The purpose of this guide

This guide helps you build sustainable development into the learning experience of all your learners. It provides a clear vision of why this work is important – from helping pupils to learn about the impact of their actions on the planet, to suggesting ways of building sustainability into the ethos and everyday running of your school.

Practical activities help you explore the difference you can make to learners by embedding sustainable development within your curriculum. These activities focus on three key questions.

1. **What are you trying to achieve?**
2. **How will you organise learning?**
3. **How well are you achieving your aims?**

Case studies show how different schools have responded to the questions. They offer examples of sustainable development in action, inspiring you to make decisions about how to develop it in your school while highlighting the extraordinary potential of learners to contribute to a sustainable future. This guide concludes with a brief overview of the organisations and agencies that can support your sustainable development work.

Sustainable development is a wide-ranging concept with implications for the whole education and children’s services sector. To help schools identify what success might look like from here to 2020, the Department for Children, Schools and Families (DCSF) has established a National Framework. The framework comprises three interlocking parts.

- **A commitment to care**
  Schools are already caring places, but a sustainable school extends this commitment into new areas. It cares about the energy and water it consumes, the waste it produces, the food it serves, the traffic it attracts, and the difficulties faced by people living in its community and in other parts of the world. A sustainable school helps learners care about themselves, each other and the environment.

- **An integrated approach**
  A sustainable school takes an integrated approach to its improvement. It explores sustainable development through its learning (curriculum); in its values and ways of working (campus); and in its engagement of local people and partners (community).

- **A selection of sustainability themes or ‘doorways’**
  The doorways are entry points, or places where schools can establish or develop their sustainability practices. Each of the doorways draws its inspiration from a range of national priorities around sustainable development. They are: food and drink; energy and water; travel and traffic; purchasing and waste; buildings and grounds; inclusion and participation; local well-being; and the global dimension.

This guide supports the National Framework for Sustainable Schools from a curriculum planning perspective.

Related resources

This guide may be used alongside the following.

- The dedicated area for sustainable schools at www.teachernet.gov.uk/sustainableschools.
- The global dimension in action: a curriculum planning guide for schools, which can be downloaded from www.qca.org.uk/curriculum.
Learning about sustainable development can help young people to understand the needs and rights of present and future generations, and to consider the best ways to tackle interrelated challenges such as climate change, inequality, and poverty. It can also motivate learners to want to change things for the better – whether that’s on their doorstep or on the other side of the world – equipping them with the skills, knowledge, understanding, and values that are crucial to envisaging and creating a sustainable society and future.

Schools should be models of sustainable living and learning. Sustainability can be built into the fabric of the school building in a way that links learning to living – for example, through energy monitoring, composting or the use of renewable energy sources. This can motivate young people to play a full part in the life of their school and wider community, enabling them to take responsibility, by reducing, reusing and recycling, to develop self-confidence, by representing the school as ‘sustainability ambassadors’, for example, or to develop successful life skills through activities such as growing and selling vegetables at a local farmers’ market.

Every Child Matters takes children and young people’s well-being as its starting point, with sustainable development underpinning the daily experience of living and learning in the environment around us. Schools can enhance learners’ physical and emotional well-being, as well as attitudes and behaviour through, for example, encouraging walking or cycling to school, or involving young people in growing produce and making a positive contribution in the local community by creating a garden with the elderly.

Embedding sustainable development within the curriculum is vital in addressing the new national curriculum aims to develop successful learners, confident individuals and responsible citizens. The table below shows the aims that are most relevant to sustainability. These aims form an important starting point when identifying what you want your learners to achieve in your school.

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### Successful learners
- are creative, resourceful and able to identify and solve problems
- know about big ideas and events that shape our world

### Confident individuals
- have secure values and beliefs, and have principles to distinguish right from wrong

### Responsible citizens
- sustain and improve the environment, locally and globally
- take account of the needs of present and future generations in the choices they make
- can change things for the better

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We need to understand what’s going wrong with the world and try and prevent it. Our future is in our hands!

Sustainable development is looking after the world for future generations.

I’ve enjoyed learning about energy and how to save it. It’s important because when we save energy, we save money and reduce our emissions, so everyone wins!

It’s important to learn about helping the planet when you’re young because we have big imaginations!

It’s important to learn about sustainability at school because that’s where you develop good habits. First we spread knowledge within school because it’s a community we know, then we can take the message to the outside – it’s a bit like a chain reaction.

I’m much more confident now. I can see things changing and that I’m part of something big.

I’m proud of our school because of all the green things.

It’s good to be eco-friendly, because if we don’t start now things could get quite serious. You don’t have to do much, every little bit helps. Just start by turning off lights, composting or recycling.
We need to find a way to live on earth that enables all people to satisfy their basic needs and enjoy quality of life, without compromising the ability of future generations to meet their own needs.

Overuse of resources
Most experts agree that our current mode and rate of development on earth is not sustainable. The way we are living is over-taxing the planet’s supply of natural resources – from fresh water supplies to fish stocks, from fertile land to clean air. In addition, the inequalities between peoples, both within countries and across the world, are growing.

Making choices
The future holds many challenges. Make the right choices and we can secure a future that is fairer, where we can all live within our environmental limits.

In addition to global challenges, learners are confronted by a range of local environmental challenges, which include exposure to road and air traffic pollution, a lack of personal mobility and limited access to safe outside spaces.

Climate change is one of the greatest challenges facing our generation, with the Intergovernmental Panel on Climate Change reporting that the planet has warmed by 0.74 degrees Celsius since the beginning of the 20th century and the World Meteorological Organization recently documenting extreme and unusual weather in many parts of the world.

Cutting the levels of greenhouse gases we produce is the most important step we can take to slow climate change. One of the main ways to achieve this is to reduce our use of fossil fuels and find alternative sources of energy.

Finding solutions
Many schools are already leading the way in finding solutions to slowing climate change. From holding ‘carbon-free days’ to creating energy-saving squads, thousands of children and young people are finding ways to save energy at school. Other schools are investing in renewable technologies such as geothermal heating or solar energy, and introducing energy efficiency measures like energy monitoring software, improved insulation or low-energy lighting.

Learning about climate change at school has inspired many children and young people to take their messages to the wider community to try and bring about change. They believe that the key to success lies in working as a community and that we can all be part of the solution.
Climate change: the response of a school – India

Communities in poorer countries are recognising that climate change threatens to undo their progress towards securing a better future for their children. To mitigate against this, many schools are teaching about risks and disasters and involving learners in educating the whole community about how to adapt to extreme weather. Here is what is happening in a school in India, where climate change is likely to have some of the worst effects.

Lessons for life at Karchua Bori School

Karchua Bori School lies precariously close to the Brahmaputra, one of the world’s longest rivers. Located in Assam, north-east India, it has suffered from an increase in devastatng floods in recent years.

What did the school want to achieve?

Headteacher Marahaj Chandra recalls: ‘In 2004, a white torrent tore down the school walls, sweeping away desks, benches and books. We were devastated that some children perished in the floods or died from water-borne diseases like malaria.’

Marahaj is convinced that children’s views need to be at the centre of any learning about natural hazards, as this can mean the difference between life and death. ‘Most policies are framed by adults and don’t take into account children’s views on how to cope with our changing weather. This is so important in India where 40 per cent of our population are children and climate change is predicted to hit us hard.’

Karchua Bori School decided to develop knowledge and action on climate change and natural disasters across school life.

How did the school organise learning to meet its aims?

When the school was rebuilt, staff decided to participate in a Disaster Risk Reduction programme run by ActionAid. They explored child-centred learning and teaching approaches, focusing particularly on survival skills, and developed ideas for involving children in creating a flood awareness campaign aimed at their local community.

Targets were set, to define what was to be taught at each age. These were integrated into existing subjects such as earth science and geography, and teachers were encouraged to facilitate lessons both in and out of the classroom.

Children began to manage their own learning through a series of skills-based activities, for example creating local hazard maps using natural resources. Children worked in groups and used sticks and leaves to symbolise features such as rivers and woodland. They identified areas that could easily be flooded and then drew an annotated sketch of their ideal school, protected from floodwaters. They then assessed the viability of their ideas, ranking them in order of priority and taking into account cost, time and labour.

The maps were used as the basis for community discussion. Children began by talking about the important role the Brahmaputra River plays in local life – how it has always brought life to the community – how it has always been a source of livelihood, how the floods might be getting worse. They then talked about how to cope with the rising waters. ‘I teach the younger children to be safe in the floods,’ says Imrana. ‘I taught all my younger brothers and sisters to swim!’

How well is the school achieving its aims?

As well as gaining a heightened awareness of the safer places in their area, children are learning whom they can inculde to bring about change. Decisions were made to plant trees between the river and the school and to persuade local government officials to rebuild the school. It was decided that the school would be built from sustainable materials on higher ground, so that it could act as a refuge for the community during floods.

Children have also gained practical survival skills. They regularly take part in simulation exercises such as evacuation drills. First aid training is embedded within the curriculum and children learn how to rescue people in danger.

They interviewed their families and recorded patterns of increased flooding and possible reasons why the floods might be getting worse. They read newspaper articles to research links between global warming, melting glaciers in the Himalayas and increased floods in Karchua Bori.

Community elders were invited into school to teach about the traditional warning signs of disasters. They helped children identify different cloud formations and notice unusual animal and bird behaviour. ‘My grandfather came to the school,’ says 11-year-old Imrana. ‘He told us about floods and how to know when they are coming. We need to look out for hot breathing clouds that are low in the sky. This means that the glaciers are melting and water will roll down from mountains and flood us.’

Peer teaching is well established, with older children supporting the younger ones in swimming. They help each other to construct raised platforms and know to stay there, with their valuable possessions, food and water, until the floods subside. ‘I teach the younger children to be safe in the floods,’ says Imrana.

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Lifejacket made from recycled bottles

What does the school plan to do next?

The children at Karchua Bori already act to inform their families. They plan to place posters around the surrounding villages to disseminate information and prevent the spread of post-flood diseases. They also want to create plays for the community, demonstrating how to act before, during and after a flood.

The children have also set up community workshops and invited their families to help design life-saving devices. These interactive sessions have led to the creation of life jackets made from recycled bottles, and jerry cans and canoes made from banana plants, bamboo and tarpaulin.
How does sustainable development fit into the curriculum?

The cross-curriculum dimensions
The cross-curriculum dimensions reflect some of the major ideas and challenges facing society, and make learning real and relevant. They are:

- identity and cultural diversity
- healthy lifestyles
- community participation
- enterprise
- the global dimension and sustainable development
- technology and the media, and
- creativity and critical thinking.

The dimensions are mutually supportive and interdependent.

Sustainable development is a cross-curriculum dimension. Like the other dimensions, it is a unifying theme that helps learners make sense of the world and their place in it. It can be integrated across subjects, and embedded in the routines, events and ethos of a school. In the language of the DCSF’s Sustainable Schools Strategy, sustainable development is relevant to a school’s ‘curriculum, campus and community’.

“Successful sustainable schools are involved in many activities beyond the core curriculum, such as Healthy Schools, Global Dimension, Eco-schools and Growing Schools. Leaders of these schools see their role as expanding school experience beyond the school and embracing the wider world. This wider, more inclusive vision is also seen in the strong pupil voice and involvement of pupils in decision-making.”

Leading Sustainable Schools, National College for School Leadership (NCfS), www.ncsl.org.uk

Find out more about how you can embed dimensions in your curriculum planning on the national curriculum website at www.qca.org.uk/curriculum.

What is the sustainable development curriculum dimension?

Learning about sustainable development can help young people to understand the needs and rights of present and future generations, and to consider the best ways to tackle interrelated challenges such as climate change, inequality and poverty. It can also motivate learners to want to change things for the better – equipping them with the knowledge, skills and values that are crucial to envisaging and creating a sustainable society and future.

Through the sustainable development dimension, young people will learn to:

- explore their own place within a changing world
- understand how human action in one place has consequences elsewhere
- consider their values and responsibilities in relation to other people, their environment and the planet
- understand long-term global challenges, including climate change, inequality, poverty and development, and appreciate the ways in which these issues impact on and change society
- critically assess what governments, businesses and individuals say they are doing to meet the needs of present and future generations
- take account of the needs of present and future generations in the choices they make
- think imaginatively about what individuals can do to develop a more informed society and sustainable future
- discover ways to influence others, acting as agents of change.

To achieve these outcomes learners need opportunities to:

- explore and help to preserve their own local environment
- investigate how environmental change arises, including study of the impact of human activity
- study and debate different viewpoints on the challenges facing society
- consider alternative future scenarios for the planet and the risks associated with not achieving sustainable development
- use their own ideas to act and contribute to change within their school
- use their own ideas to act and contribute to change within the wider community.
The new secondary curriculum programmes of study in geography, citizenship, science, and design and technology highlight specific opportunities to develop learners’ understanding of sustainable development. Taken together, these programmes can help learners to understand and tackle some of the complex ideas and challenges that shape the world. However, sustainable development can be used as a stimulating context for learning across all subjects, as illustrated in the case studies provided in this guide. It can also provide a compelling context for developing literacy, numeracy and personal, learning and thinking skills.

Pupils develop a more coherent view of sustainable development where they experience a curriculum with subjects working together to develop a rounded understanding of sustainable development.

For more information about each subject, go to www.qca.org.uk/curriculum.

### Organising learning around the sustainable schools doorways

The DCFS’s sustainable schools strategy contains eight sustainability themes or ‘doorways’, shown right.

The doorways help schools build sustainable development into the entire planned learning experience for pupils. They can be used:

- as themes to integrate sustainable development across subjects
- to embed sustainable living into the routines, events or environment of a school
- as a focus for learning outside the classroom.

The doorways are interconnected. For example, learners may be introduced to healthy food and drink during lessons and move beyond this to using the school grounds to grow fruit and vegetables. This may lead to an exploration of composting and waste reduction; the swapping of seeds with others can explore as aspects of decisions made about the use of energy, materials and other resources. For example, students might devise their own criteria for evaluating the life-cycle impacts of products or services, highlighting the social, economic and environmental costs and benefits.

### Citizenship

Citizenship helps learners become informed, critical and active citizens. It enables learners to consider the actions they and others can take to influence decisions affecting communities and the environment. In citizenship learners investigate and debate different viewpoints on the challenges facing society, including those relating to sustainability and the risks associated with not pursuing sustainability. They use their research to plan and take responsible action, as agents of change, to develop a more informed society and sustainable future.

### Design and technology

Design and technology enables learners to take a long-term view on the impact of new products, technologies and systems on people and their environments. Within design and technology, learners can explore aspects of decisions made about the use of energy, materials and other resources. For example, students might devise their own criteria for evaluating the life-cycle impacts of products or services, highlighting the social, economic and environmental costs and benefits.

### Science

Science plays a key role in sustainable development. Learners’ scientific knowledge and skills can be developed using real-world examples related to sustainable development issues, such as mitigating climate change and improving energy conservation. Applying scientific knowledge in the sustainable development context enables learners to reflect on their values, and encourages them to think about how these issues may affect their own lives, the directions of societies and the future of the world.

### Geography

Geography thrives when it is relevant to young people’s lives. Geography enables learners to understand the interconnectedness of the physical and human worlds, and the potential impact of current and future changes on people, places and the environment. Geography inspires learners to be local, national and global citizens, through exploring their values and their responsibilities towards other people, the environment and in relation to the sustainability of human life on the planet.

### The DCFS recommends that, by 2020, all schools:

- **Food and drink**: are model suppliers of healthy, local and sustainable food and drink, showing strong commitments to the environment, social responsibility and animal welfare in their food and drink provision, and maximising their use of local suppliers
- **Energy and water**: are models of energy efficiency, renewable energy and water conservation, showcasing opportunities such as wind, solar and biomass energy, insulation, rainwater harvesting and grey water recycling to everyone who uses the school
- **Travel and traffic**: are models of sustainable travel, where vehicles are used only when absolutely necessary and where there are exemplary facilities for healthier, less polluting or less dangerous modes of transport
- **Purchasing and waste**: are models of waste minimisation and sustainable procurement, using goods and services of high environmental and ethical standards from local sources where practicable, and increasing value for money by reducing, reusing, repairing and recycling as much as possible
- **Buildings and grounds**: manage and, where possible, design their buildings in ways that visibly demonstrate sustainable development to everyone who uses the school. Through their grounds, we would like schools to bring pupils closer to the natural world, capture their imaginations in outdoor play, and help them learn about sustainable living
- **Inclusion and participation**: are models of social inclusion, enabling all pupils to participate fully in school life while instilling a long-lasting respect for human rights, freedoms, cultures and creative expression
- **Local well-being**: are models of corporate citizenship within their local areas, enriching their educational mission with activities that improve the environment and quality of life of local people
- **Global dimension**: are models of global citizenship, enriching their educational mission with activities that improve the lives of people living in other parts of the world
In launching the report Christine Gilbert, Her Majesty’s Chief Inspector of Schools, said:

“It’s really encouraging to see that some schools are making sustainability an integral part of school life. Teachers in the best lessons are using stimulating discussion and activities to engage pupils in issues relating to sustainable development. Too often sustainability is a peripheral issue. More schools need to make sure it is a key feature of their development plans.”

Christine Gilbert, Her Majesty’s Chief Inspector of Schools
Introduction to practical activities

Shaping learning for sustainable development within your school

Every school will find its own way to build sustainable development into the curriculum. But it can be daunting trying to decide where to start and getting the conversation going with colleagues.

Over the past two years QCA has been working with schools, trying out ideas for curriculum innovation and sharing experiences. We’ve found that successful, effective curriculum innovation must be disciplined. It must be focused, based on evidence and closely monitored.

The seven-step process for disciplined innovation (shown below), tried and tested in schools, will help you transform your curriculum and ensure your changes have an impact on learners’ achievements, lives and prospects.

This section includes activities that other schools have found useful in helping them to build sustainable development into their curriculum.

You can find out more about disciplined innovation in the QCA publication *Disciplined curriculum innovation: Making a difference to learners* (QCA/08/3862), and the tools to support schools innovate their curriculum on the national curriculum website www.qca.org.uk/curriculum.

The case study section of this guide will give you examples of how other schools have answered the three questions and may be useful in stimulating discussion in your school.

There is one activity for each of the three questions that need to be considered during any curriculum development work.

**Activity instructions**

Teachers can work in groups of three or four, and draw a picture of one of your learners in the middle of a large sheet of paper. Around the outside of the picture, write down examples of the skills, knowledge, understanding and values you want your learner to have once the sustainable development dimension of your curriculum is working effectively.

Display the pictures around the room and discuss whether there is a shared understanding of your learner. Work together to create a picture that reflects all the desirable characteristics of a learner who understands about sustainable development.

Look at the picture below to see what staff at Sir John Lawes School in Hertfordshire said.

**Reflect on your activity**

You should now consider what you have written – you may want to ask the following questions, as well as some of your own.

- How does your picture of a learner relate to the national curriculum aims?
- What do you want learners to know? How do you want them to feel? What do you want them to be able to do?
- Do the words you have used relate to skills, knowledge, understanding and values, or to attitudes and attributes, or to both?
- Do the characteristics of your learner vary at different key stages?

Now circle each skill or attribute in a different colour, depending on whether it is a strength currently seen in most learners (green); some learners (amber); or a few learners (red) within your school. Can you agree your priorities for development by looking at the picture?
Activity 2: Planning compelling learning experiences

Design a learning experience that will help develop the characteristics of a learner who understands sustainable development.

Activity instructions

Look at the picture of a learner, developed in activity 1. If you want your learners to develop the skills, knowledge, understanding and values you visualised, what kind of learning experiences will they need?

Schools need to think about how to achieve this through the entire planned learning experience – lessons, events, routines, extended hours, out-of-school learning, locations and environment – and through the qualifications that are offered, including new GCSEs, GCEs and Diplomas. The overall experience of the learner within the school environment is also key. For example, is it normal behaviour to minimise energy and waste in classrooms, or to cycle to school?

Working in small groups, share ideas about the kinds of compelling learning experiences that would benefit your learners. Here are some suggestions:

- taking responsibility – raising awareness of the link between climate change and energy use, and taking steps to reduce energy consumption across the school
- making a positive contribution in the local community – working with other groups, such as the elderly, to create a garden
- sharing and communicating experiences – speaking to school staff or local councillors, or at national conferences, about concerns and ideas.

If you need inspiration, look at the case studies in this guide or contact any of the organisations listed on pages 46 and 47. The key to success for many of the case study schools was to make these learning experiences an integral part of their curriculum.

The following example shows how one school helped learners to understand the connections between energy use and climate change. Learners investigated energy use in their school, how it is linked to extreme weather events thousands of miles away and what they could do to reduce their energy consumption.

Reducing our school’s energy use

Place
- Pupils give feedback in assemblies on weekly energy use.
- Display results and pupils’ work in entrance hall.
- Outdoor learning – visit local Eco Centre or shrinking glaciers in Alps.

Time
- Weekly energy monitoring by pupils.
- Weekly feedback in assembly by pupils.
- 10 x cross-curriculum lessons using the ActionAid PowerDown toolkit.

Teaching and learning approaches
- Learning relevant to pupils, involving learners proactively in their learning.

Quality and standards
- Energy reduction targets set and measured by learners.
- Staff measure impact on core learning, eg quality of persuasive writing in English.

Resources
- Invest in energy monitoring software eg ecoDriver.
- Use ‘solar packs’ in D&T or science.
- Find case studies from NGOs showing climate change in different countries.

Curriculum links
- Data handling in maths.
- Effects of using energy in science.
- Causes of climate change in geography.
- Exploring behaviour change in citizenship.
- Persuasive letters to parents in English.
- Effective participation and team working.

Other dimensions
- Community participation, eg ask parents to join a carbon challenge club and keep their energy use under 100kWh a week.

People
- Pupils – monitor energy use on a weekly basis.
- Staff – plan 10 x cross-curriculum lessons.
- Parents and staff – take part in a carbon challenge.
- Experts – NGOs, visiting teachers work with pupils.

Thanks to Ashley Primary School in Surrey for helping to devise this compelling learning experience.
Activity 3: How will you know if the experience has made a difference to learners?

Explore ways to evaluate the impact of your compelling learning experience on learners.

Activity instructions

Go back and look at the diagram of the seven-step process of disciplined innovation on page 14. Design an evaluation tool to measure the impact of your curriculum changes on your learners, the school and the wider community. You could use film, vox pop interviews, surveys, diaries, creative writing, pictures or modelling work to demonstrate what your learners gained from the experience.

You need to use disciplined innovation: taking a baseline of what learners are like at the moment and monitoring their progress to ensure curriculum changes have as great an impact as possible.

Sustainability river

A picture of a river can be used to reflect on the journey and visualise next steps. It can represent the learning journey in chronological order; the source of the river shows the situation at the beginning and features highlight key experiences along the way and the next steps to be taken.

Go to page 44 to see the complete river image shown below.

Steps to determine the impact on learners of placing sustainable development at the heart of your curriculum

Review progress

Plan ‘reflection points’ for when you assess the progress learners have made towards meeting the goals and, as a result, what you should do next. Collect evidence that shows progress in learners’ attitudes, attributes, skills, knowledge and understanding. The evidence may come from parents, learners and the community as well as teachers.

Making decisions based on evidence

Use the evidence you collect to answer two questions:

- what progress have your learners made towards achieving the goals?
- what action needs to be taken to improve their progress?

Your answers will help you decide what to do next. The decisions you make should aim to increase the rate of progress and the impact you are making.

Evaluate and record the impact

Periodically, evaluate and record the impact of your curriculum developments on learners and their learning. This is an opportunity to report on the differences between your starting point and current situation. It is also an opportunity to communicate the differences you’ve made to your learners through your reporting tools, for example the SEF and governors’ reports. The s3 sustainable school self-evaluation tool will support this process.

Maintain, change or move on

Curriculum innovation is a process driven by questions:

- are our learners making enough progress?
- are we seeing sufficient change?
- are we making a difference to enough learners?
- is it time to change our priorities?

When you know the extent of the impact of your curriculum developments on learners you should ask:

- are we going to keep doing what we are doing, change our approach or move on to another priority?

If you decide to keep doing what you are doing, you will need a maintenance strategy. The schools we worked with found that it was easy to lose momentum on long-term projects. Regular, but not overly frequent, reflections on progress are a successful way of keeping staff motivated and focused on the goals.

Reflect on your activity

- Does your evaluation tool:
  - involve learners, colleagues and members of the wider community?
  - let you assess ongoing progress?
  - have the flexibility to build on the unexpected?

- How often will you use it? At what points would it be good to analyse the information?

- Does the evaluation tool measure impact on learner behaviour, achievement and self-esteem?

- What values, skills and behaviours do schools need to become sustainable?

- How could learners be involved in helping measure success?

- Who will you share the information with and how?

Key resources from DCSF

Planning a sustainable school: Driving school improvement through sustainable development

This document contains thirteen activities that help bridge the gap between the recommendations of the National Framework for Sustainable Schools and school improvement planning. The activities help schools plan, implement, monitor and evaluate their progress towards becoming a sustainable school.

s3: sustainable school self-evaluation tool

s3 is designed for teachers, school leaders, pupils, governors, local authorities and parents. It helps schools voluntarily record and report their efforts to promote sustainable development as part of their Ofsted SEF. It is in two parts: the first covers school practices under the headings used in the SEF, and the second assesses progress under the eight sustainable schools doorways.

Both documents can be downloaded or ordered from www.teachernet.gov.uk/sustainableschools.
Introduction to case studies

These case studies show how different schools have planned and integrated sustainable development into their curriculum. Whether yours is a primary, secondary or special school, these stories offer inspiration and useful tips.

Each case study illustrates the school’s answers to the three key curriculum questions:

1. What are you trying to achieve?
2. How will you organise learning?
3. How well are you achieving your aims?

What motivates these schools?
The case study schools all share a desire to excite and engage learners in the big issues of our time and to discover for themselves that there is something worth preserving in their local area and beyond. Many schools wish to make learning real and relevant, from designing a garden, to organising walking clubs or monitoring energy use. School leaders aim to be outward-looking and to create strong connections with the local and global communities.

Above all, the schools involved wanted their learners to see that they have a place in creating the future, and to begin to think deeply about how they can make the biggest difference within their lifetime in relation to pressing global issues such as climate change.

What did they do?
All schools involved in this project have built sustainable development into their curriculum planning. Cross-curriculum themes such as ‘the Olympics’, ‘needs and wants’ and ‘survival’ were popular, and often planned and explored across all subjects and year groups.

Some school leaders have placed sustainability at the heart of their school, either giving direct responsibilities to key staff to lead on different aspects of the work or by appointing a dedicated sustainable development coordinator. Pupil participation and leadership is developed in all schools, with learners engaged in a range of initiatives from Eco Committees to Energy Squads.

First-hand experiences are highly valued, with learners visiting places such as composting sites, eco centres and gardens, and then using their knowledge to create living examples of sustainability in their school.

Opportunities to learn within the school grounds are also fully exploited – from growing medicinal herbs to creating a secret garden for story-telling. External partners are often invited into schools to support staff and students, for example, energy auditing with the Carbon Trust, and waste reduction, reuse and recycling with the Schools Waste Action Club.

What have they achieved?
Staff in all schools believe that embedding sustainable development across school life has a huge range of benefits for learners. Many learners have developed personal, learning and thinking skills, as well as communication skills. Children as young as 10 were able to articulate complex arguments to adult audiences. Learners in many schools were able to make connections between their own actions and problems such as global warming, speaking with passion about the difference they could make through small changes in behaviour.

Teachers believe that working on real and relevant topics has helped raise standards in the core curriculum, particularly literacy, as learners are engaged in issues that matter to them and are able to present, write or even dramatise a persuasive and reasoned case for action.

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Growing together
Argyle Primary School

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Creating the future
Ashley Primary School

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Finding imaginative solutions
Cassop Primary School

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Regeneration gets a green light
The Durham Federation

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Real-world learning
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A focus on well-being links generations together
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Taking responsibility for change
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Looking beyond their doorstep
St Martin at Shouldham Church of England Voluntary Aided Primary School
Growing together

Argyle Primary School

What did the school want to achieve?

Over 60 per cent of the pupils attending Argyle Primary School come from the tightly knit Bangladeshi community that is settled in this economically deprived area of Kings Cross. In 1991 Argyle was in special measures. There were few links between home and school, and pupils often encountered different values and expectations.

‘At the time, most of our children were passive learners’, explains current headteacher Laura Wynne, adding, ‘They rarely asked questions, held a narrow world view and often didn’t appreciate what their local environment had to offer’.

Staff were keen to develop communication between parents and carers, staff and pupils, and to create a curriculum based on shared values. ‘Our aim was to empower pupils to lead rich and fulfilling lives, now and as adults. We wanted to emphasise the importance and wonder of our environment, both locally and globally, and to engage parents and carers in the life of the school through helping us develop sustainable practices’, says Laura.

How did the school organise learning to meet its aims?

After some initial improvements, a major strategic step was taken to involve the whole community in creating the school’s development plan. A range of organisations such as WWF, along with representatives from different religions, helped the school community to think about the future of the world, and the challenges and opportunities it might hold for children. ‘As a result we established sustainable development as a core value in our curriculum and an important tool for raising achievement’, recalls deputy headteacher Jemma Winfield. Staff began a process of curriculum design to integrate sustainable development into all aspects of teaching and learning.

Learning about sustainability is now connected across all subject areas. For example, a year 4 unit of work called ‘Tomorrow’s World’ includes a scientific investigation of renewable energy sources and their possible role in the future, comparison of the amounts of energy used by different electrical appliances in mathematics, and hands-on testing of solar power in design and technology, with pupils constructing their own solar cookers.

Abdi, now in year 6, still recalls this vivid learning experience. ‘Sustainable development is about making sure our planet keeps on going, We made solar-thermal cookers in Design and Technology and they actually worked! We learnt that magnifying glasses concentrate the heat because when the sun shines on black mirrors, the black absorbs the light and becomes warm’.

The importance of the urban environment is celebrated across school life. Staff, governors, parents and carers, and pupils have worked together to develop sustainable practices including an energy audit by the Carbon Trust, monitoring by pupils ‘Power Rangers’, water conservation, including water saving taps and rainwater harvesting, and fruit and vegetable gardening, and composting of food waste.

Pupils have moved on from learning about their environment to taking steps to improve it. ‘Our School Council came up with the idea of a ‘Sci-High’ house in the middle of our playground. It’s made from recycled wood and has a small wind turbine to make electricity’, says Sabrina, year 5. In addition, pupils came up with the idea of holding a Green Fair for parents and carers, and the wider community. The pupils wanted to demonstrate what they had been learning in lessons and were particularly keen to give parents and carers some tips on the importance of energy conservation.

‘We explained that we are making too much CO2 and our planet is getting too warm. We showed pictures of countries like Bangladesh and India that are getting over flooded. All of our parents promised to ‘PowerDown’ and save energy’, says Yumna, year 5.

Power Rangers go around turning off lights and screens in classes, and shutting doors and windows. They give points to the most energy saving classroom – and points mean prizes. Pupils are also asking their families to complete and return a ‘Promise for Our Planet’ pledge in order to match the school’s efforts to save energy.

How well is the school achieving its aims?

Ofsted has praised the school for ‘an outstanding curriculum that is aimed at empowering pupils in a changing world based on global citizenship and sustainable development’. The pupils want to make a difference in the world and are aware of the ways to influence others.

‘As we grow up we should have a say. We can write letters to MPs and speak out about things like the cutting down of trees. If we don’t learn about this in school we won’t care and we’ll let the world carry on using too much,’ says Tahmin, year 6.

Sustainable development is well integrated into the curriculum – rather than being an additional component. Even the youngest children are able to talk about energy conservation and link this to climate change, while key stage 2 children use difficult terms such as ‘sustainable development’ and can relate them to their work in different subjects.

‘If we carry on using coal, oil and gas then they are going to run out. So we have tried using solar power to make electricity. Last year some of us also wrote letters to our MP about deforestation and climate change, which we learnt about in geography’, says Sabrina, year 5.

What does the school plan to do next?

Staff are saving up for a display board to put up in the entrance hall to help record daily energy consumption and output. The School Council has sourced fair trade school bags and uniforms, and invited parents, carers and governors to a series of meetings to discuss how to make these available to pupils. The pupils are approaching this, like other initiatives, with the gusto and creativity their home and school communities have grown to expect.
Creating the future

On joining the school seven years ago, Richard believed this could only be achieved through developing a curriculum which emphasised not only the core subjects, but also a need for pupils to care for themselves, each other, and the world. ‘Our aim was to give children time and space to grow as people, to find out what’s important to them, what their values are and how to act on those values. They can then relate their values to real issues, such as how to make the biggest difference to climate change in their lifetime’, says Richard.

How did the school organise learning to meet its aims?

A focus on values provides a framework for children’s learning, with 22 values underpinning the curriculum. In year 1 a value like ‘belonging’ might focus on ‘belonging to family’, progressing by year 5 to ‘belonging to the world’. Richard reflects, ‘In this way we can measure progression in children’s learning and they gradually begin to see the part they can play on the wider world stage’.

Across all year groups learners are encouraged to ask questions about the way we live our lives. Recently they have been finding out about energy – where it comes from, how it is used and the carbon emissions it can create. To help pupils with their learning the school has invested in an energy-monitoring software system called an ecoDriver. The school has also won grants to install solar technologies to generate electricity and a biomass boiler to generate heat using locally sourced wood pellets.

All learners can view and discuss live data on an LCD monitor in the school’s reception area. Line and bar graphs reveal how much energy the school is consuming or producing, as well as how much CO₂ it is emitting. Elliot from year 6 says, ‘The ecoDriver provides us with graphs, which show us how much energy our school is using, or in the case of our solar panels, how much they are producing – every hour, day, week or month’. Years 5 and 6 are using ecoDriver graphs in their core learning. Class teacher Miss Ota explains, ‘In numeracy, this has brought data-handling skills to life, because the children want to know why energy use is higher at certain times of the week and lower at others. In geography we investigate climate and how much energy our solar technology is producing. We are able to track back through the graphs to the days or months when we have seen most sunshine and see the positive impact this has had in providing us with clean solar energy’.

Pupils progress from thinking about ‘the way we live our lives’ to whether we could ‘live our lives better’. For example, year 6 tracked energy use over several weeks to identify particular appliances or areas of the school where consumption was heaviest. ‘We found out that Mondays were the worst day because teachers needed to make photocopies for our lessons. So we challenged the teachers to try and photocopy less and find alternative ways to teach us!’ We could also see that the after-school club was using lots of power during its sessions. So we asked them to turn off computers and electrical games when they were not using them’, says Nathan, year 6.

Pupils are also given the chance to experience what sustainable development means through first-hand experiences. In June 2008, year 6 set out by train for Chamonix in the Alps to better understand the issues of climate change and how individual, team and global well-being are inextricably linked. Over three days, pupils explored the theme of well-being, visited the shrinking glaciers, and finally presented their ideas on waste, energy, water, food and transport to the Mayor of Chamonix. ‘To see the heat from their own hands melting a glacier was totally real’, recalls Richard, ‘It helped form who they are and where they want to go to’.

How well is the school achieving its aims?

Ofsted believes that Ashley Primary’s pupils are ‘developing an exceptional understanding of environmental issues’. It has praised the school’s ‘strong learning ethos and the way that the pupils are involved in the development of the school towards using wholly renewable energy technology’.

Many of the children are becoming informed and responsible citizens, with a strong desire to share their values with the wider community. An impressive number of families have joined the ‘100 Club’ where members try to keep their energy consumption to under 100 kWh a week, to match the school’s efforts.

‘Our consumption for the first three months of this year was 50 per cent down on last year. We had a Carbon Free Friday last term, and we managed to get our energy for the whole school for the day down to just 30 kWh, which is less than £3’, says Richard.

Above all, pupils from Ashley Primary are confident and positive about the future and their role in it. Former year 6 pupil Miranda says, ‘I know when I grow up, even if it’s not my job, I want to help preserve the world we live in. I will tell other people about my experiences in Chamonix and try to convince them of the importance of saving the world from pollution.’

What does the school plan to do next?

The school is now busy working with eight other local schools, sharing best practice and challenging them to become more carbon conscious. One school has already reduced its energy consumption by one-third in a matter of weeks through a combination of behavioural change and weekly energy monitoring.

Richard is planning a Children’s Carbon Charter – a new alliance between NGOs such as ActionAid and schools around the world, giving young people the opportunity to share their best practice and challenge governments to improve their green credentials too.

As Richard explains, ‘If we can deepen children’s understanding of issues such as climate change and sustainability in relevant and motivating ways, and then engage them in meaningful projects to start to impact positively on those issues, the results can be truly amazing. It’s empowered learning at its best’.

ecoDriver data on an LCD monitor in the school’s reception area. Line and bar graphs reveal how much energy the school is consuming or producing, as well as how much CO₂ it is emitting.
Finding imaginative solutions

What did the school want to achieve?
Cassop Primary School in Durham has a deserved reputation as a sustainability-conscious school – not least for being the first wind-powered school in the country. However, as headteacher Jim McManners points out, ‘Being a sustainability-conscious school is a continuous process, you can never sit back and claim to have achieved.’ Being a sustainability-conscious school – not least for being the first wind-powered school in the country. However, as headteacher Jim McManners points out, ‘Being a sustainability-conscious school is a continuous process, you can never sit back and claim to have achieved.’

How did the school organise learning to meet its aims?
Other headteachers regularly ask Jim, ‘How do you fit sustainable development into the curriculum?’ His answer is, ‘Everywhere! It’s a body of knowledge children need to have, for example, in science and geography, but it’s also a whole approach to learning that is about discovery and allowing the student voice to flourish.’

At Cassop Primary, teaching and learning about sustainability is organised around four key steps:

Step 1: Creating concern and interest
Step 2: Building knowledge of issues and solutions
Step 3: Thinking imaginatively about what individuals can do
Step 4: Discovering ways to influence others

For example, a year 5/6 cultural hubs project, funded through the Arts Council, created the first ever Annual Theatrical Lecture, focusing on global issues and using the context of Antarctica. ‘The idea was to develop a rich and deep learning experience, and allow children’s voices to be heard. Issues of sustainability were discussed and investigated across all subject areas’, explains Jill.

The pupils imagined themselves in the year 2010. The Kyoto Protocol on global emissions had broken down, and Scott of the Antarctic had come back to life! In geography, learners looked at climate; in science, they investigated adaptation and change; in English, they came up with a central idea then wrote and performed a theatrical script, focusing on the seven deadly sins and virtues.

The pupils were keen to get their messages on sustainability out to the widest possible audience. After a good deal of imagination, negotiation and team working, the final scripts portrayed the sins as modern vices such as over-consumption, and the virtues became examples of sustainable living. ‘For the sake of a little luxury, how much waste do we create?’ provokes one character. The performance played to local and national audiences, and pupils found they had discovered an inspiring way to influence others.

Living examples of sustainability are built into every aspect of school life at Cassop Primary. Nearly all the trees in the surrounding fields have been planted by learners or their parents when they were pupils. A ‘smart meter’ in the school’s Energy Zone tells pupils how much energy the school is consuming, and a large interactive display reveals the wind speed for the school’s turbine and whether the school is currently supplying power to the whole of Cassop village or taking it from local power stations.

How well is the school achieving its aims?
Learning through first-hand experiences has given pupils a genuine interest in their learning and helped them connect complex issues to their own lives. ‘The interactive display about our wind turbine has really helped me learn about energy and where it comes from,’ adds ‘something worth preserving’ both in their local area and the world beyond.’

Some pupils have limited experiences of the world beyond the two ex-mining villages that largely form the school’s intake. ‘We aim to give all our children – from reception to year 6 the chance to learn through first-hand experiences’, explains deputy head, Jill Jackson. ‘We want to stimulate and awaken their interest and enthusiasm, in order that they discover for themselves that there is ‘something worth preserving’ both in their local area and the world beyond’.

Eligent and informed ambassadors

Everyday I can check to see if we’re supplying electricity to Cassop village or importing it from the grid,’ says Rosie, year 6.

After winning the DCSF award for sustainable schools in 2007, learners were described as ‘eloquent and informed ambassadors, not just of the school and its activities, but of the messages of sustainability’. Georgina in year 5 says, ‘Sustainable development is about making the world better for people in the future. If we don’t do something now there won’t be enough time left’.

Staff report that pupils have developed a huge amount of self-confidence from their knowledge and actions. ‘Our approach to sustainable development has developed children’s self-esteem and confidence. The idea that they can take their messages to the rest of the world – whether it’s an audience of school children in London or visitors to our environmental centre – is hugely empowering,’ says Jill.

What does the school plan to do next?

Staff and pupils are passionate about sharing their ideas with others. They have created a workshop space where other schools can build a miniature turbine and test it in a wind tunnel, listen to a wind-up radio or sift recycled materials on a conveyor belt. Fundraising plans are underway to provide more workshops for other schools in the region. As Pip from year 5 says, ‘We’re always thinking about how we can help other schools be carbon neutral. I think we can do anything as long as we put our minds to it’.

Cassop Primary makes imaginative expeditions to Antarctica and the year 2010, inspiring learners to improve the future of the planet.
What did the school want to achieve?
The Durham Federation – a federation of Durham Community Business College and Fyndoune Community College – lies in a semi-rural area just outside Durham. The local catchment is made up of 13 ex-mining villages – small communities that once drew their livelihoods and identity from the collieries.

Mass pit closures in the 1980s set off a pervasive decline in the area. Unemployment brought a growth in social problems, such as drug abuse, and an increasingly insular community. ‘The mines held society together and created self-sufficient communities’, explains Trevor Dunn, principal of Fyndoune Community College, adding, ‘A lot of this has been lost’. Trevor sees education as a way of addressing the problem. ‘We are committed to providing opportunities to help students gain confidence and self-belief. For us sustainability is all about regeneration and well-being. It’s inseparable from Every Child Matters’.

Both colleges wanted to create confident individuals who understand how to make a positive contribution to regenerating their local area and who believe they can attain good results. The development of leadership skills is key. ‘We aim to make student voice central to everything we do. We want learners to think and act outside their usual comfort zones, giving them the power to lead change’, says Anne Lakey, chief executive and principal of Durham Community Business College.

How did the school organise learning to meet its aims?
Staff worked alongside partners such as the Specialist Schools and Academies Trust (SSAT), the National Trust and local businesses to give the colleges a strong steer on how to make sustainability a part of real learning.

As a result the humanities curriculum was organised around big questions, such as how do people adapt and cope in times of economic or environmental change, that students could investigate. ‘This enables learners to look at sustainable development at a much deeper level. It means engagement with moral, historical and geographical issues such as survival – whether that is personal survival or the future survival of the planet’, explains Lucy Smith, humanities curriculum leader.

Staff also planned to use the federation farm and gardens as a way to make learning more hands-on. For example, during a year 8 learning journey entitled, ‘What do I need to survive?’ staff and learners transformed one of the school’s allotment plots into a miners’ garden. Taking inspiration from a traditional garden at a local mining museum, they grew flowers and vegetables in containers made from objects such as tyres, boots and wheelbarrows. This helped them to understand their own local history and investigate, through first-hand experiences, how miners survived on very low incomes and developed a ‘reduce, reuse, recycle’ lifestyle well before the phrase was coined.

How well is the school achieving its aims?
Staff have seen a significant increase in learner confidence, as director John Harpin explains. ‘There’s an upward trend. It’s very powerful to see young people having the confidence to be positive role models for older people. Community leaders ask if our students can help them out with environmental projects’.

Students also see the relevance of their learning, as Chris in year 9 comments, ‘I can see how it’s going to help me in my life, my community and my environment. It makes links between what’s in my mind and the skills I need’.

This has, in turn, enhanced leadership skills, with students like Ryan in year 9 saying, ‘Confidence is a big one for me. Before I was quiet and never used to talk. Now we’re leading meetings, speaking at conferences and advising other schools on setting up school councils’.

Mentoring skills are put to good use in a peer-mentoring programme with feeder primaries. Ashley in year 10 believes she has not only helped ensure a smooth transition from primary to secondary school, but she has helped to offer opportunities for younger pupils to express their own ideas. ‘Just after the beginning of term one year 7 asked me, ‘Why haven’t we got a wind turbine in our school, and who do we need to work with to get one?’’

What does the school plan to do next?
While the federation continues to provide opportunities to develop student voice, the school council is busy securing funds for a study garden, which would be suitable for wheelchair users and small children. Their inclusive approach has already set learners from across the region the task of coming up with the most imaginative and sustainability-conscious design ideas.
What did the school want to achieve?
Glebe Special School’s journey towards making sustainability visible and purposeful began nine years ago in a year 10 geography lesson. Head of geography, Martin Crabbe describes what happened. ‘Back in 1999, a group of year 10s were becoming increasingly difficult as they struggled to grasp abstract ideas like sustainable development. It all culminated in one lesson when I saw they didn’t understand the relevance of geography. So, I decided to take learning out of the classroom.’

Martin hoped to increase engagement by creating direct links between the curriculum and the real world. He wanted learners to be active participants in using the school grounds to construct their own learning space. The long-term aim was to use this approach to expand and enhance teaching and learning opportunities across different subject areas.

As Robert Kellard, head of art, explains, ‘The garden quickly became a resource for creating environmental art. Today, an art installation forms the centre-piece of the garden – this doubles as a weather station, feeding data into the geography classroom’. A miniature wind turbine, created in science for recharging design and technology equipment, overlooks the space. And dried banana skins from the compost area have been used to make costumes for plays performed in the sedum-roofed drama block.

Glebe uses school grounds to make geography relevant and give learners a sense of community.

How did the school organise learning to meet its aims?
Martin decided to teach a large part of the geography curriculum through the school grounds. ‘Living by doing’ was made central to lessons. For example, learners designed recycling audits and transport surveys while grappling with concepts like ‘environmental interaction’.

A collaborative learning approach ensured everyone had a say. When given the task of landscaping the school garden, learners set up a consultation process to gather ideas. They listened to and took account of different views, managed discussions sensitively, and only then put their plans into action – by creating an organic fruit, vegetable and flower garden with a wildlife pond area.

The developing garden created a buzz around school, capturing the imagination of other learners and staff. The next step was to map sustainability across the curriculum, encouraging more use of the school grounds across all subjects.

The geography department also used the garden as a resource for the Bromley Garden Project, a social enterprise initiative involving other local schools. Learners planned, developed and maintained a garden business, with the aim of producing food to sell at local farmers’ markets. They investigated organic food production in geography, as well as developing enterprise skills such as risk taking, collaboration and self-management. When they are not planning and planting, learners share ideas with other schools through a sustainable geography website, managed by GCSE students as part of their geography coursework.

How well is the school achieving its aims?
Learners are excited about geography and see its relevance to their lives, as former GCSE geography student Lucia describes. ‘Another good thing about a school garden business is that you can learn about lots of different types of jobs, meet lots of different people and visit lots of different places. It’s brilliant to do in geography because that is what geography is all about. It’s about people and places and all the different ways that they are connected. I think that you learn much more this way because you are doing it for real not just reading about it all in a book’.

The participatory learning approach has had a positive impact on behaviour and attitudes to learning. ‘The Bromley Garden Project has motivated students to become collaborative learners. It has helped them to develop self-esteem and a realisation that they can contribute positively to their communities’, says Martin.

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Learners have discovered ways to adapt their behaviour to suit different roles and situations. Positive relationships with customers, market traders, and farmers have led to students winning awards and making headlines in local newspapers. Josh from year 11 says, ‘I’m proud of the whole school. I felt brilliant when we won the Bromley Environment Award. The money went to the school garden. We even bought loads of wellies!’

This increased confidence is evident, with students speaking about sustainability at national conferences, sharing success stories and building on their new-found status as a model for sustainability in the community.

‘We are trying to make Glebe a better place now and for the future, and this is what I think sustainability is about,’ says Ben, year 9.

What does the school plan to do next?
Plans are underway to work in partnership with the Soil Association and catering companies to produce organic food for the school canteen and tuck shop.

Learners also want to share gardening ideas with Kobi Nazrul School in Tower Hamlets, London. They say they want to identify improvements that would benefit others as well as themselves.
Global horizons

Expanding learners’ horizons

What did the school want to achieve?

Harby Church of England Primary School lies at the heart of a small Leicestershire village in the Vale of Belvoir. The school’s vision has been to expand learners’ horizons and to explore their potential as future world citizens. Headteacher Richard Simpkins explains, ‘We aim to enable pupils to develop the knowledge, skills and attitudes that are relevant to the needs of today and tomorrow’s society. Learning about sustainable development gives pupils real and meaningful hooks to hang their learning on, and empowers them to move beyond learning about their planet, to helping to look after it.’

However, with only six per cent of pupils attending from outside the village, staff knew they could only fulfil this vision if pupils were given first-hand learning experiences beyond the school gates. ‘If we really wanted to prepare our children to be citizens of the future, we felt that a much greater part of their learning needed to be developed through meaningful experiences. We wanted to give children a reason to care about their learning – to move from learning with a ‘made-up’ purpose to learning about real issues’, explains senior teacher Cath Chivers.

How did the school organise learning to meet its aims?

Learning about sustainable development was woven into curriculum plans for each class – from learning about ‘ourselves’ in year 1, to the Tudors in years 2/3. Common themes now include rights and responsibilities; needs and wants; and caring for others. Activities are designed to be purposeful, stimulating, and wherever possible, they relate to topical issues that inspire and motivate pupils.

For example, one year 4/5 science topic on circuits started with a practical investigation. Pupils constructed circuits to find out how they worked and then moved on to discuss electricity and how it is created. They then made connections between energy use at home and school, and its impact on global warming. At the time there was a national debate raging about the use of nuclear energy in the UK and a local debate about proposals for wind farms. The pupils were concerned about the impact of global warming and the choice of the government to use nuclear power in the future rather than renewable sources of energy.

As a result years 4/5 started a school-based and national campaign to raise awareness about energy use and its impact on climate change. In ICT they designed posters and stickers urging staff and pupils to ‘switch off and turn down’. And in citizenship they discussed what action they could take to get their views heard at a national level – as a result, the whole class wrote letters to the Prime Minister to find alternatives to nuclear energy. Lois from year 5 is very positive about this experience, ‘I felt excited when the envelope from Downing Street arrived at school. I felt proud and important that our views on global warming had been recognised by the Prime Minister’.

Wherever possible, pupils learn through first-hand experiences, with maximum use made of school grounds and local places of interest.

Harby’s pupils challenge the Prime Minister to find alternatives to nuclear energy

‘We go to lots of places and get great ideas. The rotten resource centre gave us ideas for the compost bins in our school. After we went on a trip to the reservoir we decided to get water savers for the toilet. Every little helps’, says Tom, year 6.

Pupils come up with their own solutions to problems and have formed a group of ‘Eco Warriors’, with representatives from all year groups. ‘The Eco Warriors turn off taps and lights when they are not needed. They have found litter hotspots and make sure that rubbish is recycled’, explains Matthew, year 5.

How well is the school achieving its aims?

An Ofsted inspection on education for sustainable development judged the school as ‘outstanding’ with all pupils demonstrating an excellent understanding of many aspects of sustainable development. Staff say the inspection raised the profile of this work and was motivating for pupils, parents and carers. The pupils are becoming more confident in their opinions and in communicating them to different audiences – even challenging others about their behaviour. And there have been many vivid learning experiences.

‘We share ideas through an Eco Board so people can come home and tell their families what to do. We don’t use plastic bags anymore. We all watched one day while year 2 dug a hole in the playground and buried a plastic bag and a paper bag. The paper bag rotted but the plastic one just stayed there,’ explains Hannah and Elspeth, year 6.

Learning about topical issues has enriched pupils’ learning and helped add depth to their work in core subjects. ‘I think working on real issues helps raise standards. To get to level 4 as a writer is easier if you are writing about issues that matter to you. It’s also much easier for pupils to judge how successful they have been when they are engaging with real audiences’, says Cath.

What does the school plan to do next?

The school recently won a Green School Award through a local paper and the Eco Warriors have lots of ideas about how to invest the money, as Ella from year 5 explains. ‘We’d like to have a wildlife area in the garden. We’ve looked at solar-powered water fountains and different trees that we could plant.’ Some pupils are also planning to attend parish council meetings to put forward their views on issues such as waste, litter and recycling.
What did the school want to achieve?
The Petchey Academy opened in a deprived area of Hackney in 2006. One of the only schools in the country specialising in health, care and medical sciences, Petchey is also committed to working with and giving back to the local community. Principal David Daniels explains, ‘We think and act like a family – with our extended family being the community around us. Sustainability is about being outward looking and positive, and this is a key way in which we aim to connect with the local community’.

Staff are passionate about making sustainable development a focus for pupils’ learning and actions. ‘We aim to give learning about sustainability a real purpose’, says assistant vice principal Fiona Hattersley-Smith, adding, ‘If there’s a topical debate raging in the wider world – about food miles or climate change, for example – we aim to seize on it, looking behind the headlines and thinking deeply about the implications for the local and wider community’.

How did the school organise learning to meet its aims?
Teaching and learning is now organised across four learning ‘centres’: Natural World (science, PE and dance), Controlled World (mathematics, design and technology, ICT, music and art), Communication (English, drama, languages and literacy), and Human Spirit (geography, history, religious education and citizenship).

The Academy decided that learning centres should share themes such as ‘work in the 21st century’ or ‘natural disasters’ across each year group. Opportunities to learn about sustainability have been planned into each theme, with a strong focus on connecting with topical issues making learning more immediate and stimulating.

Fiona says, ‘Our starting point is always to explore what sustainability means, and for learners to realise that it’s not just about the environment’. She adds, ‘We encourage learners to expose some of the myths about sustainability. For example, across English, humanities and science, pupils might research and debate whether it’s always more energy-efficient to grow food locally than to import it’.

Pupils are encouraged to make connections between what they know and what they do. The Think Green and Active Community teams are particularly motivated groups of learners, as Think Green Team member Sheku explains, ‘We want to show people in our school why it’s important to think green. We start with the school because it’s a community we know. We aim to spread the message from people here to the community outside’.

Local partners such as sustainable development education provider ecoACTIVE support staff and pupils in their aim to improve quality of life for local people. The Think Green Team meet once a week for two hours and have been sharing ideas about sustainability with a group of elderly people and helping them create a community garden. Students prepared local partners such as sustainable development education provider ecoACTIVE support staff and pupils in their aim to improve quality of life for local people. The Think Green Team meet once a week for two hours and have been sharing ideas about sustainability with a group of elderly people and helping them create a community garden. Students prepared

The school’s involvement in the local community has been a big success, as a resident of Thirlmere House, a local retirement home, explains. ‘We really enjoyed spending time with the children from Petchey Academy, hearing about their environmental project and telling them about our Eco Team. It was great to see that the younger generation is so knowledgeable about this important subject. Some of us do not get to spend a lot of time with different groups of people, especially the young, so the project was important to us in this respect also.

There has also been a big increase in numbers opting to take triple science. There has also been a big increase in numbers opting to take triple science. ‘Science is becoming more appealing. There’s a real emphasis on understanding how it impacts on our everyday lives and on the contribution learners can make to creating a sustainable future through science and technology’.

What does the school plan to do next?
The Olympics will be a shared theme across all learning centres. An investigative approach will underpin this work, with a key question being: ‘London aims to host the most sustainable games ever in 2012, but are there reasons why we should be sceptical?’ A year 8 learning journey might begin with an investigation of the impact of the games on previous Olympic cities. Pupils would be expected to consider positives and negatives. For example, improved transport systems in Athens versus a higher level of pollution and unused stadiums. Plans for London 2012 will begin with a visit to the Building Exploratory centre in Hackney. Pupils will then predict potential problems for their local community and propose solutions – the focus is on developing critical and creative thinking skills.

Staff and pupils also want to expand the school’s emphasis on local well-being by creating a community restaurant. The idea is to develop a shared allotment on the site, nurtured by pupils and local residents, which would provide some produce for the restaurant. Meals would be prepared by junior chefs, working alongside professionals at the school.
Sir John Lawes Secondary School
Taking responsibility for change

What did the school want to achieve?

Listening to and learning from student voice is crucial to Sir John Lawes’ vision of achievement, care and excellent standards. ‘Here we aim to empower our students to be sustainability ambassadors – within the school, the local community, and on national and international platforms. This helps us to fulfil our key objectives of enabling confident individuals, successful learners and responsible global citizens to thrive’, says headteacher Claire Robins.

Year 10 student Isabel, who is a member of the Eco-Schools group, a group of students who play a key part on sustainable development issues and practices within the school, adds, ‘We aim to reach out to all students and teachers, making them care as much about the environment as we do. We are also working with primary schools and the rest of the community to get our messages across’.

Staff wanted to embed sustainable learning across all areas of the curriculum. A key objective was to develop learners’ critical and creative thinking skills. As Greg Brennan, head of science, explains, ‘If we wish to create a sustainable world, our students must be able to visualise future scenarios and the impact human behaviour is having on our planet. We aim to excite and engage them in learning about the big issues of our time – to help them see that they hold the keys to the solutions. After all, they are the scientists, inventors, and thinkers of tomorrow’.

How did the school organise learning to meet its aims?

Since 2007, learning about sustainable development has been coordinated by dedicated advanced skills teacher Helen Gossnell. This, along with a positive Ofsted monitoring visit in 2006, has united staff in seeing the value of integrating sustainability across subjects. ‘Although we already had lots of good practice going on, this enabled us to pull together and collaborate between curriculum areas’, says Claire.

Helen’s first step was to audit all subjects to see where sustainability learning was already present. The results were a surprise to teachers. ‘At first we thought, oh no, not another audit! But then it was great to see what we were already doing. For example, in art we were reusing canvasses and in textiles we were running plastic bag fashion shows’, says head of art, Val de Souza.

Staff decided to make more use of topical debates to uncover the truth about some of the big issues facing the world – such as inequality and environmental degradation. ‘Changes in the secondary curriculum and the new GCSE science options have provided a fantastic opportunity to connect science with young people’s real concerns. Our students want to understand the world around them, how things work, and the impact that they have on their environment and other people. They are excited about exploring their own potential and the positive contribution they can make to society,’ says Greg.

In a GCSE module on air quality, students investigate the effects that pollutants have on the environment and ourselves. Using window markers a group of students created graffiti messages to display their thoughts on how to improve air quality in the future. The idea was to change attitudes by sharing ideas in a striking and unusual way. ‘We created graffiti-style writing about climate change and greenhouse gases on the windows of our science block – the messages will inspire other people’, says Amy, year 10.

Wherever possible, students take responsibility for change. For example, the Eco-Schools group has surveyed staff attitudes and behaviour towards energy and recycling, and year 9 are involved in a ‘Be the Change’ ambassador programme run by charity Peace Child International. Year 9 now receive training to deliver workshops to primary school pupils on issues relating to sustainable development.

‘We came up with lots of ideas for workshops. We got a bin bag full of rubbish and asked the children to sort it into piles to reuse, recycle or throw away. We really wanted to get across to them how much waste is dumped in landfill sites and to show that is our future we’re wasting – because of the impact this has on global warming,’ explains Sophie, year 10.

How well is the school achieving its aims?

Linking learning to action has helped students develop analytical and problem-solving skills. ‘They have a clear understanding of the complexity of many sustainable development issues and recognise that many decisions involve balancing benefits, costs and impacts. Subject leaders report a higher level of questioning skills from learners and the ability to use evidence to decipher the truth behind topical media debates.

‘I’ve just been through the GCSE science course. We looked at the debates around different types of energy, like nuclear power or fossil fuels. We linked rising CO2 to rising temperatures, and linked this to energy use. It’s interesting and is helping us to understand everything we hear on the news about climate change’, says James, year 12.

Students have become successful sustainability ambassadors – representing the school at local, national and international events. For example, they have exchanged ideas on waste reduction with a Zambian link school, and met Gordon Brown as part of Send My Friend to School, the world’s largest children’s campaign calling for free education for all children. Students have also taken part in a mock United Nations conference on climate change.

Many have a heightened sense of responsibility, as Ed in year 11 illustrates, ‘I’m now involved in a climate change charity called “You, Me and the Climate”. I’ve created a petition for free public transport for 11- to 16-year-olds in Harpenden. Most of the inspiration for this has come from school’.

What does the school plan to do next?

The Eco-Schools group is about to publish a Sustainable Food Shopping Guide and distribute it across Harpenden, starting with places where local people congregate, such as the farmers’ market and then moving on to groups of influence like the Town Council. ‘Our food guide is aimed at all citizens in Harpenden to make them aware of food sustainability issues – examples being fair trade and buying seasonally’, explains Millie, year 10.

Other initiatives are planned, including an environmental conference where students will identify issues for the school to work on in the future – such as energy wastage at night. An Eco Squad has already been formed to push this agenda forward.

Helen is keen to discover whether students’ involvement in sustainable development activities helps raise standards. Staff therefore plan to work with Reading International Solidarity Centre to track behaviour and attitude change, and to disseminate findings to schools throughout the country.
Crispin School
Making change happen

What did the school want to achieve?
Twenty-one years ago Crispin School began a long and challenging journey to place learning about and for sustainability at the heart of the school’s ethos and curriculum. Despite numerous challenges – including funding restrictions and curriculum changes – one of Crispin’s four key aims now is that ‘pupils should be equipped to contribute to a sustainable common future’.

Deputy headteacher Frances Thompson explains, ‘For many years, our aim has been to create an ethos and culture where all children leave school with a concept of what sustainable development means, and are encouraged to go on to lead sustainable lives. In essence it is about encouraging students to consider their ecological footprint on the planet and how their actions impact upon their own well-being and that of others’.

Student participation is seen as central to changing attitudes and behaviour, and leadership of sustainable development is owned by staff, students and the wider school community.

‘We want students to think beyond their local area, appreciate our global interdependence and engage in the big issues facing the planet. We believe this can only be achieved through real participation and the co-creation of knowledge. They are leading us, as much as we lead them. We want all our initiatives to spring from the students’ ideas’, says science teacher and education for sustainable development coordinator Tom White.

How did the school organise learning to meet its aims?
‘Learning about sustainability’ (curriculum content about sustainability of the physical or human environment) and ‘learning for sustainability’ (opportunities to develop critical thinking and decision-making skills through active learning and participation) are mapped across each year group and subject. For example, pupils in year 8 geography compare sustainable practices in Kenya with those in Somerset, they investigate the properties and uses of natural and man-made fabrics in different cultures in design and technology, and create a piece of forum theatre based on the theme ‘No man is an island’ in drama.

Experiences are designed across the curriculum to show the importance of sustainability for current and future generations, allowing students to investigate the interdependence of the natural environment and human society, and to consider the best ways to exercise responsible stewardship of the planet. Ben, from year 10, outlines a few of his most memorable, recent learning experiences. ‘In maths last term I looked at 4 point moving averages using data on CO2 emissions in the UK over the last 60 years. I calculated averages and then a trend. In physics I’m working on a case study, arguing three cases for and against ‘Should Britain invest in nuclear power?’, and this term in chemistry I’m answering the question ‘Is climate change actually happening?’ by looking at the chemical composition of the atmosphere and the process through which it changes’. This work has inspired Ben to develop a workshop for year 7s called ‘Global warming and climate change. Let’s be part of the solution!’

A ‘Green Room’ is dedicated to learning about sustainable development, and to enhancing students’ investigative and critical thinking skills. For example, year 7s now embark on a quest to ‘Design a sustainable home’ in science, through testing the energy consumption of different appliances, measuring temperatures in different locations and investigating the most effective forms of insulation.

‘The new curriculum has helped us get away from just learning facts and get back to investigative, evidence-based learning. Hands-on investigations and problem solving give the younger pupils a real interest in science. When we investigate energy sources we get out the solar testing kits and mobile wind turbines, and the students discover for themselves how to get the best out of the technology’, says head of science Paul Nicholson.

Learning within subjects is strongly linked to curriculum-enrichment days. Organised by Tom and a 100-strong student Green Committee, the days give students the freedom to debate issues such as global warming and trade, visit places of interest such as landfill sites or farms, participate in workshops such as one on sustainable sculptures, and to view each others’ work.

‘In textiles we’ve been involved in a project called ‘Style will save us!’ We worked towards putting on an Eco fashion show for our next sustainable development day. We thought about how to turn the waste that is dumped on the earth into something beautiful and the challenges involved in designing ethically, explains Ryan, year 10, adding ‘I found fabric and netting in a dump to make a dress – someone even made a skirt out of crisp packets!’

Students follow up what they have learned on these days in subject areas and through a range of student-led action groups. Year 7 recently took part in a ‘Journey to a better future’ day, where older students helped shape their learning objectives and experiences. They tutored on the day, helping the younger pupils investigate their own carbon footprints. As a result year 7 are busy creating a series of stunning wall panels in their art lessons, which will be displayed outside the science block. Each panel displays a simple message about saving energy and aims to make the biggest impact on the greatest number of people.

Under the guidance of Ben, the year 10 founder of the school’s Climate Action Group, 35 year 7s have now formed the Energy Police. Ben explains, ‘I think that solving the problem of climate change is partly about raising awareness. If people understand the problems and the science then they might change their behaviour. We devised a No Energy Day and gave presentations to staff and pupils about possible solutions to climate change. The Energy Police made posters about saving energy and put them up around the school. On the day itself we wanted to use as little energy as possible, so we even confiscated the teachers’ kettles!’

The Energy Police have followed up this initiative through daily monitoring of energy use at lunchtime in every

Hands-on investigations
CAS E STU D Y 9

Crispin’s pupils work with Kenyan partner school to build best practice and learn how to live sustainably.

Links with Masana School in 1997
Crispin School continued

classroom. Each term Ben enters the data collected into a spreadsheet he has created and comes up with a league table of best and worst practice.

For the past 11 years a strong partnership with Masana School in Kenya has been organised around the theme of ‘Living sustainable lives’. All students benefit from this exchange. For example, year 9 undertake a problem-solving task in PSHE related to real issues facing Masana villages such as the spread of malaria. To help with their research they attend workshops on conservation, water use or recycling, which are visited by Kenyan teachers. This unit of work contributes to the students ASDAN International Award.

Some students have created the ‘Kenya Crew’, which involves peer tutoring in the local primary schools and Kenyan partner primary schools on topics such as solar energy, solar ovens and carbon footprinting.

How well is the school achieving its aims?
A striking mural painted by year 8 pupils on the side of a recycling shed reads ‘Live the change you want to see’. Across the whole of Crispin School there is visible evidence of students’ commitment to a sustainable future. There are ‘seats of significance’ made from old railway sleepers, bird boxes and log piles to attract wildlife, a working earth oven created with a local environmental campaigner, a beautiful mural encouraging us to reduce carbon emissions and the new ‘Masana Building’, which includes many sustainable features partly designed by the students.

‘I’ve learnt that living as a community is the most important thing’, says year 11 student Lily. ‘The students from Masana School in Kenya have taught us a lot about sustainable living. As a community they have decided to ban plastic from their entire school. I’ve joined the Kenya Crew and been involved in peer tutoring in primary schools on issues like food miles and recycling’.

Over 10 per cent of the school population is involved in the active Green Committee. Over the years they have changed the way both the school and the local community behaves. Students organise the recycling of mobile phones, paper and Christmas cards. Local residents are leafleted and pupils collect from them, some spend their breaks managing the collection and reuse of waste materials.

They have also campaigned to the district council to improve cycle routes to school.

‘Our work on sustainability has been crucial in changing the attitudes of pupils, staff and members of our wider community to greater awareness of environmental issues. Our pupils are now much more involved in local decision making and, as a result, are better equipped to make decisions about their environment and future. It has encouraged us to collaborate more closely with schools locally and globally, sharing good practice,’ says Frances Thomson, deputy headteacher.

Pupils’ knowledge of sustainable development is now outstanding. Crispin has praised the ‘superb education for sustainable development’, commenting, ‘Students leave with an excellent understanding of the importance of this issue both locally and nationally’. Recent curriculum changes have also helped improve pupils’ engagement with subjects such as science.

‘We are seeing our pupils really enjoying science – particularly some of the boys who were previously uninterested. They are finding the answers to big questions, like the causes of climate change, and this is sparking their imagination and really engaging them. When pupils are engaged, they learn better and results improve’, says Tom.

What does the school plan to do next?
An energy debate is planned by the Climate Change Action Group, involving four other secondary schools, parents and carers, and Kenyan visitors, as Ben explains, ‘The idea is to create a team which connects people from different communities. We want to work together to find alternatives to fossil fuels.’ Sustainable development has been the driving force behind certain curriculum developments at Crispin School and will continue to be so in the future. In 2009 staff are introducing ‘Land Based Studies’.

Involving students more in their learning and in defining what is good teaching is another step forward. For example, students will be able to debate what they learn and how they learn it in workshops on the future of teaching and learning at Crispin School.

The Crispin Journey – 21 years of learning to live sustainably: Key milestones

1987
Creation of environmental area and pond, and art team start ‘Learning through landscapes’ project

1990
Crispin wins WWF ‘Green Flag’

1993
New headteacher, Paul James joins the school

1994
Crispin begins working with WWF - seed funding to help develop a Green Committee, which becomes influential in changing school practice - recycling waste paper and saving energy, for example.

1995
‘I started here 18 years ago and was on the first staff Green Committee. Staff from different subject areas used to meet and discuss what we wanted to achieve. As far as I remember it was to counter the throw-away culture of the time by using what some people might call rubbish as potential artwork. The school ethos and policies grew out from our own ideas and from the students.’
Annie Martin, art teacher

1996
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Looking beyond their doorstep

St Martin at Shouldham Church of England Voluntary Aided Primary School

What did the school want to achieve?
In September 2000 a small primary school opened in the village of Shouldham, Norfolk. With an initial mix of pupils and staff from a number of schools, new headteacher Marika Mears sought to involve the whole community in developing a positive learning environment. ‘The school opened as the result of the closure of two local schools. Children from 13 primary schools formed the first intake. We felt that one of the ways to bring pupils, staff and the local community together would be to develop the school’s immediate environment. Class groups and parents and carers spent sessions digging and planting – getting to know each other through working together’, Marika said.

The long-term vision was to develop a learner-centred curriculum, using the school grounds to enhance and expand learning and teaching opportunities, and to raise standards. At the time, this was at odds with prescriptive national numeracy and literacy strategies.

‘Since the school opened in 2000 we have aimed to develop our children’s role as stewards of the local and global environment, and to embed understanding of sustainable development across the curriculum. We wanted to make learning real and relevant to the children by actively involving them in creating a sustainable learning environment. Pupil participation has always been key’, says Marika.

How did the school organise learning to meet its aims?
The starting point was to address gaps in learners’ knowledge. ‘Our community planting activities revealed to us just how little the children knew about their local environment. They had little idea of what grew in the fields around them and their perceptions of the world beyond their doorsteps were extremely limited,’ explains years 1/2 teacher Cherry Archer.

Outdoor learning was planned across all subjects, with pupils encouraged to get their hands dirty. The emphasis was on developing skills such as cooperation and team working, as well as pupils’ understanding of topics like habitats in science, or food and farming in geography. External partners such as Norfolk Schools Waste Action Club and Eco Schools helped integrate learning about a range of topics – from biodiversity to energy and waste – across the curriculum, while initiatives such as the National Economic Foundation’s ‘Green Energy Machine’ – a demonstration vehicle showing examples of renewable energy – provided exciting examples of renewable energy technology.

Pupils and staff began to link learning during lessons to the way in which they used the resources around them. ‘We’re learning about renewable energy in science and at the EcoTech Centre so why can’t we have it in our school?’ was a typical question from pupils. The school was oversubscribed at this time and had plans to build a new classroom and nursery. Pupils took part in consultation meetings about how the new buildings could be made sustainable. Architects were surprised to find there were many places within the school grounds where they could not build and that, having used model wind turbines in science, pupils were fully aware of the potential for using renewable energy in their school. ‘You can’t build there – that’s my tree you’ll be destroying! This is the best place to put the wind turbine and make sure that the solar panels face south to catch the most sun,’ advised Lewis, now year 5.

Connecting pupils’ local actions to wider world issues was the next step. With the support of ActionAid, pupils investigated how children in countries such as India are adapting to climate change. Years 5 and 6 followed the methodology ‘learn, investigate, act’ to explore the causes and impacts of climate change, investigate connections between global warming and energy use, and consider the best action to take to help slow climate change. As a result pupils set up their own Energy Saving Club, which monitors classroom energy use at lunchtimes. A green balloon placed outside your door shows how well your class has done, whereas a red balloon is a warning that heat is escaping or electricity has been left on.

How well is the school achieving its aims?
Staff have identified three main areas of achievement: an improvement in standards in all subjects has been observed; the development of an inclusive ethos based on the stewardship approach is now apparent; and a successful school and community partnership with learners participating as active global citizens has developed.

The school’s curriculum and stewardship approach has been highly praised by Ofsted in its April 2008 Inspection Report. ‘Pupils in all year groups develop exceptional awareness of their responsibility to help sustain the environment now and in the future. The clear emphasis given to ecological sustainability is greatly appreciated by older pupils and has an excellent impact on pupils’ personal development and their strong sense of responsibility to others’. Last year 100 per cent of pupils gained level 4 and above in the core subjects in their key stage 2 national curriculum tests, with an exceptionally high percentage achieving level 5. Staff feel strongly that learners’ involvement in sustainable development and their growing global awareness has motivated them to learn and helped raise standards.

Year 3 and 4 teacher Lynda Nash explains, ‘We have become aware of the benefits, for individual pupils and class groups, of working in the outdoor environment. Skills are developed in cooperating or turn-taking, and staff
2000

‘The schoolgrounds consisted of a sea of bright green, sprawling grass. There was no landscape plan – the plan was active participation. Families brought plants and spent sessions digging and planting, discussing size, shape, season, and textural effects of planting. For many, this was the first time they had really engaged with their local environment.’

Marka Mears, headteacher

Groving together

The school opens as the result of closure of two local schools. Villagers create the garden and grounds, plant a sapling for each child and learning about sustainability takes root.

‘These environmental activities provided the stimulus and first-hand experiences for core curriculum reading and writing. This approach brought joy and purpose to learning even though, at the time, there were no pages for these in the national strategies. As a Leading literacy teacher I could see the immediate improvement in standards due to the positive approach of pupils to writing.’

Marianne Taylor, year 5 and 6 teacher

2001

Addressing gaps in knowledge

Surprised at how little pupils knew about their local environment, staff plan regular outdoor education sessions. They are concerned about straying too far from the national literacy and numeracy strategies, but are encouraged by improvements in pupils’ motivation and standards.

‘This will lead to a greater knowledge of the history of the planet, a better understanding of the need to value the environment, and a deeper awareness of what we need to conserve and sustain,’ explains Marika, adding, ‘The outcomes of this process will be fed into the review of our own school improvement plan’.

Groving together

2002 –2003

Learning through doing

The Eco-Schools framework is used to create cross-curriculum topics such as biodiversity, waste and water. Pupil participation is key to successful learning, with activities like composting or recycling led by learners. A positive Ofsted report allows this creative, learner-centred curriculum to flourish.

New sustainable buildings

Children, staff and governors persuade architects to use geothermal heating, solar water-heating and rainwater harvesting in their new building. Their dreams for a wind turbine do not receive support from the local parish council.

St Martin at Shouldham Church of England CEVA Primary School timeline

Continued

2004

From local to global

Leaders investigate how local actions can have a global impact. They support the building of sustainable schools in India, and decide to minimise their own water and energy use to help slow climate change.

Sustainability champions

The Eco-Council has regular meetings to discuss environmental issues, implement plans and to provide feedback to classes. For example, they decide not to install chilled water dispensers, as they would need electricity to run them. Pupils share ideas about sustainable living with the parish, district and county council.

2005

National and local endorsements

The school wins a Norfolk Schools Sustainability Award, receives praise from Ofsted for the positive impact of learning about sustainability on pupils, and is a centre of excellence for Forest Schools, an innovative educational approach to outdoor play and learning that encourages individuals through positive outdoor experiences.

‘Young people at St Martin at Shouldham have a sophisticated understanding of sustainability and are actively involved in decision making – bringing informed judgements to the process and really making a difference.’ Sue Falch-Lovesey, head environmental and outdoor learning, Children’s Services, Norfolk County Council

St Martin’s summary of the school’s curriculum journey as a river

2006+

2008

Leadership to promote leadership of sustainability with other local schools.

Learners are keen to expand the work they have begun as sustainability ambassadors. They plan to visit other primary schools and their linked secondary school, as well as making contact with members of parish and county councils to explain their work on ‘reducing, reusing and recycling’. Marika is busy working with the National College for School Leadership to promote leadership of sustainability with other local schools.

The school is seeking funding to develop interactive learning facilities – called ‘Walk Through Time’ and ‘Ecolab’ – for use by the 17 other schools in their local cluster and communities. ‘Walk Through Time’ will be a living outdoor museum, demonstrating some of the changes the earth has survived throughout history by displaying features from different geographical ages, such as fossils from the Cretaceous period.

At the end of the walk, pupils will see the very short amount of time that humans have lived on the earth, and then move into the indoor Ecolab facility, which will demonstrate that it is within human kind’s grasp to ensure the continued survival of the planet, through, for example, the use of renewable technologies.

Pupilssort organic waste
Where to go for additional support

This guide has been developed in partnership with organisations involved in promoting sustainable development in schools. Case study schools were nominated by these organisations to show the difference sustainable development can make to learners.

The following organisations are among many that can offer additional support and guidance as you develop the dimension in your own curriculum. Use the practical activities in this guide to help you get started, and the ideas and expertise of these organisations to help you open up possibilities and shape your compelling learning experiences.

QCA
QCA is committed to building a world-class education and training framework. We develop and modernise the curriculum, assessments, examinations and qualifications. QCA aims to develop a modern, world-class curriculum that will inspire and challenge all learners and prepare them for the future. To achieve this we work in partnership with many education organisations, including those represented in this publication. Global dimension and sustainable development is an important cross-curriculum dimension. To find out more about dimensions and their role in the curriculum, visit www.qca.org.uk/curriculum.

Sustainable schools
A dedicated area of TeacherNet supports schools’ work on sustainable development. A range of informative resources are available from this website, designed for governors, bursars, pupils, teachers and school leaders, as well as those supporting schools such as local authorities and NGOs. The resources include a planning tool to help schools work out for themselves how to apply sustainable development, and a self-evaluation tool (called ‘s3’) to help them assess their progress towards the national expectations. There is also a guide to how well-known award schemes such as Healthy Schools and Eco-Schools can be used to meet the expectations. To access the website visit www.teachernet.gov.uk/sustainable schools.

Sustainable Development Commission
The Sustainable Development Commission (SDC) is the government’s independent adviser on sustainable development. Education is an important focus for the SDC and we are working closely with DCSF and its partners to embed sustainable development thinking in all aspects of children and young people policy. Areas of interest include school leadership, curriculum, inspection and carbon emissions, as well as the wider well-being of all children. For more information visit www.sd-commission.org.uk.

DEA
DEA is an education charity that promotes global learning. This means that education should put learning in a global context, fostering:

- critical and creative thinking
- self-awareness and open-mindedness towards difference
- understanding of global issues and power relationships
- optimism and action for a better world.

DEA’s Global Dimension Website for teachers (www.globaldimension.org.uk) includes resources on areas such as climate change, poverty and water. There are resources for all ages and subjects, many free.

For local support see www.globaldimension.org.uk/localsupport
www.dea.org.uk

Sustainability and Environmental Education (SEEd)
SEEd’s primary objective is to enable more of the education sector to engage in education for sustainable development. SEEd facilitates stakeholder engagement, promotes shared learning and good practice, builds capacity and develops cross-sector partnerships and understanding. SEEd offers:

- workshops and training – both online and face-to-face
- an interactive website providing a one-stop shop for resources, funding and organisations that can support schools
- networks for particular interests, current news and online discussions with educators and experts
- sustainability resources and initiatives reviewed by teachers for teachers
- workshops to highlight the state of environmental education and education for sustainable development.

www.se-ed.org.uk
About this publication

Who’s it for?
School leaders and teachers of all subjects in all primary and secondary schools in England

What’s it about?
How to develop the sustainable development dimension of the curriculum in your school

What’s in it?
• A definition of sustainable development and why it’s important
• Practical activities for staff, governors and young people
• Case studies from schools, showing sustainable development in action

Related materials
Use this publication in conjunction with DCSF’s Sustainable Schools strategy, which can be found at www.teachernet.gov.uk/sustainableschools.

QCA wishes to make its publications widely accessible. Please contact us if you have specific accessibility requirements.