

ecoDriver™ Case Study –Ashley C of E Primary School

Contact – Richard Dunne – Head Teacher and on SEDS Advisory Board

Client Brief

Richard Dunne was already actively working to reduce energy usage and carbon reduction emissions and getting the teachers, pupils and community actively involved in helping to do so.

Steve Mills, CEO and Founder of SEDS introduced Richard to ecoDriver™ to help drive forward these efforts, educate the pupils on sustainability and how to secure their future.

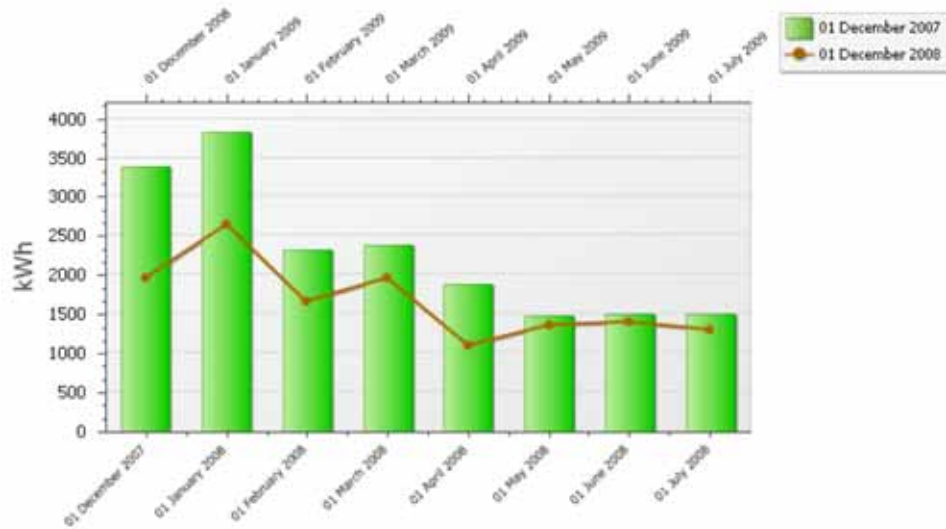
Steve and Richard share the belief that it is through educating children that we will really be able to secure the future.

The Ashley C of E Primary School Story

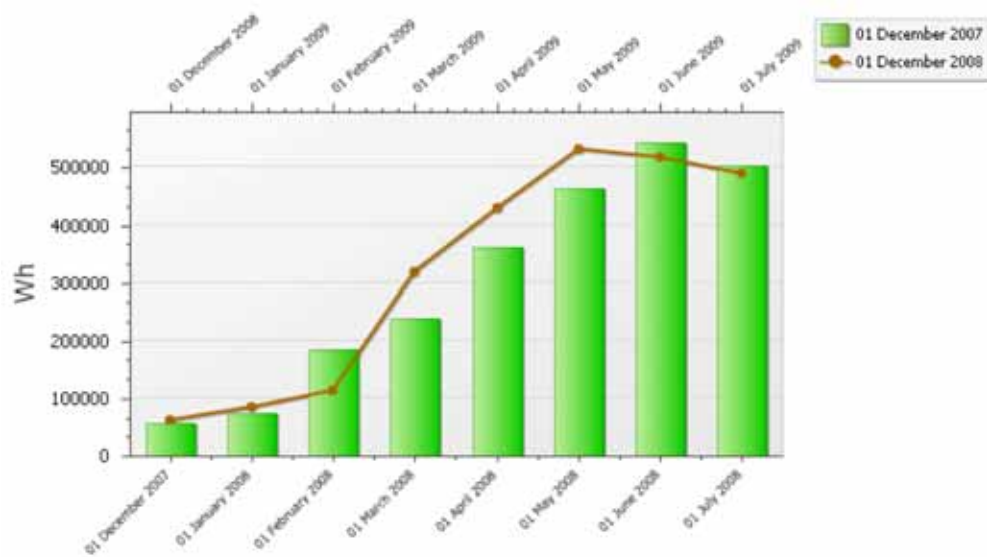
Following an expedition, sponsored by Steve Mills, to see the effects of climate change in the Antarctic, Richard initiated an ambitious programme of sustainable energy work in the school, with active support from the governing body. Pupils are actively engaged in efforts to reduce energy consumption at school and at home, and participate in the promotion of the energy activities through film and case study material.

- Pupils monitor electricity consumption in each building using data provided by ecoDriver™. The data can be viewed half hourly, daily, weekly and monthly, so that pupils can see the impact of their actions through their use of the system.
- Three school buildings are set weekly electricity consumption targets with a collective target of less than 100kWh per day. Energy monitors share data every Friday and the pupils are financially rewarded if targets are met.
- 71 staff, governors' and pupils' families have joined a Carbon Countdown Challenge to use less than 100kWh of electricity per week in their homes.
- Fluorescent lamps in the old school building are being replaced by more efficient T5 versions, installed in existing fittings using an adaptor. Efficient IT equipment has been chosen and wasteful appliances eliminated.
- Light sensors with an over-ride facility have been installed in cloakrooms and toilets of the new building. This building has solar tubes in classrooms, corridors and cloakrooms to bring daylight into dark areas.
- 35kW biomass boiler installed in the original school building which burns wood pellets sources locally. Double glazing has reduced heat loss from the building.
- 4.2 kWp photovoltaic array on the roof of the new teaching block, along with a bank of eight solar thermal evacuated tubes (11kW).
- ecoDriver™ software system used to monitor electricity consumption and electricity generated by the PV array.
- £154,000 spent on sustainable energy measures, over half from the school's own resources.
- Impressive 51% reduction in electricity use and 18% reduction in gas use between 2007 and 2008, saving about 14 tonnes/year of CO₂. Use continues to fall. Similar reductions in some of the Carbon Challenge homes.
- Plans for energy efficiency, passive solar heating, natural lighting, green roof and PV array in a £3 million new school build.

Graph showing the total electricity usage of the school comparing December to July 2007 to 2008:



Graph showing total solar power generated from December to July for 2007 and 2008:



Teaching Sustainable Energy:

Richard was invited to lead an expedition team to Antarctica to learn about the impact of climate change on the uninhabited wilderness. The team set up an education base run on renewable energy and developed ideas for a values-based Antarctic curriculum that would inform, educate and inspire young people to find more sustainable ways of living.

Influenced by the expedition, and the school's own sustainable energy practice, all teachers plan sustainability learning questions for termly topics which cover the full spectrum of the 'eight doorways to sustainability' curriculum. For example, ecoDriver™ is used in 'Numeracy for a real life application' of handling and interpreting data, and in Art and Design pupils have designed stickers and posters to encourage energy efficiency and water

conservation. Pupils have also appeared in energy saving videos for EDF Energy, BP and the suppliers of the ecoDriver software. The school runs termly Funky Fridays and themed weeks that include projects to explore sustainable practices. On one such occasion pupils worked at BP headquarters on solar energy projects.

The curriculum activities reach beyond the school gates. Pupils whose families are participating in the Carbon Countdown Challenge and 100 Club are actively involved in reading meters, like the Current Cost meter, at home and encouraging energy efficiency. The pupils now share the school's best practice with pupils from other local schools and links have also been made with schools in Poland and Italy.

Each year, Year 6 pupils travel by train to Chamonix for a 'Leadership on the Edge' experience focused on the meaning of well-being at an individual, team and global level. Whilst there, the pupils visit the shrinking glacier of La Mer de Glace which provides a first-hand experience of the impact of climate change and reinforces their understanding of the need for sustainable energy. Last year the pupils' ideas about how to become more sustainable in the Chamonix Valley were sent to and integrated into the Mayor of Chamonix's 30 year sustainability plan.

The Ashley C of E Primary School story continues with impressive energy savings and CO2 reductions, amazing work continues by both Richard, the teachers, pupils and the community. Sustainability is truly integrated into the school and has not only benefited in the ways already mentioned but has also improved learning in the school.

For further information on the school and how you can start your own sustainability programme please contact us at: info@sedsLtd.com