



**CENTRE FOR  
SUSTAINABLE  
ENERGY**

# **Citizenship Education to Cut Carbon**

EST Innovation Programme – Feasibility  
Report

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**2 September 2004**

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## 1 Project details

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The work described in this report was carried out with support from the Energy Saving Trust's Innovation Programme. The views and judgements expressed in this report are those of the authors and do not necessarily reflect those of the Energy Saving Trust.

## 2 Partner details

Centre for Sustainable Energy

Bristol City Council LEA

Bristol City Council Energy Management Unit

Four schools in the Bristol area

Bristol & Somerset Energy Efficiency Advice Centre

Bristol & Somerset Renewable Energy Advice Service

### 3 Executive summary

The idea for the programme “Citizenship Education to Cut Carbon” grew out of feedback from CSE’s successful ‘Energy Matters’ programme, independent research into which showed that education to develop children’s knowledge about energy efficiency has a significant impact upon the actions of the whole household. Energy Matters provides a fully-supported programme linked to the National Curriculum at Key Stage 2 for science technology and numeracy. However it has never included information about grants and discounts, largely because experience told CSE that teachers and parents are deeply sceptical about education programmes that hand out promotional materials. Moreover, information about grants is not particularly relevant to science, technology or numeracy.

With the introduction of Citizenship into the National Curriculum, CSE began to see a way in which the Energy Matters method could be adapted to broach the topic of grants and incentives. This study set out to test the feasibility of such an idea, and since Citizenship is a compulsory part of the National Curriculum at Key Stage 3, CSE proposed to trial the idea with 4 secondary schools in Bristol.

The objectives of the study were as follows:

- to build upon CSE’s previous energy education work, by working with the Bristol City Council Citizenship Curriculum Adviser, to develop new activities around energy grants and meeting the criteria for Citizenship in the National Curriculum and pilot in-service training sessions with teachers from selected schools.
- to raise awareness, and therefore take up, of grants and discounts offered by EEC providers, local authorities, Warm Front and installers for the ‘fuel poor’, ‘nearly poor’ and ‘able to pay’ sectors;
- to develop the methodology to track participants and work with grant providers to record and evaluate the number of new grant referrals;
- to involve the EEAC and REAS in providing support to parents and carers;
- to investigate the most appropriate way of engaging Energy Efficiency Commitment providers in education programmes promoting grants and discounts.

After consultation with Bristol City Local Education Authority (LEA) and Energy Management Unit (EMU), a number of Bristol schools were approached and the four that were recruited represented a good cross section of households, including those in Urban Renewal Areas

Simultaneously, work began on the teaching resources, which were structured around 3 sessions and included lesson plans, teacher notes, activity sheets and pupil information sheets. Both Bristol City LEA and EMU were consulted about programme content, and the citizenship teachers from the participating schools were invited to comment on the materials at an early stage; the latter providing useful observations regarding differentiation.

The key activity, from the point of view of the study, required pupils to put together an energy advice pack for members of their own family or household. They could choose from a range of simple leaflets, which included details about the Bristol & Somerset EEAC, and a grant application form.

In-service teacher training took place in three schools during the latter half of Summer Term 2004, followed by delivery of the teaching programme by the citizenship teachers, assisted in two cases by members of the CSE Education & Training team.

Three schools decided to use the materials to hold a conference with pupils in Years 8/9, and this proved to be popular and successful with teachers and pupils alike. The activities in the resource pack were used to run workshops and there was a final plenary session. Some

good work was fed back from the pupils in the form of posters and raps. Teaching staff commented on the imaginative response from pupils not generally known for their enthusiasm.

The Bristol & Somerset EEAC & REAS attended parents' events in three of the schools. They also assisted with setting up and implementing the tracking system, designed to monitor enquiries and grant referrals from the households of participating pupils.

The key results of the study are:

- the citizenship teaching resources have been used in three schools, with around 390 pupils
- the materials benefited from the early in-put of Bristol City Council LEA & EMU, and from staff in the schools themselves. The resource has now been developed to the point where it could be adapted for use in a number of formats
- the programme was a success educationally. Feedback from the citizenship teaching staff was good and the conference format was particularly successful. The programme broke down barriers and engaged pupils who are often reluctant to show enthusiasm during citizenship lessons
- however, there have been less enquiries to the Bristol & Somerset EEAC & REAS and referrals for grants and incentives than CSE hoped for
- response to the EEAC & REAS stand at the parents' events was fairly limited.

The reasons for the disappointing number of referrals are discussed in key issues & lessons learnt and in the conclusions. They can be summarised as follows:

- it is more difficult to engage pupils in school-home links at this stage in their career than those at primary school age, and there may be a case for evaluating the programme in terms of the changing behaviour of the pupils themselves
- the timing of the programme may have borne on the overall result. Successful co-ordination with secondary school timetables requires a long view. Planning and recruitment needs to take into account the whole school timetable in order to provide context and offer the opportunity to reinforce learning and encourage school-home links
- the Summer Term is a good time for schools to use unusual teaching techniques and one-off programmes, but is not necessarily the best time to promote information about grants and the energy-saving measures usually associated with cold weather
- the parents of secondary school children do not generally come into school as often as those of primary school children. When they do come into school they focus on talking to the teaching staff, a process which is usually structured, allotting parents specific times to talk to individual teachers.

A further key finding concerns the need to take into account differentiation when producing teaching materials. This is particularly important at Key Stage 3, where variation in ability may be more pronounced than at Key Stage 2, and teaching staff need to be able to incorporate teaching materials into their scheme of work with the minimum of amendment.

Although the materials trialled during this study have not as yet yielded many referrals, they proved popular with citizenship teachers and pupils alike and resulted in some good work from pupils in a subject that is often received with limited enthusiasm. Although CSE may have difficulty making the case for implementation funding, due mainly to the need to measure EEAC referrals rather than the quality and depth of educational experience, we have learnt much from the study and can see how the programme could be developed into a teaching resource with the potential to influence pupil behaviour and improve school-home links and reduce carbon emissions.

## **4 Description of the feasibility study**

### **a) Scope of the study**

The study was aimed at the domestic sector, and in particular at the households of school children attending Years 8 & 9. Work to support the study took place in four secondary schools in Bristol.

The study concentrated on the link between energy related activities in the school and those in the home. The take up of grants and incentives by the households of those children taking part in the programme of learning was also a factor.

### **b) Background**

The idea for Citizenship Education to Cut Carbon grew out of feedback from CSE's successful 'Energy Matters' programme, which showed that education to develop children's knowledge about energy efficiency has a significant impact upon the actions of the whole household.

Independent research into the affect of the programme was completed in April 2003, and showed that:

- three quarters of parents had adopted some behavioural changes to save energy as a result of their children's involvement in Energy Matters
- the level of behavioural change was higher than that achieved by professional advice services such as EEACs
- parents rated their children and Energy Matters as almost twice as influential on their behaviour as other sources of information.

The Energy Matters method is centred upon a resource pack of lesson plans, teachers' instructions and pupil activities that relate closely to the National Curriculum at Key Stage 2 in a number of study areas, including Science, Technology and Numeracy. The activities encourage home-school links and have the potential to involve household members as pupils carry out some of the suggested exercises for homework. Participating schools are also offered in-service training and full ongoing support for the teachers who use the resource.

However, the Energy Matters programme did not include activities to inform pupils about the grants and discounts that are available. Therefore, it has always had a limited impact in terms of the practical steps taken by those householders whose decision to invest in energy-saving measures depends upon full or partial financial support. Such information was not included because experience told us that teachers and parents are deeply sceptical about education programmes that hand out promotional materials. Moreover, information about grants can be a sensitive topic to introduce if the teaching materials are being used in science, technology or numeracy lessons.

With the introduction of Citizenship into the National Curriculum, a way was seen which could adapt the Energy Matters method to broach the topic of grants and incentives. Citizenship is now a compulsory subject in secondary schools, challenging pupils to think about social equity, the necessity of taking personal responsibility for their actions, as well as the importance of their own attitudes towards matters that affect their immediate and wider community. Many of the social, economic and environmental issues surrounding the use of energy lend themselves well to such debates, and so CSE decided to develop materials that would link closely to Citizenship and the curriculum at Key Stage 3.

We discussed the idea with Citizenship Curriculum Advisers, who believed that the Energy Matters method could be adapted to yield results given the home-school links our education programmes always seek to achieve. It was also agreed that the programme would be well-received by schools; especially in the light of recent findings, which show that teachers do not consider that they have enough support or backing to do justice to Citizenship. In particular, they find it difficult to make the kind of links with outside organisations and community groups that give their pupils a relevant and practical context for their studies.

Therefore, in Citizenship Education to Cut Carbon CSE sought to bring together the successful method adopted in Energy Matters with a fresh approach to energy education. The programme would offer schools an attractive Citizenship teaching resource based upon the social and non-technical aspects of energy use, which could justifiably include information about grants and discounts.

### **c) Purpose of study**

Having made this fusion, CSE wanted to establish whether the development of innovative teaching materials that included information about grants and incentives would prove to be as successful in stimulating grant referrals as Energy Matters was in promoting behavioural change.

### **d) Aims & objectives for the lead organisation and any partners (as distinct from the overall aims and objectives of the study, if appropriate)**

#### **Aim:**

To test the feasibility of an innovative new methodology for informing householders about grants and discounts by engaging parents and children in knowledge exchange and decision making activities, related to the Citizenship Curriculum, which will look at the reasons for, sources of, and availability of energy efficiency grants and discounts, promoting grant referral and take up and thus reducing carbon emissions

#### **Objectives:**

To build upon CSE's previous energy education work and work with the Bristol City Council Citizenship Curriculum Adviser, to develop new activities around energy grants and meeting the criteria for Citizenship in the National Curriculum and pilot in-service training sessions with teachers from selected schools.

To raise awareness, and therefore take up, of grants and discounts offered by EEC providers, local authorities, Warm Front and installers for the 'fuel poor', 'nearly poor' and 'able to pay' sectors.

To develop the methodology to track participants and work with grant providers to record and evaluate the number of new grant referrals.

To involve the EEAC and REAS in providing support to parents and carers

To investigate the most appropriate way of engaging Energy Efficiency Commitment providers in education programmes promoting grants and discounts.

**e) Role of partners in the feasibility study**

The LEA advised on the development of suitable Citizenship activities and the recruitment of schools. They also commented upon the in service training. The LEA supported the programme as part of its promotion of Education for Sustainable Development.

The Energy Management Unit advised on the recruitment of schools and resource development to ensure that there would be a linkage between the activities of the feasibility study and work being done on schools' energy management.

The EEAC provided energy efficiency advice direct to parents and householders by attending school events. They also played an important part in developing a system to track the grant referrals arising from the work in schools.

The REAS also attended school events to offer advice about renewable technology to parents and householders.

Teachers from the selected schools attended in-service training sessions, commented upon ways to use the materials and delivered the activities with pupils.

**f) Programme of work/methodology**

The programme of work involved seven elements:

- consultation with project partners
- recruitment of schools
- development of teaching materials
- development of a system for tracking grant referrals resulting from school-home links
- support for participating schools and teachers
- delivery of the teaching programme
- attendance of Bristol & Somerset EEAC & REAS at parents' events
- investigation into ways to engage fuel suppliers
- evaluation and reporting.

**Consultation with project partners**

During the Spring Term of 2004 (January to April) CSE consulted members of staff from Bristol City Council Local Education Authority (LEA) and the Energy Management Unit (EMU) to discuss plans to pilot an energy-based suite of teaching materials aimed at the Citizenship element of the National Curriculum. Meetings between the three partners took place early in the proposed programme, in order to decide upon a recruitment strategy that would ensure a selection of schools from urban renewal areas.

In order to carry out the study, it was necessary to ensure that the schools taking part had pupils on their rolls whose households were likely to qualify for the grants currently on offer. Thus, decisions about which schools to contact were based upon discussions about the socio-economic profile of schools in the Bristol area.

The meetings also enabled CSE to take advice from their partners about the development of teaching materials, to ensure that they would not only link with the Citizenship curriculum, but would also address some of the issues at the core of the 'impetus' award scheme (see Appendix 1) and EMU's schools' energy management programme.

### Recruitment of schools

After consultation with the LEA and Energy Management Unit CSE wrote to the lead Citizenship teachers at a number of schools, providing a brief introduction to the new programme (see Appendix 2), followed by telephone calls to discuss the possibility of running the programme. This process did not turn out to be as difficult as CSE anticipated. Most schools expressed an interest in trialling new materials that had been developed with the citizenship curriculum especially in mind. The determining factor was the school's timetable and the potential to incorporate the programme with a term's notice at the most.

The aim was to recruit four schools representing a range of communities in Bristol. In the event, face-to face meetings were set up with the citizenship co-ordinators in the four schools that eventually joined the programme, which included the following:

- one from an SRB area
- one a predominantly multi-ethnic catchment area
- one which enrolls pupils from across the city and surrounding area
- one with pupils from varied socio-economic and ethnic backgrounds.

All of the schools were recruited during April 2004.

### Development of teaching materials

Work on the teaching materials began at the same time as recruitment. The complete teaching resource included:

- lesson plans
- teacher notes
- activity sheets for pupils
- information sheets for pupils
- guidelines for producing and using the activities.

Some schools also required the provision of practical resources for delivering some of the activities, such as card for poster making, wallets for information packs etc. All the participating schools received an inter-active CD Rom exploring the links between everyday actions and CO<sub>2</sub> emission.

The materials were designed to run in 3 sessions and were closely linked to key criteria in the Citizenship curriculum at Key Stage 3. In line with this, each session considered a different aspect of energy use:

Session One:	Why save energy?	Exploring social, economic and environmental reasons
Session Two:	Who is responsible?	Encouraging pupils to debate and express their opinions about social responsibility
Session Three:	What can I do?	Helping pupils to think about personal actions & benefits, and their role in helping others to understand the options

CSE took first drafts of the resources to the initial meetings with their citizenship contacts in the school, both to help with recruitment and to allow teaching staff to comment on the

structure and content of the proposed sessions. In some cases follow-up meetings took place to review the changes made as a result of their comments. This proved to be an extremely fruitful process, producing activities and information sheets that suited the capabilities of a wide range of pupils.

During one start-up meeting the citizenship teacher described the complexities of the school timetable and the difficulty of interesting pupils in citizenship lessons. CSE suggested using the materials to deliver a conference. This idea looked good in terms of its potential to provide an adult setting for an adult debate. It would be an unusual occasion, hopefully helping pupils to remember the issues and topics that had been covered.

CSE re-worked the structure of the programme so that it could easily be adapted to a conference format, offering the idea to all four schools. In the event, two schools chose to use the materials to run half-day conferences that were publicised well in advance, and one school ran two mini conferences over a two week period.

The teaching activities included debates, “pub” quizzes, opinion polls, games and role play; pupils were challenged to think about the part domestic energy use has to play in climate change, where responsibility lies for improving the situation, and how their own attitudes inform the debate. Each format worked equally well in either a traditional classroom setting or a conference “workshop”.

The key session from the point of view of the study asked pupils to think about their own household, or a member of their family/social network, in order to compile a tailor-made energy advice pack to take home with them. They had to choose from 15 simple leaflets, covering a range of topics about the reasons for saving energy, practical measures, renewable energy sources, easy no-cost and low-cost tips, as well as details about the availability of grants and incentives. All the leaflets bore the Freephone number 0800 512 012 and references to the Bristol & Somerset EEAC and Energy Saving Trust: the grant leaflets included an application form with instructions about returning it to the EEAC. From this activity it was hoped to see school-home links lead on to grant referrals for eligible households.

The teaching materials and details of the full programme are on the CSE website: [www.cse.org.uk/csepublications](http://www.cse.org.uk/csepublications)

### **Development of a system for tracking grant referrals resulting from school-home links**

CSE worked with the Bristol & Somerset Energy Efficiency Advice Centre to establish a system for recording and tracking any enquiries and/or grant referrals from the households of pupils taking part in the programme.

Members of the EEAC staff were instructed to ask telephone callers from the relevant postcode areas how they had heard about the advice service or the measures/grants they were enquiring about. EEA staff would assign any enquiry arising from the school a designated code on the DAX system, as well as adding details about the enquiry/referral to a specially designed excel spreadsheet (see Appendix 3). Completed grant application forms from the pupils’ home advice packs would be recorded in the same way, as well as being colour coded on the Warmfront referral recording system.

The leaflets and grant application forms included in the teaching materials were specially developed for the programme. They gave only the 0800 512 012 telephone number and contact details for the Bristol & Somerset EEAC & REAS and were printed on bright

green paper. Thus it is easy to distinguish them from other written enquiries. The EEAC & REAS took copies of the same leaflets to the parents' events, instead of their usual literature, in order to ensure easy tracking of referrals from this source.

### **Support for teachers taking part in the programme**

The schools taking part had few if any dedicated citizenship teachers. Staff involved in the programme taught a range of subjects and did not necessarily have any background or experience in the topics covered in the teaching resources. Hence, an introduction to the materials and ongoing support from CSE was an important part of the programme.

Teacher training sessions took place during May 2004 with two of the partaking schools. They were held at the end of the school day and usually lasted for around 60 to 90 minutes. Every citizenship teacher detailed to take part in the programme attended their school's session.

Members of CSE's Education & Training Section presented and demonstrated the resources, taking questions and asking teaching staff to comment on the materials. They also provided their contact details; to ensure that teaching staff had access to ongoing support should they need it. The school with the largest pupil population and planned to hold their conference with the entire compliment of Year 8. They asked CSE staff to attend, in order to deliver a short opening session and take part in the plenary at the conference. CSE staff spent the rest of the conference assisting in individual "workshops" as required and were able to observe the activities in action.

One school found it difficult to incorporate a training session into their timetable. As a result, CSE provided "on the job" training, helping the teachers to deliver the programme over a two-week period. Teaching staff from this school propose to use the materials again with other groups during the next school year.

The fourth and final schools did not want a full staff training session, feeling that a one-to-one briefing with a key member of staff would suffice.

All schools have received information about the Impetus scheme, supported by suggestions as to how the Education to Cut Carbon teaching materials could contribute to an application.

Evaluation and feedback shows that the schools valued the training sessions and considered them essential to the smooth running of the teaching programme.

### **Delivery of the teaching programme**

The teaching materials were used in three schools during the latter part of the Summer Term as follows:

- on 27<sup>th</sup> May 2004 with approximately 120 pupils from Year 8. Having received their briefing, staff adapted some of the materials to suit the varying needs of their pupils. The Year 8 timetable for the morning was cancelled and replaced by the Saving Energy & Cutting Carbon Conference.
- on 14<sup>th</sup> & 28<sup>th</sup> June with approximately 64 pupils from Year 9. The mini conferences lasted for one hour and forty minutes. The first looked at the reasons for cutting carbon, the second at personal responsibility.

- on 8<sup>th</sup> July 2004 with all Year 8 groups amounting to over 200 pupils. The citizenship co-ordinator was extremely dynamic and committed to the idea of Saving Energy Cutting Carbon Conference. The event was carefully organised and publicised well in advance. Pupils enjoyed the full conference experience, including registration, a welcome drink, delegate's packs, badges and "coffee breaks".
- the final school was unable to use the materials during the Summer Term, but will incorporate them into the citizenship timetable during Autumn Term 2004.

### **Attendance of Bristol & Somerset EEAC & REAS at parents' events**

The Bristol EEAC & REAS attended parents' events at three of the schools taking part in the programme to reinforce the energy-saving message and offer assistance with applications for grants. The events were as follows:

- a parents' evening on 27<sup>th</sup> May 2004, which coincided with the conference held in this school
- an Awards Day on 14<sup>th</sup> July 2004 at the school that ran the programme over the two-week period of 14<sup>th</sup>–28<sup>th</sup> June
- a Review Day on 14<sup>th</sup> June 2004 with the school that did not run the conference until 8<sup>th</sup> July.

The final school could not offer a suitable event and will not be using the materials until the next academic year.

At each event the EEAC & REAS set up a display stand and took along the same grant application forms that had been developed for use in the teaching pack.

### **Investigation of ways to engage fuel suppliers**

During the course of the programme CSE contacted a number of key fuel suppliers in writing, providing details about the programme and inviting them to enter into discussion about ways in which the teaching materials could be developed to support the Energy Efficiency Commitment programmes of work (see Appendix 4). At the moment we have not had any concrete results but will continue to follow-up our initial discussions.

### **Evaluation and reporting**

At the end of the programme each teacher was asked to complete an Evaluation Form and return it to their citizenship co-ordinator (see Appendix 5). Within a week of each event members of CSE staff contacted the citizenship co-ordinators who fed back results by telephone, which were duly recorded by CSE.

Teachers provided useful feedback and constructive suggestions for improvement (see Appendix 6) and overall the response to the programme, the materials and the teacher support was good.

## **g) Results**

The citizenship teaching resources have been used in three schools, with around 390 pupils. The fourth school could not use the materials during the period of the study. Thus our conclusions are not based upon four schools as originally intended. However, we will stay in contact with them during Autumn Term 2004, to monitor their progress as they use the materials.

The teaching materials benefited from the early in-put of Bristol City Council LEA & EMU, and from staff in the schools themselves. The resource has now been developed to the point where it could be adapted for use in a number of formats.

Feedback from the citizenship teaching staff was good. They welcomed new ideas and methods for delivering the citizenship curriculum. The in-service training and ongoing support was fundamental to the success of the programme.

The conference format was very particularly successful, evoking a good response from both teaching staff and pupils. At the plenary sessions pupils fed back from the workshops, which yielded some creative work including posters and raps. The programme broke down barriers and engaged pupils who are often reluctant to show enthusiasm during citizenship lessons.

However, in terms of enquiries to the Bristol & Somerset EEAC & REAS, and referrals for grants and incentives, the study has not yielded the results that CSE hoped for. There has been one eligible grant enquiry. CSE will use the tracking system to continue to monitor this beyond the end of the feasibility stage.

Response to the EEAC & REAS stand at the parents' events was fairly limited. However, the Awards Day on 14<sup>th</sup> July did provide the opportunity to distribute a number of leaflets directly to parents.

## **h) Key issues and lessons learnt**

During the course of the programme three key points emerged:

- The poor response from parents and difficulty of making school home links with Key Stage 3 pupils
- The importance of timing & reinforcement if better school-home links are to be made
- The importance of taking into account differentiation when developing teaching materials at secondary level.

### **The poor response from parents and difficulty of making school home links with Key Stage 3 pupils**

To date, the response from parents has not been as good as CSE had hoped for or expected, based on their experience with Energy Matters. The reasons for this are possibly related to the timing of the study, which is discussed below. However, of equal, if not greater importance, is the nature of interaction between pupils & their parents/guardians at school at secondary level.

All of the schools chose to run the programme with pupils in Years 8 & 9, meaning that the pupils taking part were between 14 and 15 years of age. Engaging with pupils of this age is difficult in most secondary schools, and in those chosen it was particularly so.

Even though the programme evidently broke down barriers, allowing participation from groups of pupils who are usually reluctant to engage, it did not necessarily extend to the exchange of information in school about home circumstances, or discussion at home about the topics covered during the session in school. Although pupils were encouraged to take home the advice packs they had created, there was no guarantee that they would actually be passed on to parents. Unlike primary school pupils, who generally come out of the school gate and show their parents/guardians what they have been working on during the day, secondary school pupils cannot be relied upon to make that link.

Indeed, where the most forms were returned it was mostly due to the efforts of Bristol & Somerset EEAC staff, who were able to hand forms directly to parents at the Awards Day, rather than through pupil interaction.

In the light of the success of the teaching sessions, and the thoughtful work that came out of many of the activities, it may be that any future evaluation should concentrate upon the changing behaviour of the students themselves, and the longer term impact this would have as they approach adulthood and independence, rather than the number of forms completed by parents.

On the whole the Bristol & Somerset EEAC and REAS reported that there was only very modest interest in their stand at the parents' events. It seems that the four schools involved in the programme are representative of most other secondary schools, in that parents do not generally come in to school as often or on such a free basis as those with children at primary school. When they do, it is to attend events such as review days and parents evenings; and their contact with the school is usually very structured. They have allotted times to talk to teachers and tend to be focussed on the purpose of their visit with little or no reason to stay on the site once their appointment is over. At all but one of the events, the EEAC & REAS display stand and advice staff was the only non-school presence. Therefore, there is limited evidence that this is an effective method for reinforcing the message and promoting grant referrals with secondary school parents.

### **The importance of timing & reinforcement**

The timetables of secondary schools are usually more complex than those of primary schools. This is well illustrated by the school that has not been able to run the programme as yet. Along with all of the others, this school was recruited during the Spring Term with a view to using the materials during the Summer Term. However, having signed up to the programme they subsequently found it difficult to incorporate into their summer timetable and will not use the materials until the next academic year.

The other three schools were able to incorporate them into the weeks immediately before the half term break or the end of term. In this respect the Summer Term is a good time to work with secondary schools, because many relax their timetables during the last couple of weeks before the end of the school year. This was well-illustrated by the two schools that took advantage of the wind-down by using the materials to run Year 8 conferences.

However, using the teaching materials so late in the school year had three less favourable effects upon the programme:

- it did not provide scope for teachers to carry out follow-up work or to co-ordinate the citizenship programme with the wider school timetable. CSE believes that this is an important factor in the poor response, given that school/home links are already hard

enough with pupils at this age. Reinforcement of the teaching can improve this. Delivery of the citizenship programme alongside related topics in other subject areas such as science, technology or geography, and time later in the term to hold follow-up sessions, would provide context and allow pupils to reflect on the issues.

- the summer term is not the best time to promote energy-saving measures and grants that are normally associated with the cold weather. It is generally recognised in energy circles that interest in energy-saving measures and requests for grants increase during the cold weather and reduce somewhat during the summer.
- finally, it was difficult to find suitable parents' events for the EEAC & REAS to attend at such a late point in the school year. CSE was only able to arrange one parents' event that linked with delivery of the teaching materials. This was pure luck; the other schools had already held their Year 8 parents' evenings before the programme began. The timetable for the extra curricular events that bring parents into school is usually decided at the start of the school year.

Therefore it is necessary to approach schools and plan events well in advance of running the programme. CSE believes that ideally, it would work best to approach schools when they are drafting their timetables for the next academic year. This long term approach would increase the opportunities for running the citizenship programme at a time when it could be set into a context; in terms of the season and perhaps by scheduling use of the materials in citizenship lessons to link with other subject areas such as science, technology, geography etc.

### **The importance of differentiation at secondary level**

In its guidelines to teachers for working with 14–19 year olds, the Qualifications & Curriculum Authority emphasises the importance of differentiation, and in particular the availability of diverse materials, matched to the needs individuals.

The value of the Energy Matters approach, upon which this programme was based, lay in the fact that it came ready to use and was easy to adapt to suit the range of ability found within a primary school. Teachers needed to do the minimum to make the resources work for all of their pupils. Working with secondary school staff and Year 8 & 9 pupils CSE found that the situation was more complex. It soon became clear that parts of the planned programme might prove to be too difficult for some pupils, whilst it would perfectly suit others. This applied as much to the actual pupil activities themselves, as it did to the written content and literacy levels.

Very few schools have enough dedicated citizenship teachers to deliver the curriculum across the school. Instead teachers from a wide range of subjects help with its delivery, despite having already busy timetables. Thus they were concerned about the time and expertise needed to adapt the materials. As a result CSE made fundamental changes to some of the materials to help the teachers deliver the programme to all of their pupil groups. This resulted in two versions of the Pupil Information Sheets and some additional activities.

Despite these amendments the teaching resource still needs more work in order to offer schools a programme that can be used with the full range of academic ability.

**i) Recommendations for implementation (or reasons why not to be implemented – as appropriate) including estimate of carbon savings possible if implemented**

Given the number of referrals arising during the course of this study it seems only logical to decline the opportunity to go for implementation funding. However, the programme was successful in engaging pupils and getting them thinking about energy issues, and as such could well have a beneficial affect on their behaviour both in the immediate and long term. The time-scale of the study, and the fact that it took place during the summer, make it difficult to draw conclusions about the affect upon their present households. There is possibly a case for trialling the materials again during the autumn or winter. Ongoing partnerships with the LEA may provide this opportunity.

The feedback from teaching staff and the success of the 3 conferences shows that there is potential to develop the programme further into an effective and successful teaching resource. Thus, as a teaching programme CSE would strongly recommend implementation. However, the measurable outcomes would have to be radically re-thought, moving away from completed forms and grant referrals, towards the assessment of changes in pupil behaviour and perceptions regarding current and future energy awareness and usage.

**j) Conclusions**

The citizenship curriculum provides an excellent context for discussion of the social and economic aspects surrounding energy issues. It is an appropriate forum for making school-home links to disseminate information about grants. However, the inherent difficulties of working with pupils at this stage in their academic career have to be acknowledged in terms of expectations about immediate referrals or tangible changes in household behaviour.

In addition to this, parents' events in secondary schools do not necessarily provide an effective forum for reinforcing the information given to pupils during teaching. Opportunities to meet parents in secondary schools are rare, and when they do occur the parents are usually focussed on meeting teachers as part of a structured timetable.,

In order to improve the chances of making direct school home links the programme might need to be run during the winter heating season. It might also benefit from delivery within a time scale that allows follow-up sessions to reinforce the issues and co-ordination with other subject areas to provide context.

A programme such as Citizenship Education to Cut Carbon works at its best, from an educational point of view, when it takes into account differentiation and provides teaching staff with full support to adapt and deliver the resources to the full range of learning needs.

Despite the limited quantifiable results in this study, CSE believes that the programme has the potential for future development into a useful and effective citizenship teaching resource that could have a significant impact upon the understanding and attitudes of the young people themselves.

## Appendices

1. Further information about the impetus award
2. Initial contact with citizenship co-ordinators:  
letter to introduce the programme  
further details about the programme
3. Tracking System:  
spreadsheet to record grant referrals
4. Contact with Energy Efficiency Commitment providers:  
draft of initial letter
5. Evaluation Form for teachers
6. Evaluation from Participating Schools

## Appendix 1: Further information about the impetus award

Details taken from the teachernet website:

[www.teachernet.gov.uk/teachingandlearning/subjects/citizenship/impetus](http://www.teachernet.gov.uk/teachingandlearning/subjects/citizenship/impetus)

### **impetus Awards Launch**

**impetus is a youth-based awards scheme which promotes social cohesion, civil renewal and good citizenship, based on common basic values.**

The impetus Awards 2003/4 were launched on **2 October 2003**, following successful trials carried out over the last two years in England, Northern Ireland, Scotland and Wales.

This impetus approach takes the Human Rights Act as subject matter and, with projects initiated by young people, encourages them to work through the issues with the support of local volunteers, representing their community.

#### **Who will get awards?**

Certificates are awarded to any school or youth organisation that shows it is exploring and developing shared values in the context of the Human Rights Act.

Around 100 schools and 45 youth organisations took part in pilot projects in 2002 and the results were evaluated by the School of Education, Manchester Metropolitan University, which concluded that there were tangible changes in the perceptions and attitudes of young people and adults alike.

This assessment convinced the organisers, the Institute for Global Ethics and the Citizenship Foundation, to turn the initial idea into an annual event, with local, regional and national celebrations.

#### **Further details**

For more information visit the **impetus** website or contact Vanessa Rigaud at:

Institute for Global Ethics UK Trust

3-4 Bentinck Street

London W1U 2EETel: 020 7486 1954

e-mail: **[impetus@globalethics.org.uk](mailto:impetus@globalethics.org.uk)**

## Appendix 2: Initial contact with citizenship co-ordinators

Draft of letter sent to all Bristol schools

Dear [name]

We are currently developing some learning materials for Citizenship at Key Stage 3. The materials will explore the importance of energy efficiency and the political, social and environmental background to the national and international debate about sustainability. They will encourage the pupils to think about their own attitudes and the part that they and their community have to play within the debate. As such the materials make direct links between current affairs and many of the learning outcomes required in the PHSE & Citizenship national curriculum at Key Stage 3, and encourage the exchange of home-school knowledge.

The materials will be sufficient for 3 one-hour lessons, and will be aimed at Year Group 8. They are inter-active and involve the pupils in a number of activities that will stimulate opinions and encourage their self-development as responsible citizens.

We hope to pilot the materials in 4 schools in Bristol during Summer Term 2004, and would be very pleased to hear from you if you would like to take part in the pilot. If you decide to join the programme, you and your school will receive full support in using the materials, including supply cover for one-to-one briefing sessions for those teachers taking part. All teaching materials and pupil activities will be supplied by CSE, and ongoing support is available. The programme is sponsored by the Energy Saving Trust, under their Innovations Programme C.S.E. are working with the Citizenship co-ordinator at Bristol City Council.

If you would like to know more about the programme, please contact me on 0117 929 9950 email [g.lewis@cse.org.uk](mailto:g.lewis@cse.org.uk)

I look forward to hearing from you.

Gaynor Lewis (Education Officer)

## Citizenship at Key Stage 3 Education to Cut Carbon

Draft of further details provided for schools

### A New Programme

- New teaching resources with curriculum links to the national curriculum Citizenship programme of study at Key Stage 3.
- Resources for three sessions to introduce and explore the environmental, social and economic ramifications of energy use at personal, local, national and global level.
- Inter-active and practical activities to encourage classroom debate and home-school knowledge exchange
- Full training and support for the teachers who use the resources including supply cover for inset sessions if necessary.
- Involvement in a pilot programme that will roll out at national level, should it prove successful in its pilot phase
- A programme that supports the Eco-Schools scheme and help schools going for the Impetus Award Scheme run by the Global Ethics Institute.
- The opportunity to involve the Bristol & Avon Energy Efficiency Advice Centre in extra-mural school events such as open days and parents' evenings.



## Appendix 4: Contact with Energy Efficiency Commitment providers

Example of the initial letter sent to contacts at six Energy Efficiency Commitment providers:

21<sup>st</sup> July 2004

Dear [name]

### **Education to Cut Carbon: Citizenship Programme at Key Stage 3**

I am writing with details about a feasibility study we are currently conducting under the Energy Saving Trust's Innovation programme of work. The study aims to discover whether providing pupils with information about the grants and discounts for energy-saving measures has any effect upon the actions taken by the adults in their households. In its pilot phase, the programme has involved the development of new teaching materials linked to Citizenship at Key Stage 3, recruitment of four secondary schools to test them, and inset training for the teachers involved in the programme.

The materials have now been used by around 390 pupils in Years 8 & 9 in three of the four schools. We are currently evaluating the programme and preparing the final report, which will set out our recommendations for ways to adapt the materials and make them available to other schools.

It is in this context that I am writing to you. We would like the opportunity to discuss the concept with you, in particular to explore how it could be adapted to meet the requirements of your Energy Efficiency Commitment programme.

The idea for Education to Cut Carbon grew out of feedback from independent research into CSE's 'Energy Matters' programme, which shows that education to develop children's knowledge about energy efficiency has a significant impact upon the actions of the whole household. However, Energy Matters does not include information about eligibility for grants, which is often a sensitive topic to introduce if the teaching materials have been developed for use in science, technology or numeracy lessons. The Education to Cut Carbon teaching pack does include such information.

Citizenship is a compulsory subject in secondary schools, challenging pupils to think about taking personal responsibility for their own actions, what their own attitudes are about matters that affect their immediate and wider community, and the importance of social equity. Many of the social, economic and environmental issues surrounding energy use lend themselves well to such debates, and so CSE decided to develop materials that would link closely to Citizenship and the curriculum at Key Stage 3.

We consulted with Bristol City Council and the Local Education Authority to identify four schools that were willing to work with us on the programme. The schools were keen to take part because the activities and teaching materials helped them to tackle areas of the National Curriculum that are often regarded as hard to teach. In addition, the programme offered Citizenship teachers some in-service training and ongoing support while they delivered the sessions.

The lesson plans and teaching materials were developed to promote debate about the reasons for saving energy, the energy-saving measures available, the capital required for them, and how grants and incentives can alleviate the cost. Pupils were also encouraged to reflect upon the kind of energy advice that would most suit their own household. During this session they were provided with a selection of leaflets about energy-saving measures, including details about eligibility for national and local grants.

In order to keep account of the impact these materials might make, we have set up a tracking system to record any grant referrals that are derived from the programme. The Bristol & Somerset Energy Efficiency Advice Centre & Renewable Energy Advice Service assisted with this tracking system; they

also attended parents' events to provide follow-up information directly to parents and guardians and reinforce the message.

If you would like to see the teaching materials, or talk further about the programme, please call either myself or Richard Dunning (Head of Education and Training) on 0117 934932.

Yours sincerely

Vicki Jellings  
Project Manager (Education to Cut Carbon)

## Appendix 5: Evaluation form for teachers

### Saving Energy & Cutting Carbon

#### Speedwell Technology College

Thank you for taking part in this pilot programme. Please help us to evaluate it by answering the following questions.

#### Structure & Staff Support

	<i>Very Good</i>	<i>Good</i>	<i>Average</i>	<i>Poor</i>
Teacher's Manual				
INSET/briefing				

Comments:

#### Session 1 Why Save Energy?

	<i>Very useful</i>	<i>Useful</i>	<i>Not very useful</i>
Energy Quiz			
Carbon Gym			

Comments:

#### Session 2 Saving Energy & Cutting Carbon: Who is responsible?

	<i>Very useful</i>	<i>Useful</i>	<i>Not very useful</i>
Debate			
Poster Design			
Rap			
Pupil Info Sheets			

Comments:

**Session 3 Saving Energy & Cutting Carbon: What can I do?**

	Very useful	Useful	Not very useful
Matching Game			
Case Studies			
Taking Advice Home			
Pupil Info Sheet			

Comments:

**Additional Resource**

	Very useful	Useful	Not very useful
Carbon Consequences			

Comments:

Please make any other comments that would help us to improve the programme.

*Thank you for taking the time to fill in this form. Please return to:  
Vicki Jellings, Centre for Sustainable Energy, FREEPOST SWB727,  
BRISTOL BS1 6ZY*

## Appendix 6: Evaluation from participating schools

### **School One: Saving Energy & Cutting Carbon Conference on 27<sup>th</sup> May 2004**

**The programme was carried out amongst year eight pupils. The teachers who wanted to use the materials were trained during an inset session. They adapted the materials to suit the varying needs of the pupils they taught.**

CSE provided the following materials

- Teachers notes
- Consumables-paper
- Printing resource pack

(The school agreed to do all the printing and supplied all the additional resources)

The sessions were run as a conference. To accommodate this approach the school's usual timetable was cancelled. Approximately 120 pupils took part. Groups were taught in mixed ability groups with 35/40 pupils per group.

Each session lasted 50 minutes and was run by 4 tutors.

#### **Teachers' Comments**

##### **Structure and staff support**

The teacher's manual was good and the inset briefing very good. The manual provided an effective resource, which can be reused.

##### **Session 1 Why Save Energy?**

The energy quiz was very useful and was accessible to all abilities allowing the sessions to be taught in mixed ability groups.

As the school uses fast machines the pupils had few problems using the Carbon Gym activity. However, there was some delay at the end when the calculations were taking place It would also have been useful if there was greater explanation about the outcomes the pupils could expect e.g. why does air travel have such an impact on carbon emissions?

##### **Session 2 Saving energy & Cutting Carbon: Who is responsible?**

This session was the weakest in the programme. The posters produced by the pupils were disappointing and did not reflect their understanding of the topics, which were being covered. The debate, which was the introduction to the session, had no spark. The time allocated was not sufficient. Therefore the springboard for the poster masking was not provided.

##### **Session 3 Saving Energy & Cutting Carbon: What can I do?**

The matching game was good, but took a long time to prepare. If the game was printed in larger print and laminated the information would have been more accessible.

The case studies were not used, because of lack of time.

The home advice pack was a problem because the pupils were given too much choice. Six leaflets would have provided a sufficient base for the pupils to make their choice.

##### **Additional Resource**

This was not used, insufficient time.

##### **Further Comments**

The overall success of the programme is shown in the fact that the school will run the conference next year. The school itself needs to be better prepared; particularly in terms of organising the printing well before the event.

When the school printed the resources, they printed enough copies for two years. The overprint made it difficult to administer.

### **Conclusion**

The citizenship teachers successfully and independently delivered the resource. They had problems dealing with the amount of printing required to run the unit, and this is perhaps an issue, which needs to be addressed.

Overall the pupils responded well to the challenges they were set during the conference. The success was facilitated by the enthusiasm of the citizenship co-ordinator and the in service training. Mixed ability teaching ensured the resources were accessible to all abilities.

## **School Two: Cut to Carbon Citizenship Conferences on 14<sup>th</sup> & 28<sup>th</sup> June 2004**

**The Citizenship work at this community school was carried out amongst year nine pupils. Training for the citizenship teachers took place during the actual teaching sessions, which were attended by a trainer from CSE. Some amendments were made to the materials to make them appropriate for the ability of the pupils.**

CSE provided the following materials

- A complete set of printed resources
- Teachers notes
- Consumables-paper, glue, scissors
- Prepared games and activities

The conference was split into two sessions each lasting 1 hr and 40 mins. Session one covered the introductory activity where pupils were taken through an "ice breaker" session and introduced to the idea of global warming. Using a questionnaire and the carbon gym they explored the question of who is responsible for the carbon in our atmosphere. The pupils kept to task and were actively involved in the discussions.

Session two looked more closely at personal responsibility. The pupils designed folders for their families, which contained selected information sheets on how their family could benefit from the grants which are available. This activity particularly motivated the girls within the group, who were very keen to get the information home to members of their family.

### **Teachers' Comments**

Two teachers taught the work to all the year 9 pupils. They had to adapt a lot of the materials for the lower ability groups.

### **Structure & Staff Support**

- The teacher's manual was good and provided the detail necessary to support the teaching.
- The manual would have been easier to use if it was more concise

### **Session 1 Why Save Energy?**

- The introductory session was excellent and engaged the children in a lively session where they were eager to share their opinions.
- The energy quiz was useful, giving the children a good focus. However, the lower ability groups could not access a lot of the information. They found the initials a particular problem.

- The Carbon Gym was very slow because the computers in school are very slow. Some of the pupils became frustrated, however others were engaged in the activity. It was a very useful classroom tool.

#### **Session 2 Saving Energy & Cutting Carbon: Who is responsible?**

- This session was not covered by the school because they only ran two sessions each lasting 1hr and 40 mins.

#### **Session 3 Saving Energy & Cutting Carbon: What can I do?**

- The matching game was very good and was suitable for all abilities
- Case studies were not used (lack of time)
- Taking advice home was very useful but the lower ability group would have been greatly helped with a step by step guide.

#### **Additional Resource**

##### **Carbon Consequences**

This was considered to be a useful activity which encouraged pupils to think and talk together. If there were less choice of the same card this would have aided the effectiveness of the game.

#### **Any other comments**

The school will run the programme again next year. The teaching staff will make their own modifications to the materials to meet the special need element within their school population.

#### **Conclusion**

This is a school, which needs a great deal of support because of its catchment area , There are a number of children with special educational needs.

The teachers adapted the resources as they used them. However, greater differentiation of materials would have increased the effectiveness of the resource.

Such differentiation takes time and resources, which the budget did not cater for. If the target of meeting the specific needs of pupils' families are to be achieved, it is an issue that needs to be considered.

## **School Three: Saving Energy & Cutting Carbon Conference on 8<sup>th</sup> July 2004**

**The Citizenship work at this technology college was carried out amongst the year eight pupils. The teachers who ran the sessions were trained during an inset session. The materials were adapted to suit the varying needs of the pupils they taught.**

**The citizenship co-ordinator organised the running of the conference. CSE provided support and assistance on the day.**

**The whole timetable for year eight was cancelled and the conference started with the pupils collecting their folders and having a drink. They were then introduced to the theme of the conference in a lecture theatre. Pupils then attended three sessions with an allocated year tutor.**

CSE provided the following materials

- A complete set of printed resources
- Teachers notes
- Consumables-paper, glue, scissors
- Prepared games and activities
- Conference groupings

### **Teachers' Comments Structure & Staff Support**

The teacher's manual was very good and the inset briefing good. The manual provided an effective resource, which can be re-used. One teacher commented "There was almost too much information."

### **Session 1 Why Save Energy?**

The energy quiz was very useful and was accessible to most abilities. The Carbon Gym motivated the pupils; it captured their attention, and caused a number of pupils to rethink their lifestyle.

### **Session 2 Saving energy & Cutting Carbon: Who is responsible?**

This session was the weakest in the programme. The time allocated was not sufficient and the information sheets were too detailed for some pupils. The debate could have worked in smaller groups. Most pupils choose to design a poster or write a rap, and the resulting work was good.

### **Session 3 Saving Energy & Cutting Carbon: What can I do?**

The matching game was good; the boys particularly enjoyed sorting. The remaining activities generated a lot of paper, which required a lot of organisation before the session. Using leaflets printed on paper of different colours helped pupils to make selective choices. More time would have been useful.

### **Additional Resource**

This was not used, insufficient time.

### **Further Comments**

The success of the work is shown in the fact that the school will run the conference next year. The Plenary was successful and engaged the pupils. Greater success would have been achieved if there was a bigger build-up to the conference during tutor time. If a different tutor taught each session it could have made the sessions more informative.

### **Conclusion**

The citizenship teachers successfully delivered the resource. The staff and pupils enjoyed the sessions and responded well to the challenges set during the conference. The success was facilitated by the enthusiasm of the citizenship co-ordinator. The in service training also contributed to the success. The conference approach allowed pupils to rise to the challenges they were set during the three sessions, and most pupils showed enthusiasm, producing some good work which they were keen to display during the closing plenary. Further information about this conference, along with examples of some of the work completed by pupils, is available on [www.cse.org.uk](http://www.cse.org.uk)