



Evidence of Impact of Sustainable Schools



Overview

This publication sets out the educational and social benefits to young people of learning in a sustainable school. It is written for leadership teams in primary and secondary schools and other educational settings across England. Under five themes, it sets out 15 top tips based on the impact of sustainable schools and education for sustainable development on school improvement and young people's well-being as defined by *Every Child Matters* outcomes. We hope these will be useful in the context of schools striving to enable learners to become successful, confident individuals, and responsible, caring citizens. The themes are:

1. Improving schools: enhancing young people's learning and well-being.
2. Bringing young people's learning experiences together.
3. Developing young people's participation.
4. Contributing to school, community and family life.
5. Modelling sustainability practices, thinking and planning.

Each theme sets out the tips together with a short summary of the evidence. The sources of evidence are listed at the end of the booklet.

Evidence of the impact of sustainable schools is supported by growing research, policy, and practitioner literature, in the main from the UK but also internationally. Multiple sources of evidence now show that being a sustainable school raises standards and enhances well-being. This is because sustainable schools engage young people in their learning therefore improving motivation and behaviour; they also promote healthy school environments and lifestyles. In addition, the evidence shows that sustainable schools advance community cohesion by making valuable connections between the school and its parents, carers and the wider community.

Improving schools: enhancing young people's learning and well-being



1.1 Make sustainability a strong focus of your school development plan

This improves teaching and learning by providing a meaningful, real-world focus which young people recognise as significant for their lives, thus enhancing school relevance, and supporting engagement and enjoyment. Young people gain understanding and skills that enable the development of capabilities for living and working sustainably, now and in the future.

Ofsted (2009) visited 14 schools over a three year period and found that their focus on sustainability had a wide range of positive consequences. Sustainability captured the interest of young people because they could see its relevance to their own lives and futures. There was evidence of an increase in knowledge and understanding of the importance of leading more sustainable lives, and there were examples of more positive attitudes to learning, better behaviour and attendance, and improved standards and achievement. Importantly, the findings show that sustainability was a significant factor in improving teaching and learning in these schools. Such benefits are also shown in other research in England, for example, Porritt et al., (2009), and also in USA research, for example, Duffin et al. (2004), Falco (2004), Bartosh et al. (2006), NEETF (2000), SEER (2005), Ernst and Monroe (2004), Athman and Monroe (2004).

"Some years ago I would not have highlighted [Education for Sustainable Development] to OFSTED for fear they would consider it a distraction from core business. Now ... I am confident that our work in this area has made a direct difference to pupils' achievement, behaviour and health and I'm therefore proud to discuss it with inspectors. ... Without doubt sustainable development has helped our children to develop a greater sense of care towards each other, the natural environment and the wider community ... preparing [them] for the future."

Head teacher, Birdham CE primary school, W Sussex; quoted in Blakeley-Glover et al. (2009)

1.2 Use sustainability to develop an inclusive school ethos

This provides a positive context for supporting teachers' work, and young people's learning and well-being, and for developing both the care agenda and community cohesion.

In a study of 56 schools for the National College, Birney and Reed (2009) found that schools which focus on sustainability bring an ethic of care and a common vision for building a more just and inclusive school and society. This results in positive benefits for young people's learning and well-being, and also for the staff and wider community. This research, that of Porritt et al. (2009), and the DCSF (2008) White Paper, 21st Century Schools, illustrate the contribution that sustainable schools can make to building stronger relationships and understanding across communities both locally and further afield.

1.3 Improve the quality of school buildings and surroundings

This helps you to focus on the environmental dimension to children's well-being and fully address the Every Child Matters agenda. Improving the quality of the school environment enhances young people's physical and mental health and safety, and their overall development, learning, enjoyment and behaviour.

Research by the Sustainable Development Commission (2009) and by Thomas and Thomson (2004) shows that environmental quality and young people's well-being are inextricably linked, and that young people's everyday experience of living and learning in the environment, and the health of the environment itself, are critical to overall well-being. Research for the NASUWT (Broadhurst et al., 2008) shows that the quality of the physical environment surrounding the school affects behaviour within schools, and also attendance, academic achievement and parental support. Thomas and Thomson (2004) found that the worse a local environment looks, the less children are able to play freely, and develop the habits and commitments that will enable them to address environmental problems in the future. This research base also shows that schools have an important contribution to make in improving the quality of young people's environments. See also

the *Good Childhood Enquiry* (Layard and Dunn, 2009) which found strong evidence that young people do want a better school environment.

But be wary of prioritising social change or environmental improvement over young people's learning.

Research funded by the Specialist Schools and Academies Trust (Scott, 2008), argued that, whilst it was hard to believe that schools would utterly neglect student learning in favour of enhancing sustainability, it is certainly possible that lessons or teaching materials can have outcomes that are unbalanced in this way, especially where the purpose is to push a particular argument or course of action.

2 Bringing young people's learning experiences together



2.1 Make connections between ideas

Create space in the timetable to look at sustainability in cross-subject ways, integrating these with extra curricular and out-of-classroom activities, and how the school is managed. This enables young people to appreciate connections between issues and develop their understanding.

"Sustainable development will not just be a subject in the classroom: it will be in its bricks and mortar and the way the school uses, and even generates, its own power. Our students won't just be told about sustainable development, they will see and work within it: a living, learning place in which to explore what a sustainable lifestyle means."

Prime Minister Tony Blair (2004) quoted on Teachernet

In complementary studies of 15 UK primary and secondary schools over three years, Ofsted (2009) and Gayford (2009) found that, in the most successful schools, sustainability was an integral element of a well-planned curriculum alongside special events and activities, and was experienced both within and outside the classroom. In these schools, Ofsted found instances of enhanced attitudes to learning, better behaviour and attendance, and improved standards. See also, Porritt et al., (2009); Percy-Smith (2009); Posch (1999).

2.2 See the school and community as learning resources

Involve young people in monitoring and improving the school and community's use of energy and resources. This enhances their learning about living more sustainably and efficiently, and about the connections between environmental quality and well-being.

In the Ofsted (2009) and Gayford (2009) study schools, students and staff took responsibility for improving the sustainability of the school, for example, through monitoring and reducing electricity and water usage, auditing and planning sustainable transport to and from school, making improvements to the school's grounds and habitats, and growing food for the school kitchen. In these schools, the involvement of all students and staff resulted in the embedding of sustainability within the culture of the school. For example, the young people in Gayford's study were able to explain their learning about sustainability in terms of healthy lifestyle, saving energy, and recycling, and were able to relate this to their personal actions and sense of responsibility. See also, Ofsted (2008).

2.3 Value the natural and cultural worlds

Give young people active experience of the wider world, integrating this into school based learning. This is motivating and contributes directly to their health and well-being, and to their strong sense of place in relation to the local community and environment.

There is a large body of research that illustrates the importance of environmental experience and contact with nature in childhood to promote children's physical and mental health and well-being. See, for example, SDC (2009); Frumkin (2001); Faber Taylor and Kuo (2006); Louv (2004); Chawla and Flanders Cushing (2007a). Research for the Department for Children, Schools and Families into school based actions to promote community cohesion (Dyson and Gallanaugh, 2008) found evidence to show that a variety of school-community activity resulted in improvements to young people's knowledge of and attitudes towards diversity, as well as to their understandings of their own cultures and backgrounds. In the USA, Duffin et al. (2004) found

that educational programmes relating to the local community and environment improved young people's attachment to place, civic engagement, and environmental stewardship.

But be wary of thinking that much of this will be achieved without significant teacher professional development.

Research across 56 schools for the National College (Porritt et al., 2009), found that a commitment to staff development supports a sustainable schools approach; they also found benefits in involving as many staff and teams as possible in sustainable school leadership. Similarly, an Ofsted study (2009) recommends appropriate staff training and support so that all teachers understand how to make a school sustainable.



3 Developing young people's participation



3.1 Be positive, and give young people hope for the future

Participating in constructive, meaningful activities helps young people see the point of getting involved, aids their understanding of what they can do themselves and when collaborative social action is needed.

Hicks and Holden's (2007) research into young people's views of the future, found strong evidence that, regardless of age, the environment is a consistent theme in their concerns about the future and that providing collaborative, positive and supportive learning environments is vital in helping students to raise and deal with their concerns. This research also shows that enabling young people to develop a sense of agency through involvement in collaborative and constructive action helps young people engage in their learning and feel more hopeful; this is similarly demonstrated in the Cambridge Primary Review (Alexander, 2009), and in research by Chawla and Flanders Cushing (2007b).

3.2 Listen to youth voice and take account of young people's environmental and community perspectives

If you provide opportunities for young people to discuss and respond to significant issues that are important to them, this will help the acquisition of confidence and skills (both social and analytical) to support active citizenship.

Research for the Children's Society (Layard and Dunn, 2009), for the ESRC (Barratt Hacking et al., 2006), and by Thomas and Thomson (2004)

"We want to have a say in how our world is run, to make people aware of... what is going on in our world and how they can help us to change it... we want children to grow up respecting their community and each other."

Year 8 student, Kingsfield School, South Gloucestershire; research data in Barratt Hacking et al. (2006)

found strong evidence that young people care about the quality of their local communities and environments, e.g. in relation to habitats, safe places to play and socialise, crime, vandalism and traffic dangers. This research base also shows that young people want to have a voice and contribute to local improvement yet they perceive few opportunities to do so. Research in two English urban areas found clear evidence that schools can provide a valuable forum for young people to voice their local aspirations and contribute to sustainable community development. Through such processes, the young people developed confidence and self esteem and a range of leadership, participation and decision making skills (Barratt and Barratt Hacking (2008) and Barratt Hacking and Barratt (2009).

3.3 Involve all young people in thinking about and responding to issues

When they are taken seriously, structures such as school councils and eco groups, and other curricular and extra curricular activities, provide all young people with practice in genuine participation and leadership, whilst making a positive contribution to school, community, and their own lives.

Research for the National College (Birney and Reed, 2009) and the ESRC (Percy-Smith, 2009) provides strong evidence that involving young people in discussions, decision-making and action to do with how the school and community responds to sustainability, provides a firm foundation for their future social participation and

leadership, and results in improved behaviour. Ofsted (2010) found benefits arising from young people's involvement in student committees, school parliaments, school councils, and green teams, reporting high levels of achievement and engagement from students beyond those most involved. See also Keating et al. (2009). Similarly, Gayford (2009) reports that young people of all ages generally considered the school council to be a good thing as it provided opportunities for involvement in decision-making within the school, particularly where students control meetings, disseminate outcomes, and take action. In USA research focusing on practitioners' experience of working with young people on environmental action, Schusler et al. (2009), found evidence that environmental action builds young people's capabilities for further participation and contributes to both personal and community transformation. See also, Harris (2009).

But be wary of painting too gloomy a picture for young people; the feelings of hopelessness that this can engender will not help people play an active, positive role.

Hicks and Holden (2007) found that young people become increasingly worried and/or disinterested when schools place too much emphasis on problems. Research for the Cambridge Primary Review (Alexander, 2009: 198), noted that "*pessimism turned to hope when [people] felt that they had the power to act. ... the children who were most confident that climate change need not overwhelm them were those whose schools had decided to replace unfocused fear by factual information and practical strategies for energy reduction and sustainability*".

Contributing to school, community and family life



"At the beginning I thought it was all about recycling and saving energy. Now I can understand how the parts fit together and have an impact upon society locally, nationally and globally. The best part is that the pupils and I are learning together, we've made mistakes and sometimes we turn into cul-de-sacs, but because of that we have an even better holistic understanding."

School leader, quoted in Birney & Reed (2009)

4.1 Take young people's aspirations seriously

When planning programmes, taking their community knowledge and their desire for a better local quality of life into account enables young people to see the value of school.

In research for the EU involving primary schools in three European countries, Shallcross et al. (2007) found evidence that when environment-related work involves issues of direct interest to young people, such as the school physical environment, it helps them engage in their learning. Research

for the Economic and Social Science Research Council (Barratt Hacking et al., 2006; Barratt Hacking and Barratt, 2009) in secondary schools in two contrasting urban environments in England found that when schools play a role in community development, and when they incorporate students' everyday experience and local community concerns within the curriculum, young people's engagement, motivation and learning are enhanced. See also, Spencer and Woolley (2000); Thomas and Thompson (2004); SDC (2009).

4.2 Let young people work with community groups in and out of school

Working on real world activities and taking action to resolve issues, makes educational experience meaningful and motivating, and enhances learning. This supports strong home-school and community-school relationships, and help young people develop social and cultural identity, a sense of place, and pride in school and community.

In a report on Citizenship in English Schools, 2006 to 2009, Ofsted (2010) cite multiple examples where young people's participation in community related issues resulted in learning benefits including understanding local issues, the democratic processes needed to resolve them, and developing team and leadership skills. In large-scale research into citizenship education in England, Keating et al. (2009) found similar benefits including how community based activities extended and reinforced learning in the classroom. Ofsted also found evidence of genuine benefits for the community, for example, local environment regeneration and improved community facilities. International research shows that experiential learning with community organisations, for example on conservation projects, can impact positively on young people's engagement and learning, including improvements in environmental behaviour, community awareness, and relationships between community members, young people and schools. See, for example, Schneller (2008); Bogner (1999); Powers (2004).

4.3 Involve young people in outdoor learning

Taking part in activities, e.g. gardening, growing food, and conservation, in and around the school enables young people to see the interconnections between healthy eating and lifestyles, environmental quality, and well-being. It can also prepare young people for their future economic contribution including work in the green economy.

In research for Farming and Countryside Education, Malone (2008) found strong evidence from across the world that when young people engage in explorative play and experiential learning activities in school grounds, local

community settings and further afield, their lives can be changed positively, with improvements in attention and achievement, physical and mental health, social interaction and personal concept/esteem. Malone also found that outdoor learning enhanced young people's environmental responsibility and their resilience to changes in their environment. International research by Bell and Dymont (2008) and Blair (2009) provides strong evidence to show that activities in school grounds including gardening, habitat restoration, tree planting, etc. contribute to young people's learning, environmental awareness, social behaviour, and relationships. This research further shows that, if grounds are designed and used with a view to improving the quality of children's play and learning experiences, benefits accrue for young people's physical, mental, social and spiritual well-being therefore contributing to healthy schools initiatives.

But be wary of using young people to try to change what is seen as bad practice, as this can lead to them being caught between conflicting school and parental/community values.

Gayford (2009) found the greatest gains where there was close agreement about learning for sustainability between the school and young people's families. There is conflicting evidence, however, about whether and how the transfer of learning on sustainability (including that related to lifestyles and behaviours) between school and home takes place. See, for example, Duvall and Zint (2007); Uzzell (1994; 1999). The research evidence suggests strategies to reduce the potential for school-family tensions where there is disagreement, for example, well-developed partnerships between parents, schools and communities (Uzzell, 1999).

Modelling sustainability practices, thinking and planning



5.1 Let young people see that the school takes sustainability seriously

If you do this in relation to what you teach, how you operate, and how you work with others this will help young people engage with sustainability themselves, both as an idea and in practical ways.

In Gayford's (2009) research, students wanted their school to demonstrate to them that sustainability is something that it values, and Birney and Reed (2009) found that if sustainability is at the heart of everything a school does, from its ethos to its teaching and its day-to-day planning, young people are able to develop the knowledge, skills and understandings needed to contribute to achieving a sustainable society. In North America, Higgs and McMillan's in-depth study (2006) of four diverse schools, successfully developing sustainability education, showed that addressing sustainability through individual staff and teacher role models, school facilities and operations, participatory school governance, and school culture, promoted both learning about sustainability, and the adoption of sustainable behaviours. See also, Chawla and Flanders Cushing (2007b).

"We have a duty as educators and adults to educate young people about sustainable living and the best way to do this is by the demonstration of good practice."

**Extended Schools Project Coordinator,
Weobley High School, quoted in DFES (2006)**

5.2 Involve young people in developing and modelling sustainable school practices

If young people are engaged with sustainable school management e.g. travel plans, community gardening or energy efficiency, they will learn about sustainability practices, and increase their familiarity with the wide range of career opportunities in this field.

Percy-Smith's (2009) research in six schools with an interest in sustainability demonstrates that practical and experiential learning, such as active engagement in the school garden, enables young people to act on their learning in respect of sustainable lifestyles. The study shows that developing sustainability as a cultural practice rather than simply a set of skills and knowledge, and enabling young people to be 'actors of change' as well as learners, has greatest impact on learning. Gayford (2009) found that where students were involved in monitoring, recording and reporting the effectiveness of the measures taken to improve sustainability within the school, or in planning changes in the school or local community, there were valuable educational outcomes, social networking, and increased student motivation. See also Uzzell et al. (1994); Uzzell (1999); Ofsted (2010).

5.3 Be honest and encourage an open, questioning approach

Giving young people different perspectives on issues and information about uncertainties helps them appreciate the complexity of sustainability, the role that values play in making decisions about what to do, and the importance of learning.

A recent Ofsted (2010) report on Citizenship described work carried out by Year 5 students who explored how their school recycles, reduces waste and reuses materials as 'outstanding'. The students discussed both positive and negative consequences of particular approaches to sustainability, grappled with complex questions such as whether recycling necessarily reduced consumption and the impact that re-using may have on the manufacturing economy. Research reported in Rickinson et al. (2009), brings learners and their experiences to the fore, and illustrates how skilled teaching can build on young people's own views and interests in order to enhance understanding, and Percy-Smith (2009) reported that by using action based forms of learning young people were able to examine issues more effectively, understand the complexities of their real world contexts, and consequently develop effective intervention strategies.

But be wary of preaching. Young people say this is counter-productive, so be honest and open-minded when exploring issues.

Gayford (2009) found clear evidence from young people that telling them what to think and do about environmental issues is not effective. This and other studies demonstrate that using active, participatory and collaborative learning approaches helps young people to enjoy and achieve, and enables the transfer of learning to everyday life.



Acknowledgements

This report was written by Elisabeth Barratt Hacking, William Scott and Elsa Lee of the University of Bath's Centre for Research in Education and the Environment. We are grateful to all those individuals and organisations who suggested sources of information to us, and especially appreciative of the work of our user group who worked with us, developing the ideas.

References

- Alexander R (ed) (2009) *Children, their World, their Education*. London: Routledge
- Athman J & Monroe M (2004) The Effects of Environment-based Education on Students' Achievement Motivation. *Journal of Interpretation Research*, 9(1) 9-25
- Barratt Hacking E & Barratt R (2009) Children Researching their Urban Environment: developing a methodology. *Education 3-13*, 37(4) 371-384
- Barratt Hacking E Scott WAH Scott, Barratt R, Talbot W, Nichols D & Davies K (2006) Education for Sustainability: schools and their communities. In J Chi-Kin Lee & M Williams (eds), *Environmental and Geographical Education for Sustainability: cultural contexts*. New York: Nova Science Publishers, 123-138
- Barratt R & Barratt Hacking E (2008) A Clash of Worlds: children talking about their community experience in relation to the school curriculum. In AD Reid, BB Jensen, J Nikel and V Simovska (eds) *Participation and Learning. Perspectives on Education and the Environment, Health and Sustainability*. Dordrecht: Springer, 285-298
- Bartosh O, Tudor M, Ferguson L & Taylor C (2006) Improving Test Scores Through Environmental Education: Is It Possible? *Applied Environmental Education & Communication*, 5(3) 161-169
- Bell AC & Dymont JE (2008) Grounds for Health: the intersection between green school grounds and health-promoting schools. *Environmental Education Research*, 14(1) 77-90
- Birney A & Reed J (2009) *Sustainability and Renewal: findings from the leading sustainable schools research project*. Nottingham: National College for Leadership of Schools and Children's Services
www.nationalcollege.org.uk/docinfo?id=33296&filename=sustainability-and-renewal-full-report.pdf
- Blair D (2009) The Child in the Garden: an evaluative review of the benefits of school gardening. *Journal of Environmental Education*, 40(2) 15-30
- Blakeley-Glover J, Reynolds J & Arnold M (2009) *Review of Public Service Regulations*. London: Sustainable Development Commission
- Bogner FX (1999) Empirical Evaluation of an Educational Conservation Programme Introduced in Swiss Secondary Schools. *International Journal of Science Education*, 29(11) 1169-1185
- Broadhurst K, Owens K, Keats G & Taylor E (2008) *One More Broken Window: the impact of the physical environment on schools*. Birmingham: NAS/ UWT
www.nasuwt.org.uk/TrainingEventsandPublications/NASUWTPublications/Publications/OneMoreBrokenWindow/NASUWT_004587
- Chawla L & Flanders Cushing (2007a) *Benefits of Nature for Children's Health, Fact Sheet Number 1*. Denver: Children, Youth and Environments Center for Research and Design, University of Colorado at Denver and Health Sciences Center
www.cudenver.edu/Academics/Colleges/Architecture-Planning/discover/centers/CYE/Publications/Documents/Benefitsofnature-FactSheet1-April2007.pdf
- Chawla L & Flanders Cushing D (2007b) Education for Strategic Environmental Behaviour. *Environmental Education Research*, 13(4) 437-452
- DCSF (2008) 21st Century Schools: a world-class education for every child. Nottingham: Department for Children, Schools and Families
<http://publications.dcsf.gov.uk/default.aspx?PageFunction=productdetails&PageMode=publications&ProductId=DCSF-01044-2008>
- DFES (2006) Sustainable Schools for Pupils, Communities and the Environment Government Response to the Consultation on the Sustainable Schools Strategy. London: Department for Education and Skills
<http://publications.teachernet.gov.uk/eOrderingDownload/Government%20Response%2004294-2006.pdf>
- Duffin M, Powers A, Tremblay G & PEER Associates (2004) *Report on Cross-Program Research and Other Program Evaluation Activities 2003-2004*. Place-based Education Evaluation Collaborative (PEEC)
www.peecworks.org/PEEC/PEEC_Reports/0019440A-007EA7AB.0/03-04%20PEEC%20Cross%20Program%20Eval%20web.pdf
- Duval J & Zint M (2007) A Review of Research on the Effectiveness of Environmental Education in Promoting Intergenerational Learning. *Journal of Environmental Education*, 38(4) 14-24
- Dyson A & Gallannaugh F (2008) *School-level Actions to Promote Community Cohesion: a scoping map*. Technical Report. London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London
<http://eppi.ioe.ac.uk/cms/LinkClick.aspx?fileticket=SAM%2fn%2bkGkTs%3d&tabid=2416&mid=4479&language=en-US>

- Ernst J (Athman) & Monroe M (2004) The Effects of Environment-based Education on Students' Critical Thinking Skills and Disposition Toward Critical Thinking. *Environmental Education Research*, 10(4) 507-522
- Faber Taylor A & Kuo FE (2006) Is Contact with Nature Important for Healthy Child Development? State of the evidence. In C Spencer and M Blades (eds) *Children and their Environments: learning, using and designing spaces*. Cambridge: Cambridge University Press, 124-140
- Falco E H (2004) *Environment-based Education: improving attitudes and academics for adolescents*. Evaluation Report. South Carolina: South Carolina Department of Education
- Frumkin H (2001) Beyond Toxicity: human health and the natural environment. *American Journal of Preventive Medicine*, 20(3) 234-240
- Gayford C (2009) *Learning for Sustainability: from the pupils' perspective*. Godalming, Surrey: World Wide Fund for Nature
http://assets.wwf.org.uk/downloads/wwf_report_final_web.pdf
- Harris F (ed) (2009) *Letting Students Lead: sustainable schools in action*. Devizes: Wiltshire Wildlife Trust
www.wiltshirewildlife.org/Schools/v3rK4RI4ae0G9eoD9D%2Bu7DA%3D%3D/images/2009/2/40ppbooklet.pdf
- Hicks D & Holden C (2007) Remembering the Future: what do children think?. *Environmental Education Research*, 13(4) 501-512
- Higgs AL & McMillan VM (2006) Teaching through Modeling: four schools' experiences in sustainability education. *Journal of Environmental Education*, 38(1) 39-53
- Keating A, Kerr D, Lopes J, Featherstone G & Benton T (2009) Embedding Citizenship Education in Secondary Schools in England (2002-08). *Citizenship Education Longitudinal Study Seventh Annual Report* (DCSF Research Report 172). London: DCSF
[www.nfer.ac.uk/nfer/publications/CEE05/CEE05_home.cfm?publicationID=354&title=Embedding%20citizenship%20education%20in%20secondary%20schools%20in%20England%20\(2002-08\):%20Citizenship%20Education%20Longitudinal%20Study%20seventh%20annual%20report](http://www.nfer.ac.uk/nfer/publications/CEE05/CEE05_home.cfm?publicationID=354&title=Embedding%20citizenship%20education%20in%20secondary%20schools%20in%20England%20(2002-08):%20Citizenship%20Education%20Longitudinal%20Study%20seventh%20annual%20report)
- Layard R & Dunn J (2009) *A Good Childhood: searching for values in a competitive age*. London: Penguin
- See also: *The Good Childhood: what you told us about learning*. (Evidence Summary 3).
www.childrenssociety.org.uk/resources/documents/good%20childhood/Learning%20evidence%20summary_2718_full.pdf
- Louv R (2005) *Last Child in the Woods: saving our children from nature-deficit disorder*. Chapel Hill: Algonquin Books
- Malone K (2008) *Every Experience Matters: an evidence based review of the role of learning outside the classroom on the development of the whole young person*. Stoneleigh: Farming and Countryside Education
- NEETF (2000) *Environment-based Education: creating high performance schools and students*. Washington DC: National Environmental Education Training Foundation
www.neefusa.org/pdf/NEETF8400.pdf
- OFSTED (2008) *Schools and Sustainability: a climate for change*. Manchester: Office for Standards in Education
www.ofsted.gov.uk/Ofsted-home/Publications-and-research/Browse-all-by/Documents-by-type/Thematic-reports/Schools-and-sustainability
- OFSTED (2009) *Education for Sustainable Development. Improving Schools – Improving Lives*. Manchester: Office for Standards in Education, Children's Services and Skills
www.ofsted.gov.uk/Ofsted-home/Publications-and-research/Browse-all-by/Documents-by-type/Thematic-reports/Education-for-sustainable-development-improving-schools-improving-lives
- OFSTED (2010) *Citizenship Established? Citizenship in Schools 2006/09*. Manchester: Office for Standards in Education, Children's Services and Skills
www.ofsted.gov.uk/Ofsted-home/Publications-and-research/Browse-all-by/Documents-by-type/Thematic-reports/Citizenship-established-Citizenship-in-schools-2006-09
- Percy-Smith B et al. (2009) *Exploring the Role of Schools in the Development of Sustainable Communities. Full Research Report ESRC End of Award Report, RES-182-25-0038*. Swindon: ESRC
www.esrcsocietytoday.ac.uk/ESRCInfoCentre/ViewOutputPage.aspx?data=%2fFrXHTI993pfeSohL4pLOmAEpQoxKycupdvva5APYtyOVZliRH81tn1Js6o1LNAGsahb7%2b2lj9Nc6cxro7JTinNnz2TGLbk6Oi4QMI%2faZJIHBtz82kqxUm8Hx8BqaKjMVfYsT7Xul0qNjYlhWc5ZlZ1kBiGh-

CWr6abzaaKxKOSkOf3i451oAp8tuTGjgGNf5p68pdLyQr-RADTKO36vb3aRhGelaWleY%2fXo0WYQD6AlsXKoEQ3u jivpBsXfR58lhmf%2bDCYX%2fPvVdMt56gHJtpo0ntxuU 7NPQ2pzHrwlArOW19y%2bUOINvA9iVdVU7OH4c8b pn6FgnH%2bC%2bVykqQ5xwR0HphA3vM4etuu%2bM ANUrXNylS7mixgg%3d%3d&xu=0&isAwardHolder=&is Profiled=&AwardHolderID=&Sector=

Porritt J, Hopkins D, Birney A & Reed J (2009) *Every Child's Future: leading the way*. Nottingham: National College for Leadership of Schools and Children's Services

www.nationalcollege.org.uk/index/docinfo.htm?id=33294&filename=every-childs-future-leading-the-way.pdf

Posch P (1999) The Ecologisation of Schools and its Implications for Educational Policy. *Cambridge Journal of Education*, 29(3) 341-348

Powers AL (2004) An Evaluation of Four Place-based Education Programmes. *Journal of Environmental Education*, 35(4) 17-32

Rickinson M, Lundholm C & Hopwood N (2009) *Environmental Learning: insights from research into the student experience*. London: Springer

Schneller AJ (2008) Environmental Service Learning: outcomes of innovative pedagogy in Baja California Sur, Mexico. *Environmental Education Research*, 14(3) 291-307

Schusler TM, Krasny ME, Peters SJ & Decker DJ (2009) Developing Citizens and Communities through Youth Environmental Action. *Environmental Education Research*, 15(1) 111-127

Scott WAH (2008) *Raising Standards: making sense of the sustainable school*. London: Specialist Schools and Academies Trust

www.sustainableschools-ne.org.uk/Documents/SSAT%20Raising_standardsV3%20Sus%20Schools.pdf

SDC (2009) *Every Child's Future Matters*, 3rd Edition. London: Sustainable Development Commission
www.sd-commission.org.uk/file_download.php?target=/publications/downloads/ECFM_report.pdf

SEER (2005) *California Student Assessment Project Phase 2: the effects of environment-based education on student achievement*. San Diego: State Education and Environment Roundtable
www.seer.org/pages/research/CSAPII2005.pdf

Shallcross T, Robinson J, Pace P & Tamoutseli D (2007) The Role of Students' Voices and their Influence on Adults in Creating more Sustainable Environments in Three Schools. *Improving Schools*, 10(1) 72-85

Spencer C & Woolley H (2000) Children and the City: a summary of recent environmental psychology research. *Child Care Health Development*, 26(3) 181-197

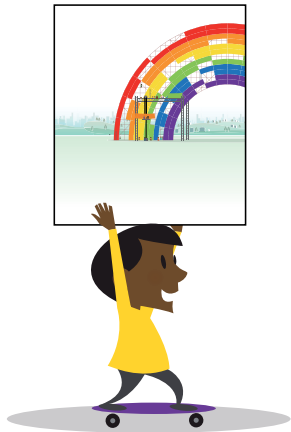
Teachernet (nd) www.teachernet.gov.uk/sustainable-schools/leadership/leadership_detail.cfm?id=2

Thomas G & Thomson G (2004) *A Child's Place: why environment matters to children*. London: Green Alliance/DEMOS

www.green-alliance.org.uk/uploadedFiles/Publications/A%20Childs%20Place%20Final%20Version.pdf

Uzzell D (1994) *Children as Catalysts of Environmental Change (Final report)*. London, England: European Commission Directorate General for Science Research and Development Joint Research Centre

Uzzell D (1999) Education for Environmental Action in the Community: new roles and relationships. *Cambridge Journal of Education*, 29, 397-413



You can download this publication or order copies online at: www.teachernet.gov.uk/publications
Search using the ref: DCSF-00344-2010

Copies of this publication can also be obtained from:
Department for Children, Schools
and Families Publications
PO Box 5050

Sherwood Park, Annesley
Nottingham NG15 0DJ
Tel 0845 60 222 60
Fax 0845 60 333 60

Textphone 0845 60 555 60

Please quote ref 00344-2010BKT-EN

ISBN: 978-1-84775-743-2

PPBHP/(4312)/0310

© Crown Copyright 2010

Published by the Department for Children,
Schools and Families

The text in this document (excluding the Royal Arms and other departmental or agency logos) may be reproduced free of charge in any format or medium providing it is reproduced accurately and not used in a misleading context.

The material must be acknowledged as Crown copyright and the title of the document specified.

Where we have identified any third party copyright material you will need to obtain permission from the copyright holders concerned.

For any other use of this material please contact the Office of Public Sector Information, Information Policy Team, Kew, Richmond, Surrey TW9 4DU or e-mail: licensing@opsi.gsi.gov.uk

This project has been printed on uncoated 9lives Offset paper. This is a true recycled content paper, NAPM approved and made of 100% post-consumer reclaimed material which may be recycled, composted or incinerated for energy recovery. The paper is totally chlorine free and the paper mill is certified to both the EMAS and ISO 14001 environmental management standards. A lithographic print process was employed using vegetable inks throughout.

The Department for Children, Schools and Families sources its paper through the Recycled Printing Papers (RPP) Framework established by Government to mainstream the use of recycled paper in printing, copying and publications.

This document has been produced to support the Sustainable Schools Strategy. For more information, go to www.teachernet.gov.uk/sustainableschools

100% recycled

This book is printed
on 100% recycled paper



When you have finished with
this book please recycle it