

ENCOURAGING SUSTAINABLE BEHAVIOURS THROUGH WORKING WITH SCHOOLS

CASE STUDY 2

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CONTENTS

CONTENTS	2
SUMMARY	3
DIFFERENT APPROACHES	4
MAKING CHANGE HAPPEN	6
Urban sustainability course.....	6
Eco-Schools Network.....	8
REFLECTIONS	11
For more information	12
ENDNOTES	12

SUMMARY

What people know and think affects how they act. Information and knowledge about an activity is important, but not sufficient to activate most kinds of pro-environmental behaviour change.¹

Over four case studies, we explore approaches adopted by projects funded by the Big Lottery Fund's Communities Living Sustainably (CLS) programme to support pro-environmental behaviour. These case studies highlight practical lessons for success and reflect on what to consider if adopting the approach. This second case study looks at different ways of working with primary and secondary school pupils to encourage pro-environmental behaviour. A young person's attitude to sustainability and pro-environmental behaviour is influenced by a combination of values, their affinity to nature, skills, their parents' environmental behaviour, their social environment, and their local context.

CLS projects have been working in schools to increase pupils' awareness of climate change and influence a wide range of pro-environmental behaviours including energy and water saving, reduction of waste, growing food and promoting active travel and healthier lifestyles.

By working with young people in schools, CLS projects have been aiming to not only influence the young person's attitude to sustainability in the longer term, but also to encourage pro-environmental behaviour in the home, and in some cases embed sustainability within the culture of the school. For community groups, organisations, and local authorities designing projects to influence pro-environmental behaviour in communities, four key design lessons have emerged from the CLS projects' work with schools:

- Behaviour change is a process, not an event. Young people need to be supported by a process of engagement in which they are active participants rather than passive recipients of knowledge.
- Activities which are both framed as pro-social (concern about the rights, feelings, and welfare of other people which prompts a moral obligation to act), and increase the young person's sense that they can successfully carry out the action (using practical exercises) are more likely to result in action.
- Developing measures to capture change in attitude and actions which can be applied by the young people themselves will deepen their understanding of the work they are doing.
- Working with young people in the school environment does not necessarily translate into changed behaviour in the home, or influencing the behaviour of parents. A targeted approach to work directly with parents is likely to have greater impact on their behaviour.

DIFFERENT APPROACHES

The various approaches used by CLS projects to work with young people in schools can be grouped into three themes:

- Projects which developed bespoke course material.
- Practical projects which engaged young people's appreciation for nature.
- Projects which adopted a whole school approach.

Examples of these approaches are summarised in Table 1. Two of these approaches are explored in more detail in the following sections.

Table 1: Summary of projects

Approach	Aimed to	Projects
Developing new course materials	Increase awareness of air quality and air pollution, and actions to reduce it.	<p>Manor House PACT, London – Air Pollution Awareness</p> <p>Working in partnership with London Sustainability Exchange, the project team worked with two primary schools. Stamford Hill Year 3 pupils had lessons about air pollution, the environment, and how to reduce their personal impact and exposure to pollution. Practical exercises to measure pollutants around the school included traffic and travel to school surveys.</p> <p>Tiverton Primary held a fun day involving 400 pupils. Traffic surveys and ozone strip tests were used to monitor their local air quality. Pupils participated in social media to share their findings and raise awareness locally.</p> <p>Of the pupils involved, 90% indicated that they had learnt about ways to improve air quality from their activities and were able to tell other people about air pollution and the actions they can take.</p>
	Increase awareness of climate change and actions they can take.	<p>Irwell Valley CLS, Salford – CLS carbon literacy courses</p> <p>Year 4 school children at Riverview Primary School completed an accredited course in carbon literacy. The course aimed to improve pupils' understanding of climate change and how to take personal action. The course was run in two other primary schools and an after-school club.</p>

Table 1 cont.

Approach	Aimed to	Projects
<p>Developing new course materials</p>	<p>Increase awareness of sustainability and actions they can take.</p> <p>Develop critical thinking.</p>	<p>Manor House PACT , London – Urban Sustainability</p> <p>The project team worked in partnership with a local secondary school to develop an urban sustainability learning programme for GCSE Geography Year 10 and 11 students. The programme aimed to encourage pupils to think critically about sustainability and its links to deprivation and quality of life in the local area.</p> <p>Irwell Valley CLS, Salford – Horticulture</p> <p>The project team developed materials on growing linked to an accredited Open Awards horticultural qualification. Incredible Edible Salford provided teaching support. Working with 16 young people, an extensive water-capture scheme was developed at the school. The project team secured partners who supported the construction work and costs.</p>
<p>Developing practical approaches</p>	<p>Strengthen young people’s affinity to nature through woodlands engagement.</p> <p>Raise awareness of climate change and the role of woodlands in combating it.</p>	<p>Sustain Eden, Cumbria - Tree Whisperers</p> <p>The project helped primary school pupils understand climate change and carbon through an appreciation of trees and their role in nature. Pupils learnt about tree types, photographed trees, and created art work. The project worked with 19 schools, over 600 pupils, and helped pupils plant over 350 trees in school grounds and 60 in woodland. A set of resources and films were created to support the project including short animations and session plans.</p>
<p>Whole school approach</p>	<p>Increase understanding of sustainability and actions they can take.</p> <p>Support a culture change in schools towards sustainability.</p>	<p>CLS Dorset – Eco-Schools</p> <p>Dorset CLS supported 12 schools in their area to form a network of Eco-Schools. An Eco-School follows a seven-step process led by pupils which addresses a range of pro-environmental behaviours, including energy, waste, recycling, and healthy living. Elements included setting up an eco committee, carrying out an environmental audit, developing an action plan, and evaluating the project.</p>

MAKING CHANGE HAPPEN

Urban sustainability course

Manor House PACT, based in London, created and delivered a four-lesson course on urban sustainability which formed part of a GCSE Geography Year 10 and 11 course (involving 126 students).

This course aimed to support students' critical thinking about deprivation, the quality of life in their local area, and how these issues are connected with sustainability and regeneration of urban environments. This participative programme incorporated games, role play, and films.

To evaluate the programme, the project team conducted a survey with the participants before and after the course to identify impact on the students' awareness of climate change and how it will affect their community; whether the students felt that they could influence decisions in their local area; whether they felt the community could collectively influence decisions by working together; and how important protecting the environment was to the students.

Awareness of climate change and the actions to mitigate it were measured using the following scale:

1. I am not aware of the key issues surrounding climate change.
2. I am aware of the key issues surrounding climate change, but do not fully understand them.
3. I have a good understanding of the key issues around climate change.
4. I have a good understanding of how key issues regarding climate change will affect me and my community.
5. I have a good understanding of how climate change will affect me and my community and what I can do about it.

The survey found that students' awareness and understanding of climate change increased as a result of the course. Students who were not aware of climate change, or did not understand how it would affect them at the outset, became more aware and could relate those changes to their life.

In some cases the course had a positive impact on knowing which actions could be taken to mitigate climate change. The course also had a positive impact on students' beliefs that they could influence decisions in their local area.

Students' pro-environmental attitudes were less affected by the course, and survey results indicated a slight reduction in the number of students who indicated that protecting the environment was of the highest importance to them. The reason for this decrease was not investigated in the study. The students were less likely to try to

influence others, either by informing them about how to adapt to climate change, or by attempting to influence family members. The range of behaviour change pledges students selected are indicated in Figure 1.

Lessons for success

The project team offered the following key lessons for success:

- **Make content relevant to the school's syllabus.** The project team was able to get buy-in from the school by matching the school's learning outcomes for the GCSE syllabus to the proposed content of the lessons about sustainability and climate change. This was achieved through a series of meetings between the project team and the Head of Geography, and using teacher text books to co-create lesson plans. This helped to develop an integrated series of lessons for the students.

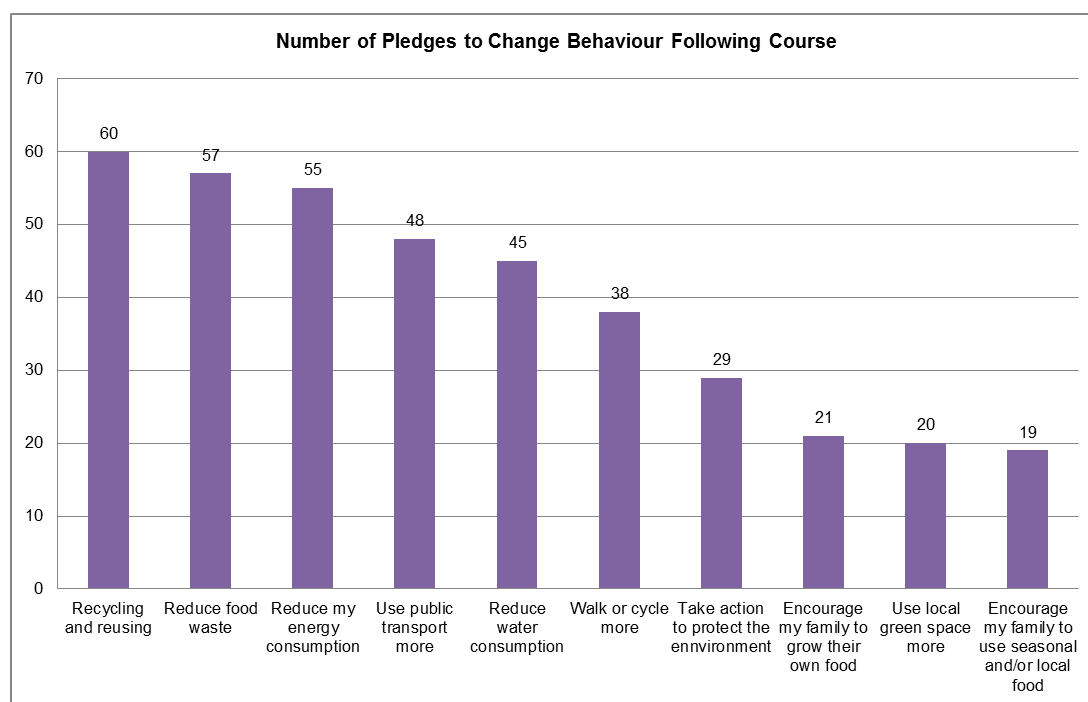


Figure 1: Behaviour change pledges

- **Advance planning.** The urban sustainability programme was delivered in a series of four lessons to five different mixed-ability GCSE classes (20 lessons in total). The project worked with two Geography teachers and four tutors from the Manor House PACT project. Early planning and coordination was needed to avoid timetabling issues. Taking advantage of a relatively quiet teaching time before the summer holidays allowed time for planning and the necessary criminal records checks to be in place.

- **Local application.** Being able to offer a discursive programme of learning about regeneration of the local area, where many of the young people lived or passed through on their way to school, meant that the content of the sessions were accessible and relevant to the experiences of the young people involved. A field trip to a regeneration site helped to bring the theories and discussions to life, and provided a case study for the students' geography examinations.

Eco-Schools Network

Dorset Council has a history of working with schools to improve their sustainability, and Dorset CLS built on this by supporting 12 schools (5 first, 4 primary, 1 middle, and 2 secondary schools) to form a local network of Eco-Schools. The project team co-ordinated support for the network through an Eco-School Officer based in Dorset County Council.

The council's Schools Energy Officer provided technical support to help schools understand and monitor energy usage. Eco-School, an international programme managed in the UK by Keep Britain Tidy,² was chosen for three reasons: the clear structure of the programme, the focus on pupil empowerment, and the involvement of parents and the wider community.

Eco-School adopts a whole school approach to changing behaviour. This opens up the opportunity to normalise pro-environmental behaviours by embedding them throughout the school. An emphasis on a pupil-led process aims to positively impact on the pupil's perception of their ability to reach a goal (self-efficacy). Each Eco-School follows a structured seven-step process addressing a range of themes, including energy, waste, recycling and healthy living.

"The children increase in confidence as they learn that the programme is about their future, and it is for them to educate the adults around them."

Gail Tucker, St Mary's Catholic First School

Schools progress through various national awards (bronze, silver, and green) which denote key milestones in the development and delivery of their action plans.

To achieve green flag status, a school needs to demonstrate that their pupil-led eco-team meets regularly and has a parent representative; an environmental review has been completed and the results have been shared with the whole school; the progress of the action plan is being monitored; and sustainability is covered by at least three curriculum areas.

Examples of two primary schools in the network are described in Boxes A and B.

Box A: Prince of Wales School

The Prince of Wales School is a First School in Dorchester which admits children from 4 to 9 years of age. The decision to join the Dorset CLS Eco-School network was driven by a belief that promoting sustainable behaviours amongst their pupils was a fundamental role of a school.

This fits with the school's curriculum statement which refers to development of the whole child - *By this we mean the development of the child academically, socially, emotionally, physically, spiritually and morally, to achieve the highest standards for each individual.*³ The school prospectus refers to the Eco-School status as a driver of the school curriculum, and it expects to achieve its Green Flag in 2016.

The school has undertaken a range of activities aimed at encouraging sustainable behaviours and attitudes. Pupils take on a leading role in implementing activities including:

- Developing an active travel policy for the school which encourages pupils to cycle or scooter to school. Pupils using these forms of transport are celebrated and the school has provided cycle and scooter storage and training for pupils.
- Reducing waste reduction and engaging in recycling activities, including litter picks, litter surveys, and ensuring that bins are being used correctly.
- Holding regular eco-assemblies to update the whole school on the activities of the eco-team. Eco-assemblies are written up as blogs on the school website.

Duncan Macbean, Eco-School coordinator at the school has identified increased awareness and changes in the behaviour of pupils and staff:

We are seeing a lot of awareness in our pupils and our staff. Specifically around litter picking and energy. We are also starting to see a bit of an impact outside the school, specifically around children nagging their parents to change their behaviour. 'You shouldn't be leaving the lights on'. I think it's going to be very effective.

Box B: St Mary's Catholic First School

St Mary's Catholic First School in Dorchester took part in the Eco-School programme because it was thought to represent 'an important opportunity to educate children in something which will have far-reaching effects, especially for them and their future'.

Pupils have been taking regular electricity meter readings in order to increase awareness of the amount of energy used in the school. Pupils analyse the data in their maths classes, producing graphs and charts to show how much power the school is using, and identify where reductions might be made.

Since joining the programme, the school has reduced its electricity consumption by 15%.⁴ Pupils have also developed a green procurement policy for the school by investigating the amount of renewable and recycled items bought by the school. St Mary's is keen to involve parents in the Eco-School programme as much as possible through homework projects and Eco-days where parents are invited into school.

Box B cont.

Gail Tucker, Eco-School Co-ordinator at the school, emphasised the impact that pupils involved in the eco-team are having on teachers in the school:

The children have been able to influence the behaviour of the adults in school in several ways [...]. An example of this is the Eco-team monitoring which rooms have the lights switched off when they are empty. The children go around the school checking the rooms at break times, unannounced, and 'splat' the rooms where the lights are found to be on. No-one wants a red 'splat' on their whiteboard!

Evaluation of the national Eco-School programme found evidence of positive impacts on behaviour, motivation, and cognitive skills.⁵ The initial results from the Dorset eco-schools are encouraging. Participating schools have increased the amount of waste they recycle from 10% to 28%. 'Switch Off' days have resulted in up to a 50% reduction in energy usage in some schools.

Behaviour change questions were not originally included in CLS Dorset's monitoring survey. The project team plans to address this by collecting retrospective information in their follow-up survey and include questions to gauge changes in attitudes and understanding of climate change, and behaviour changes across a range of themes.

Lessons for success

The project team offered the following key lessons for success:

- **Build relationships.** Not every school will engage with the Eco-School programme on their own. The strength of adding the Eco-School coordinator to the standard Eco-School model is that they can spend time building relationships with schools and increase levels of engagement. In Dorset, they made use of the contacts they already had within schools, and made links to school partnerships with the ability to influence schools in the area. Meeting teachers every term and bringing together teachers from across the schools provided additional motivation.
- **Link to school priorities.** The Eco-School programme can contribute to a number of current school priorities, such as UNICEF's Rights Respecting Schools Award which supports schools to embed children's rights into the school ethos and culture. The Dorset team found that making explicit links to these priorities was an important factor in gaining interest in the Eco-School programme.
- **Focus on primary schools.** Greater progress has been achieved by the primary, first, and middle schools in the network compared to the secondary schools. Obstacles to progress have included the lack of control over school buildings and services, the department structure of secondary schools, and the motivation of pupils.

REFLECTIONS

The findings of the CLS projects and research into pro-environmental behaviour change highlight four areas for consideration when thinking about working with schools to influence pro-environmental behaviour:

- **A process of change.** Behaviour change is a process, not an event. Young people need to be supported through a process of engagement where they are involved as actors, rather than as passive recipients of knowledge.⁶ There is a lack of evidence to indicate if there are longer-term behaviour impacts resulting from educational courses in schools. Whole school approaches such as Eco-School seem to offer the potential for normalising a wide range of behaviours within a school environment if this can be embedded within the institutional framework of the school. The experience of CLS Dorset indicates that primary and middle schools are more open to embedding this approach.
- **Beyond ecological experiences.** Research suggests a secondary school's sustainability education needs to provide more than ecological experiences (one-off trips) to impact on young people's pro-environmental behaviour. Activities which are both framed as pro-social (i.e., behaviours intended to help other people, which are characterised by a concern about the rights, feelings, and welfare of other people which drive a sense of obligation to take action), and increase a person's sense that that they can carry out action successfully are more likely to result in action.⁷
- **Feedback loops.** Feedback helps shape behaviour as part of an ongoing flow of learning activity. It is this process of learning that brings about lasting change. Evidence of impact is needed to evaluate and change behaviour and shape interventions. Measuring change should be embedded in activities and led by the young people. These measures should capture not only actions, but include changes in attitude to climate change or living more sustainably; an intention to act in a more pro-environmental way across a range of behaviours; and having a positive influence on others.
- **Wider impact.** Working with young people in the school environment does not necessarily translate into changed behaviour in the home, or influencing the behaviour of parents. This would assume that circumstances in the home supported those behaviours, and that young people are the key influencer of their parent's pro-environmental behaviour. If the intention is to influence parent's behaviour, then targeting interventions to remove barriers and influence specific behaviours are likely to have greater impact.

For more information

Sustain Eden's Tree Whisperers: <http://www.treewhisperers.co.uk/>

Eco-School: <http://www.eco-schools.org.uk/>

CLS Dorset Eco-Schools: <http://www.clsdorset.org.uk/Eco-Schools.aspx>;
<https://youtu.be/XKKgi6KR39g>

Manor House PACT Lesson Plans: <http://www.mhdt.org.uk/pact>

ENDNOTES

¹ For example, Fliegenschnee and Shelakovsky in a 1998 meta-analysis of pro-environmental behaviours study found that 80% of factors influencing behaviour did not come directly from knowledge and awareness [in Darnton, A. (2008). *GSR Behaviour Change Knowledge Review Reference Report: An overview of behaviour change models and their uses*. Government Social Research, London].

² Keep Britain Tidy's Eco-School programme has a stated mission to 'make every school in the country sustainable and to bring about behaviour change in young people and those connected to them so that good habits learned in schools are followed through into homes and communities'. The programme can be applied in primary and secondary schools, or colleges.

³ The School's Curriculum Statement is detailed in the schools prospectus. Retrieved from <http://www.princeofwales.dorset.sch.uk/website/prospectus/76887>

⁴ Average electricity consumption across the CLS eco-schools reduced by 5.93%, against an average rise of 3.05% for schools across Dorset. CLS Dorset (2016) *Final Evaluation Summary Report*.

⁵ Keep Britain Tidy. (2013). *Eco-Schools England – Exploring success to inform a new horizon*. Retrieved from <http://en.unesco.org/esd-repo/542/>

⁶ Levin's change theory describes behaviour change as a learning process, rather than an intervention which effects change through the acquisition of knowledge. Change and learning are integrated in the process of action and reflection.

⁷ A study of Finnish adolescents exploring how sustainability-related in-school experiences delivered in a pro-social way influences adolescents out of school general ecological intentions and behaviours. Uitto, A. Boeve-de Paw, J. & Saloranta, S. (2015). Participatory school experiences as facilitators for adolescents' ecological behaviour. *Journal of Environmental Psychology*, 43, 55–65.