiative has been successful.

Developing practical solutions to problems they have identified teaches children that they can make a difference.

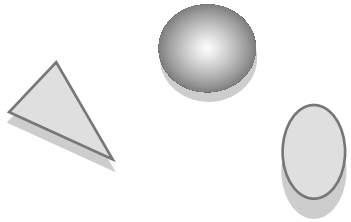
Gradually the children are beginning to appreciate that their actions may make a difference to fuel bills and to long-term sustainability. It is early days but we feel we are moving in the right direction.

Conservation is quite a difficult concept for young people. They understand the notion of use and non-use, but 'necessary use' is more difficult. At first some of the younger children suggested stopping using the computers as a way of saving energy! These concepts and accompanying attitudes develop slowly and it is in addressing such areas that our approach seems to be ideal. A four year cycle is often viewed as a problem. For us, a spiral curriculum model allows excellent opportunities for review and reflection. In a world with an ever-increasing pace of life, there is a place for 'slow knowledge'!

Sustaining the practice

We've moved on to the next part of our Environmental Studies topic grid and the energy initiative is running alongside. We feel that a manageable on-going project provides valuable opportunities to re-visit issues using different perspectives. This makes it easier for the children to make connections and think critically. This is often difficult to achieve in an otherwise subject-orientated, knowledge-based curriculum. We have resisted the temptation to have a curriculum which is content driven. Instead we use familiar topics to focus on the development of skills and attitudes that can naturally be transferred to many different areas of the curriculum.

At the moment our time commitment to the energy initiative is relatively small. Current plans are modest and include another assembly for P1-P3, plus a presentation to parents. However, our aim is not an exciting flashy project but something that we hope will become embedded in the behaviour of everyone, both at school and at home. After all, Education for Sustainable Development has to be sustained itself! Perhaps James (age 10) summed it up when he said of the project, "It's fun and it's easy to do" – surely a recipe for success!



Valuable resources

Most of the inspiration for this project came from the children themselves, as a consequence of the discussions and research they undertook and a variety of people from outside the school with whom they spoke. However, the following resources may be found useful.

Children's Participation, Roger Hart, Earthscan/UNICEF. ISBN 1 8583 332 3.

Sustainable Energy as part of a Curriculum for Sustainable Development, Ed Walsh, WWF-UK Schools' Case Study series.

Useful websites

www.cat.org.uk Centre for Alternative Technology (CAT) at Machynlleth, Mid Wales - includes support materials for schools.

www.natenergy.org.uk/educat.html National Energy Foundation - general awareness raising on energy related issues; includes ideas about teaching materials.

www.energy.ca.gov/education Energy Quest, California Energy Commission - includes lots of ideas and resources.

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The school and its project

Largue Primary School is a 26 pupil, two teacher school set in rolling countryside in rural Aberdeenshire. About one-third of the pupils have at least one parent that attended the school as a pupil themselves. Any new families are welcomed and there is still a strong sense of the school being at the heart of the community. This link with the community has important implications for a project that encourages more sustainable lifestyles – changes in attitudes and behaviour are far more likely to be taken home and into the wider community.

The energy project at Largue Primary School has been more than a cost cutting exercise, although the staff and pupils recognise that this will reap benefits in the long term. This case study suggests that the strategy developed by the school has enabled the children to see that, by working together, they can come up with practical solutions to problems they discover. Furthermore, by creating a plan of action that encouraged pupils and staff to change, children have learnt that they can make a difference.

Background

This case study is one of a series published by WWF-UK. Each one describes aspects of work undertaken by schools across the UK whilst involved in WWF professional and curriculum development programmes.

In Scotland, support was provided through the Bright Sparks and Generators Award Schemes – managed by WWF-Scotland and sponsored by Scottish Hydro Electric – between 1996 and 2000. The schemes focused on the 5-14 Environmental Studies Guidelines (for those outwith Scotland, this is the curriculum context for teaching science, social subjects and technology) which provide an opportunity for integrating the principles of Education for Sustainable Development. In particular, the schemes aimed to stimulate good policy and practice, demonstrating ways to integrate the 'Developing Informed Attitudes' strand within the guidelines. This is one way in which WWF helps develop ideas for new teaching and learning approaches – equipping students for thinking and acting in ways supporting the goals of sustainable development.