



Cut the Carbon Ltd
 Unit 7, Temple Yard
 Temple Street
 London E2 6QD

info@cutthecarbon.com
www.cutthecarbon.com

020 7729 2819 – Cath Hassell
 07837 568 011 – Simon Corbey

Cut the Carbon in Sutton Schools

Introduction

During the school year 2007/2008 Cut the Carbon took the Cut the Carbon board game into ten schools across the Borough of Sutton as part of the BioRegional “Education for One Planet Living” project. Schools were offered, free of charge, one Cut the Carbon trainer who would spend a day at the school working with the pupils to improve their understanding of the effect their personal carbon emissions (as citizens of an industrialised nation) have on global warming.

Both behavioural and technological changes are required to reduce CO₂ emissions. By playing Cut the Carbon pupils gain an insight into both; they learn how to reduce their own emissions and how schools can become more carbon efficient. The result is a change in pupils’ behaviour, leading ultimately to a culture change within the school around CO₂.

Participating schools

All schools in Sutton were emailed with details of the workshop and we also directly contacted a number of schools which had been identified as likely to engage (mostly through prior links with Bioregional through visiting the BedZED development) with such a project.

School name	Year group	No of pupils
Culvers House Primary School	Years 5+ 6	120 ¹
Hackbridge Primary School	Year 5	60
Robin Hood Junior School	Year 5	60
SS Peter and Paul Primary School	Years 5+ 6	54
Stanley Park Junior School	Year 5	93
Carshalton High School for Girls	Year 8	90
Carshalton Boys Sports College	Years 7-9	18
Greenshaw High School	Years 7-9	180
Overton Grange High School	Year 8	210 ²
Wallington County Grammar School	Years 7+ 8	120
1. 120 pupils had a 40 minute assembly. 60 Year 5 pupils then played the game with Cut the Carbon. Year 6 pupils played with their form teacher later in the term 2. 210 had a 20 minute assembly. 90 pupils played the game with Cut the Carbon. Year 6 pupils played with their form teacher later in the term		

Table 1



Cut the Carbon Ltd
Unit 7, Temple Yard
Temple Street
London E2 6QD

info@cutthecarbon.com
www.cutthecarbon.com

020 7729 2819 – Cath Hassell
07837 568 011 – Simon Corbey

Nine schools were quickly signed up and the 10th school followed shortly. Therefore no further mass mailing was required. However, arranging dates and the format of the day was time-consuming especially as teachers are difficult to contact during teaching hours. We had to do most of the organisation by phone during the school lunch hour with final confirmation by email. The schools involved were a mix of primary and secondary, and all were state schools. The schools visited, year group, and number of pupils directly taught by Cut the Carbon are shown in Table 1.

Playing Cut the Carbon

The format of the day is decided in advance after discussions with the teachers. Ideally we need a minimum of one hour to play the game give out the scores and gather feedback. If the school wants us to talk about global warming as well (which we prefer) it is best that we have 20-30 minutes to discuss the issue before the game. To maximise our time in the school we usually talk to the pupils in a group (e.g. at assembly) before playing the game in individual class sizes of up to 30.

We are very flexible with how we work with each school, and the Cut the Carbon game itself allows us to work in such a way. It is important to offer this flexibility as all schools are different. We can work with one year group or across a series of year groups; we can talk at an assembly or to individual classes; we can vary the amount of time we spend with each class, and the level of informed feedback we give to the pupils. Our feedback to the answers chosen by the pupils changes with the age of the class playing Cut the Carbon, and also with the ability levels of the pupils.



During this project timings ranged from 50 minutes to 2 hours with a class, from no presentation at assembly through to a 45 minute question and answer session with 120 pupils.

We like to work closely with one or two teachers during the day so that they see how the game is played and feel confident to play it with other classes. For us it is important that Cut the Carbon is played after we have

left the school so that the message of reducing personal CO₂ emissions reaches the widest possible number of pupils at each school. Feedback from



Cut the Carbon Ltd
Unit 7, Temple Yard
Temple Street
London E2 6QD

info@cutthecarbon.com
www.cutthecarbon.com

020 7729 2819 – Cath Hassell
07837 568 011 – Simon Corbey

teachers (both previously and in this project) showed that working closely with them in this way meant they were confident about playing the game again without us there. Several of the schools had already earmarked the classes they were going to play the game with after we left.

All the schools said that they would like us to revisit the school and hoped that the project would be extended to allow this to happen during the 2008/09 school year.

Pupil numbers

In total 327 primary school pupils and 498 secondary school pupils played the game directly with the Cut the Carbon trainers. In addition 60 further primary school pupils and 120 further secondary school pupils discussed how a carbon allowance card would work, the effect it would have on reducing their own CO₂ emissions with the Cut the Carbon trainer, and played the game later that week with their form teacher. One very important part of the Cut the Carbon package is that we always leave two copies of the game with each school so that pupils in other classes and other years can also play the game. The teachers at Overton Grange were so pleased with the buy-in by the students that played the game with the Cut the Carbon trainer, that the school decided to play the game with the remainder of Year 8 (another 120 pupils), plus all Year 7's and Year 9's before the end of the term. This is a potential 600 plus pupils playing Cut the Carbon, which works out at less than £0.75 per head.



Cut the Carbon and the National Curriculum

For the Junior Schools Cut the Carbon is relevant to Maths, Science and Geography at Key Stage 2. In the Secondary Schools we played the game at Key Stage 3 in Science, Geography or Citizenship classes depending on the preference of the school.

Water saving with Cut the Carbon

Reducing water use (especially hot water use) also results in a reduction in CO₂ emissions. There are squares on the game, as well as carbon and lifestyle



Cut the Carbon Ltd
Unit 7, Temple Yard
Temple Street
London E2 6QD

info@cutthecarbon.com
www.cutthecarbon.com

020 7729 2819 – Cath Hassell
07837 568 011 – Simon Corbey

cards that relate to water use, highlighting both behavioural and technological changes. A simple way for pupils to save water is to fit a save-a-flush bag in their WC at home, thus saving 1 litre of water with every flush. We arranged the delivery of save-a-flush bags to some of the schools. Save-a-flush bags were supplied by Thames Water or Sutton and East Surrey Water (depending on which company are the relevant water supplier). We also supplied a simple water calculator that the teachers could use with the pupils.

In Overton Grange High School we discussed the importance of saving water (both in its own right and as part of reducing carbon emissions) at an afternoon assembly and gave out 210 save-a-flush bags (1 per pupil). We estimate that (at an average occupancy of 3 people in each pupil's home) over 1,149,000 litres of water will be saved every year by the pupils in Year 8 at this school alone.

Feedback – school pupils

Every time the game was played the pupils filled out a feedback form, either individually or as a team. The feedback forms are designed to evaluate how much the pupils enjoyed the game, how much they have learnt about climate change, whether they want to play it again and whether they would like a computer version. They are also asked to pledge one thing they will do to reduce their own personal carbon footprint.



We got feedback from all the 10 schools we visited. The quality of the feedback varied depending on pupil ability, classroom control and time available for the feedback. If we had only a short amount of time with the pupils we limited the time for feedback to ensure we spent as much time as possible playing the game to maximise pupils' learning. The amount of time the pupils had for feedback was limited to 10-15 minutes but

often less. We usually added up the scores while the pupils filled out the feedback forms. The forms are designed to be filled out quickly and easily regardless of literacy levels of the pupils, and to gain information about the 4 core questions. Sometimes the feedback forms were filled out in groups (pupils play the game in groups) rather than individually.



Cut the Carbon Ltd
Unit 7, Temple Yard
Temple Street
London E2 6QD

info@cutthecarbon.com
www.cutthecarbon.com

020 7729 2819 – Cath Hassell
07837 568 011 – Simon Corbey

When pupils are more literate (or focussed!) they engage with the general questions that ask for ideas for their own carbon cards, one thing they will do to reduce their own carbon footprint and any other comments.

In total we received 465 feedback forms. Analysis of the forms showed that:

- 93% of pupils enjoyed playing Cut the Carbon
- 82% of pupils learnt more about climate change and the links between climate change and their lifestyle
- 57% of pupils would like to play the game again
- 54% of pupils would like a version for the computer

General comments

Below is a selection of the feedback we got about the game, both good and bad! At some schools we asked for group instead of individual feedback. We have not changed the grammar or the spelling, so these are verbatim from the sheets. There are more comments in Appendix 1.

[That game was the second best board game I ever played!](#)

Harry, Year 5 Robin Hood Junior School

[The game was cool and fun!!!](#)

Aasha, Year 8, Overton Grange High School

[I enjoyed it because it's a game while you are learning](#)

Nicole, Year 5 SS Peter and Paul's

[It has shown me how to look after our planet](#)

Michael, Year 8, Wallington County Grammar Schools for Boys

[It was fun and you did it well. We really enjoyed it so much. Thank you.](#)

Evie, Megan, Natasha Year 5, Stanley Park Junior School

[It's less boring than some science lessons¹](#)

Caitlin, Year 8, Greenshaw High School

[I hope you come back in year 6](#)

Jamie, Year 5, SS Peter and Paul's Primary School

¹ Dammed with faint praise!



Cut the Carbon Ltd
Unit 7, Temple Yard
Temple Street
London E2 6QD

info@cutthecarbon.com
www.cutthecarbon.com

020 7729 2819 – Cath Hassell
07837 568 011 – Simon Corbey

I would like to say thank you for your time in trying to educate us of the cut the carbon

Jamie, Year 8 Carshalton Boys Sport College

Ideas for Carbon cards or lifestyle cards

Some of these ideas will be incorporated into future versions of the game, although we will calculate the actual amount of CO₂ emissions saved or used. There are more in Appendix 1.

[You own a cow – 1000kg CO₂²](#)

The fiercesome (sic) foursome, Thefra, Niall, Ian, Luke, Year 8, Greenshaw High School

[Your window breaks. Do you:](#)

- A) Replace it normally +0
- B) Replace it with double glazed glass +100
- C) Leave it glass less -150
- D) Fill it with bricks/remove whole window -580

Dan, Year 8, Wallington County Grammar

[Your homework horror..... You don't know how to do your homework do you look it up on the computer or ask?](#)

Shauna, Year 6, SS Peter and Paul's Primary School

[Your cousin comes to stay and insists on turning on all the lights Lose 500](#)

Hau Yin, Year 8, Wallington County Grammar Schools for Boys

[You drive up to Croydon but there aren't any parking spaces so you go home. When you live 10 minutes away!](#)

Emma, Year 5 Robin Hood Junior School

What one thing will you do to reduce the amount of carbon you emit?

Most pledges were about turning lights off or TV off, or computer off (we only asked them to do one thing). Quite a few were about walking to school instead of coming by car. We have chosen a selection below. There are more examples in Appendix 1.

[Stop showering for so long](#)

Scott, Year 8, Wallington County Grammar Schools for Boys

² Not sure if they discussed any methane to CO₂ calculations!



Cut the Carbon Ltd
Unit 7, Temple Yard
Temple Street
London E2 6QD

info@cutthecarbon.com
www.cutthecarbon.com

020 7729 2819 – Cath Hassell
07837 568 011 – Simon Corbey

[I will invent eco inventions](#)

Sony, Year 5, Stanley Park Junior School

[Don't turn the toilet light on when I go to the toilet](#)

Kaeleen, Year 5, Culvers House Primary School

[I will only watch TV for 3 hours a day maximum to save CO₂](#)

Reise, Year 5 Robin Hood Junior School

[Buy more local produce or fair-trade goods. Leave the packaging at the supermarket to prove a point.](#)

Rosie, Year 8, Overton Grange High School

Feedback – school teachers

We also asked for feedback from the teachers. We were not always able to get their feedback as they were adding up the scores during time allocated for pupil feedback and teachers often came in only with their class and then left immediately. Headline figures from the teachers' feedback was that 100% of the teachers enjoyed playing Cut the Carbon, 92% feel confident about playing the game again without us, 96% would like a version for the computer and 96% would like us to visit again.

[This is brilliant. I have a lesson already planned for me with all the answers! We will roll this out to Years 7 and 9 as well.](#)

Tania Yorke, Year 8 head, Overton Grange High School

[It was a great day. Very useful and stimulating. Many thanks.](#)

Laraine Brown, Year 5, Stanley Park Junior School

Have the pupils changed their behaviour after playing Cut the Carbon?

The schools (understandably) were not able to quantify the carbon savings made but all the schools we contacted felt that the level of carbon literacy and behaviour of the pupils with regard to energy saving had improved significantly since our visit.

Appendices:

Pupil feedback

Teacher feedback

Feedback form (pupils)

Water calculation form

Cath Hassell, Sept 2008