



The outdoor environment:

*How can our children learn to
care about their futures?*



Introduction

'For a new generation, nature is more abstraction than reality. Increasingly, nature is something to watch, to consume, to wear –to ignore.'

Richard Louv, Last Child in the Woods.

With these words the National Trust's report, *Natural Childhood*, starts.

2012 was the year that we were no longer able to avoid the subject of *Nature Deficit Disorder*. In the public consciousness for the first time, this report highlighted the effect that changing lifestyles have had on our nation's children - the effect that this 'starving' of natural environmental interaction is having on their health, wellbeing and learning ability.

This report, written by *The Learning Escape*, seeks to take the concept further and specifically address the long-term benefits for the environment of learning within natural, outdoor space.

It seeks to discuss the following and make recommendations for action in Schools and Early Years settings:

1. *The current situation* - What is Nature Deficit Disorder? What does it mean for our children, society and the environment?
2. *So, what's stopping us* – Common barriers to change.
3. *What do schools think about outdoor learning and environmental citizenship?* Results of a survey conducted by *The Learning Escape*.
4. *What can we do to ensure the World looks different in 30 years' time – Promoting Environmental Citizenship.* The role direct nature experiences have in changing environmental attitudes and behaviour and using the outdoor environment with the classroom, to help students to learn about sustainability and environmental issues

This report does not seek to replicate data released in the *Natural Childhood* report, but to build on it with a view to specifically answering the question of *'How can our children learn to care about their futures?'* Its primary objective is to illustrate the importance that the natural environment plays in the concept of environmental citizenship and learning as a whole.

This report is supported by teaching and learning resources, available for download from <http://www.thelearningescape.co.uk/the-outdoor-environment>

1. The current situation

The *Natural Childhood* report drew together a number of studies that illustrated the alarming state that our children now find themselves in. They are summarized here:

- **Statistics confirm the widespread perception that our nation's children have a largely screen-based lifestyle:**
 - On average, Britain's children watch more than 17 hours of television a week: that's almost two-and-a-half hours per day, every single day of the year. Despite the rival attractions of the Internet, this is up by 12% since 2007¹.
 - British children are also spending more than 20 hours a week online, mostly on social networking sites².
 - As children grow older, their 'electronic addictions' increase. Britain's 11–15-year-olds spend about half their waking lives in front of a screen: 7.5 hours a day, an increase of 40% in a decade³.
 - Importantly, the report makes this point

'The growth of virtual, as opposed to reality-based, play is, not surprisingly, having a profound effect on children's lives; indeed, it has been called 'the extinction of experience''⁴.

- Having established that the 'free time' lifestyle has changed, the report went on to explain that:

'In a single generation since the 1970s, children's 'radius of activity' – the area around their home where they are allowed to roam unsupervised – has declined by almost 90%⁵. In 1971, 80% of seven- and eight-year-olds walked to school, often alone or with their friends, whereas two decades later fewer than 10% did so – almost all accompanied by their parents⁶.'

- If most of today's children are not even allowed down the street by themselves, the chances of them exploring the natural world are even more remote, as survey after survey has shown:
 - Fewer than a quarter of children regularly use their local 'patch of nature', compared to over half of all adults when they were children⁷.
 - Fewer than one in ten children regularly play in wild places; compared to almost half a generation ago⁸.
 - Children spend so little time outdoors that they are unfamiliar with one of our commonest wild creatures. According to a 2008 National Trust survey, one in three could not identify a magpie; half could not tell the difference between a bee and a wasp; yet nine out of ten could recognise a Dalek⁹.

So, what effect is this massive shift having on our children?

- Around three in ten children in England aged between two and 15 are either overweight or obese¹⁰.
- The proportion classified as obese increased dramatically from 1995 to 2008: rising from 11% to almost 17% in boys, and from 12% to 15% in girls¹¹.
- If current trends continue, by 2050 more than half of all adults and a quarter of all children will be obese¹².
- Other physical health problems on the increase include vitamin D deficiency, leading to a major rise in the childhood disease rickets¹³; shortsightedness¹⁴; and asthma¹⁵.
- There has also been a reduction in children's ability to do physical tasks such as sit-ups, producing 'a generation of weaklings'¹⁶; and a major decline in children's cardiorespiratory (heart and lung) fitness, of almost 10% in just one decade¹⁷.



But it goes further than just the physical effects:

- One in ten children aged between five and 16 have a clinically diagnosed mental health disorder¹⁸.

- One in 12 adolescents are self-harming¹⁹.
- About 35,000 children in England are being prescribed anti-depressants²⁰.

All these problems have been, at least in part, attributed by researchers to a decrease in the time children spend outdoors compared with previous generations.

In particular, child psychologist Professor Tanya Byron noted the effect on the development of social and risk-related understanding:

"The less children play outdoors, the less they learn to cope with the risks and challenges they will go on to face as adults... Nothing can replace what children gain from the freedom and independence of thought they have when trying new things out in the open."²¹

The combined effects of this lifestyle shift were used to stand as a description of *Nature Deficit Disorder*.

However, this *Outdoor Environment* report is interested to take the theme further by investigating the long-term effect that this *Nature Deficit Disorder* will have on our environmental understanding and sustainable behaviour.

Tim Gill, one of the UK's leading commentators on childhood, expands on the significance of this:

"Natural places are singularly engaging, stimulating, life-enhancing environments where children can reach new depths of understanding about themselves, their abilities and their relationship with the world around them."²²

In short, increased contact with nature improves the way children learn, both formally and informally. Outdoor learning gives them direct experience of the subject, making it more interesting and enhancing their understanding²³.

The evidence for improvement, which child psychologist Aric Sigman calls the ‘*countryside effect*’, is considerable. He found that children exposed to nature scored higher on concentration and self-discipline; improved their awareness, reasoning and observational skills; did better in reading, writing, maths, science and social studies; were better at working in teams; and showed improved behaviour overall²⁴.

But children don’t simply learn more, or learn better, when freed from their desks. They also learn differently, experiencing improvements in four specific ways:

- Cognitive Impacts (greater knowledge and understanding)
- Affective Impacts (attitudes, values, beliefs and self-perceptions)
- Interpersonal and Social Impacts (communication skills, leadership and teamwork)
- Physical and Behavioural Impacts (fitness, personal behaviours and social actions²⁵).

In his 2008 study with the University of Michigan, R. H. Matsuoka examined the relationship between views of nature and high school students’ academic achievement and behaviour. To investigate this relationship, he inventoried the landscape features of 101 high school campuses in South Eastern Michigan and assessed student access to these features via building characteristics and school policies (e.g., through window size and the ability to eat lunch outdoors). Matsuoka also gathered information about each school’s student academic achievement and conduct (e.g., the percentage of merit award winners and graduation rates). In analysing the data, he found that schools with larger windows and more views of natural elements had students with higher standardized test scores, higher graduation rates, and a greater percentage of

students planning to attend college, as well as fewer reports of criminal behaviour. He also found that schools that allowed students to eat outside or off campus had higher test scores and a greater percentage of students planning to attend college. In examining specific landscape features, Matsuoka found that trees and shrubs needed to be relatively close to the students to provide academic achievement and behaviour benefits²⁶.

Importantly for this report, learning outside also enables children to develop the vital connections between the outside world and what educationalists call children’s ‘interior, hidden, affective world’²⁷.

In 2011, a cross-cultural ethnographic study by UNICEF, comparing childhood in the UK, Spain and Sweden, found that British parents are trapping their children in a cycle of ‘compulsive consumerism’²⁸.

As Sue Palmer, author of the book *Toxic Childhood*²⁹, commented:

“We are teaching our children, practically from the moment they are born, that the one thing that matters is getting more stuff”³⁰.

This ‘consumerist’ ethos is underpinning our societies as it is learnt from an early age. It influences the way children interact and assess risk, understand the environmental issues the world faces and, importantly, it influences the way they prioritise and ‘reach for their goals’ as adults. The recent London and UK riots in the summer of 2011 demonstrate the eventual effect that this approach is having on our children.

We can observe strong evidence that even the lightest contact with nature makes for stronger communities; studies have shown that even in cases where the only variable is the view of green space from a window, incidences of crime are reduced by as much as 50%³¹.

Furthermore, with the recent publication of the National Ecosystem Assessment³², we are starting to recognise the extent to which we depend on the natural world for the viability of our economy. In short, the connection between sustaining an environmentally sound world and future economic and commercial success.

For all the logical economic arguments for our dependence on nature, we will not maintain our two-way relationship with the natural world unless we develop those connections at a young age. This is partly because only adults who experience nature as children are likely to be motivated to protect the environment, as Dr William Bird notes in his work for the RSPB:

“The critical age of influence appears to be before 12 years. Before this age contact with nature in all its forms, but in particular wild nature, appears to strongly influence a positive behaviour towards the environment”³³.

But it is also partly because, in order to continue to harness the services of our ecosystems, we will need to continue to develop our understanding of them – for which we will need to continue the strong British tradition of cohorts of naturalists, both amateur and professional.



No other country in the world has such a strong tradition of ‘citizen science’, adding hugely to our knowledge and understanding of our natural heritage, and enabling us to safeguard it for the future³⁴.

The vast majority of those active as volunteers in this area, in, for example, BTO surveys, are more than 40 years old; most are over 60³⁵. As time goes by, we look in vain for their successors. Young people are still studying biology and zoology degrees, and many have a keen interest in environmental issues; but according to ecologist Roger Key, few have the practical, hands-on field knowledge of their predecessors³⁶. Indeed, a study by Anne Bebbington found that most A-level biology students could not identify more than three wild plants³⁷.

In an internal report for Natural England, Key demonstrated that the decline in young people’s natural history knowledge is at all educational levels, from primary school to postgraduate studies.

If we want to create a better environment – for wildlife and people alike – this expertise and knowledge is an essential building block. As Richard Louv concludes:

“If we are going to save environmentalism and the environment, we must also save an endangered species: the child in nature”³⁸.

‘I think children are born with an inherent love of the outdoors... but as parents we stop letting them have their freedom, and we work that love of nature out of them

Kate Macrae Education Consultant and Teacher³⁹

The weight of evidence for the benefits of getting children back to nature is, as we

have seen, overwhelming. The consensus that ‘something must be done’ is also there, right across the social and political spectrum. We even have a government White Paper, The Natural Choice⁴⁰, which makes several recommendations explicitly designed to reconnect our nation’s children with the natural world, including:

- A recognition that we need to exploit ‘nature’s health service’, in particular relating to children’s physical and mental health.
- A specific pledge to increase outdoor learning, by offering practical support to schools and reducing ‘red tape’.
- Creating better neighbourhood access to nature, both locally and in the wider countryside, in order to allow children (and adults) to experience its benefits.

And yet still we head in the wrong direction.

2. So what is stopping us?

The many barriers to success may be very hard to break down, not least because they have become ingrained in our daily lives, as Richard Louv points out:

“Some of these obstacles are cultural or institutional – growing litigation, educational trends that marginalise direct experience in nature; some are structural – the way cities are shaped. Other barriers are more personal or familial – time pressures and fear, for example. A shared characteristic of these institutional and personal barriers is that those of us who have erected them have usually done so with the best of intentions⁴¹”.

The main challenge to success is that we need to convince the nation’s parents and teachers, conservationists and politicians, journalists and legislators, that the way we treat our children is – at least in this regard – at best counterproductive, and at worst utterly wrong.

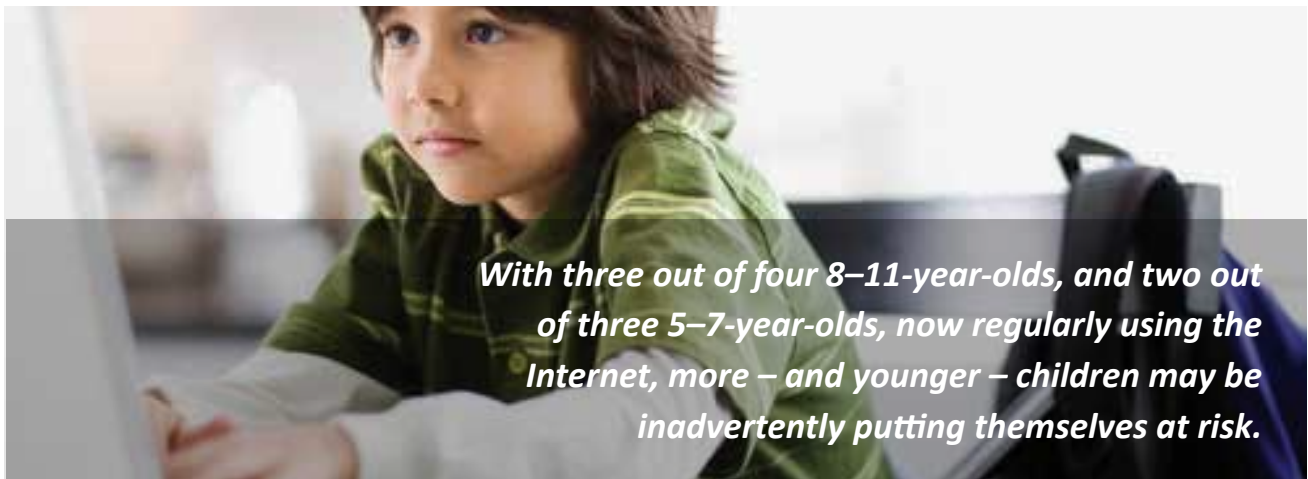
The first, primary concern and barrier to a successful ‘natural childhood’ relates to safety and, in particular, road safety. Successive governments, and motoring organisations, would have us believe that the story of children’s road safety in recent years has been one of unqualified success. The statistics appear to bear this out - the number of children killed on our roads has fallen dramatically, from almost 700 deaths in 1976 to just 81 in 2009⁴².

But these raw figures conceal the true reason behind the drop in deaths: that nowadays children are rarely allowed to venture outdoors.

In 2007, the Daily Mail reported on a single Sheffield family who neatly demonstrated this⁴³: Great grandfather George, brought up in the 1920s, had almost unlimited freedom as an eight-year-old, regularly walking six miles to go fishing on his own. But 80 years later, his great-grandson Edward enjoyed none of this freedom: he was taken to and from school by car, and was only allowed to roam within a radius of 300 yards from his home.

Indeed, Mayer Hillman’s study *One False Move* found that in 1971, 80% of seven- and eight-year-old children went to school on their own; by 1990 only 9% were making the journey unaccompanied⁴⁴.

Hillman et al concluded that road accidents involving children have declined not because the roads have become safer, but because children are no longer exposed to the dangers they pose.



With three out of four 8–11-year-olds, and two out of three 5–7-year-olds, now regularly using the Internet, more – and younger – children may be inadvertently putting themselves at risk.

Giving children the freedom to explore natural environments inevitably incurs an element of danger. Yet we should put this in perspective: three times as many children are taken to hospital each year after falling out of bed, as from falling out of trees⁴⁵.

Indeed ironically, by far the most dangerous place for a child to be is at home:

- Every year, one million children aged 14 or under go to A&E departments: 30,000 with symptoms of poisoning, mostly from domestic cleaning products, and 50,000 with burns or scalds.
- Half a million babies and toddlers are injured each year at home, 35,000 from falling down stairs.
- On average, ten children die each year from falling through a window or off a balcony, while house fires cause almost half of all fatal accidents to children⁴⁶.

A 2008 Channel Four documentary, *Cotton Wool Kids*⁴⁷, highlighted the growing tendency for some parents to become obsessively overprotective. One pre-school girl was bombarded with her mother's increasingly hysterical warnings about stranger danger; a teenage boy was not even allowed to walk to the bus stop on his own; and a working mother used a webcam constantly to monitor her child at nursery.

Yet ironically, the greatest dangers facing Britain's children are not outside in the woods and fields, but in the very place their parents regard as a safe haven: their bedrooms.

Relatives of the victim carry out the vast majority of sexual abuse: parents or step-parents, uncles or 'family friends'. Even when a stranger is involved, they often initially approach their victim via Internet chatrooms, posing as teenagers themselves. With three out of four 8–11-year-olds, and two out of three 5–7-year-olds, now regularly using the Internet, more – and younger – children may be inadvertently putting themselves at risk⁴⁸.

So are our children any safer in their bedrooms than if they were out and about with a group of friends? Statistics, experience and common sense suggest not; yet despite these statistics, we continue to assume that all dangers lie outside the home, and that by keeping our children indoors we are somehow removing them from all risk. Persuading parents of the real dangers indoors, compared to the imaginary ones outside, will be very hard to do.

Of course no natural environment is completely free from risk either. But these risks are a fundamental part of childhood: by gradually learning what is safe and what is dangerous, especially with regard to their own actions and behaviours, children develop their own 'risk thermostat'⁴⁹.

Climbing a tree is a good example: it may be easy to climb up, but the child may then realise that getting down is rather trickier. The experience has taught them an important lesson about their own limits, and the risks they are prepared to take. But if children are shielded from any possibility of being in a risky situation, how will they ever know what their safe limits are?

But there is another barrier preventing our children reconnecting with nature: figures of authority. These include teachers, police and other officials who, often with the best of intentions, are eroding our children's freedom⁵⁰.

And while most professionals take a more balanced view, it only takes a small minority to discourage children from engaging with the natural world.

According to a 2008 study by Play England⁵¹, half of all children have been stopped from climbing trees, one in five banned from playing conkers, and almost the same number told they cannot play games of tag. As Tim Gill observes, activities that earlier generations of children enjoyed as part of growing up are now being relabeled as 'troubling' or 'dangerous'⁵².

And remember, the Health and Safety Executive is an active advocate of sensible risk.

In addition, because children are no longer allowed to venture outdoors, any who do stand out from the crowd. So whereas their behaviour would once have been accepted, it is increasingly regarded as abnormal and delinquent, leading to what Richard Louv has called *'the criminalisation of natural play'*⁵³.

We do not have to look far to find examples of families reprimanded for feeding the ducks, picking daffodils or building dens in the woods.

By way of an example, in July 2006, three 12-year-olds who built a den in a cherry tree were arrested, DNA tested and locked up in police cells, accused of criminal damage. They were later reprimanded and released, but their details will be kept on file for five years. The children's parents accused the police of over-reacting, and were backed up by the chairman of the Youth Justice Board for England and Wales. But the police defended their actions, and described the children's behaviour as 'anti-social' and 'low-level crime'⁵⁴.

So how does the fact that children are driven to school impact on the development of environmental citizenship?

'What we've done is we've put Nature over there – we've put a fence around it and said 'That's Nature' – this is why we're now strangers to each other.'

Dr William Bird Outdoor Nation Interview

'Take only photographs, leave only footprints...' For environmentalists and conservationists the world over, this mantra has become the equivalent of one of the Ten Commandments.

But it has had exactly the opposite effect of what was originally intended. If conservation organisations and their wardens ban hands-on experiences, then instead of children's passion for nature being nurtured and encouraged, they may simply be put off. One expert commentator, Martin Maudsley of the National Children's Bureau, has pointed to the importance of children taking a hands-on approach: touching, picking and collecting, and occasionally being bitten or stung!

The survey first set out to understand the amount of time, during the school day, that children are spending outside.



As Nick Baker points out:

“Even nature itself has become a commodity. Many believe they cannot experience it unless they are in a nature reserve, have the right pair of binoculars, or are wearing the correctly endorsed clothes... So often nature is seen as something to travel to – not something we are immersed in all the time and dependent upon for our physical, emotional and spiritual health”⁵⁵.

This presents a key opportunity for Schools and Early Years settings. By establishing a day-to-day culture of ‘integrating the natural environment’ within a surrounding of relative ‘safety’, educational establishments can seek to instigate the step-change so drastically needed. Schools and Early Years settings have the opportunity to use natural play and learning to teach children about the world in which they live, and their role within it. They have the opportunity to help them to understand risk and their own limits. Most importantly, whether rural or inner city, they have the opportunity to present their children with the chance to learn about the environment, the natural world and embed a culture of conservation for the future.

In June 2012 an online survey was conducted by The Learning Escape to investigate perception of the current level of Environmental Citizenship development within UK Primary Schools and Early Years settings, as well as the barriers to successful development. Headteachers and Setting Managers were emailed a survey for completion. Of these, 35% were from a rural or village setting and the remainder from a town or inner-city environment. The headline results are set out below.

The survey first set out to understand the amount of time, during the school day, that children are spending outside. A staggering 14% of Headteachers were unable to say, saying that they ‘didn’t know’. The largest group (45%) said that children spent between 11 and 25% of their day outside, with the next largest group (33%) saying that they spent between 25 and 50% of their day outside, on average. Interestingly, the survey found that there was a dramatic tail off of time spent outside over the three years from Reception through to KS2. In the majority of cases this was reduced from 75-80% of the school day spent outside, in Reception, through to as little as 15% (in some cases) by KS2.

This drop off from Reception to KS2 was echoed when the survey investigated the split of this time spent outside, between 'play time', 'lesson time' and 'waiting for parents'. Even more dramatically, those teaching EYFS spent on average 80% of lesson time outside yet, by KS2, this was down to under 10% of lesson time.

In the majority of cases children spent no more than 25% of their school day outside for play purposes and under 10% for learning purposes. Alarming, 6% of them spent between 11 and 25% of their time standing outside, at the end of the day, waiting for parents to collect them from school.

Across the board, staff identified the benefits of both outdoor play and learning for development in the following areas: combatting bullying; fighting childhood obesity; working with children with ADHD; working with children with SEN; development of citizenship skills; development of teamworking skills; curriculum learning; learning about environmental issues; promotion of environmental best practice. Importantly, for the purposes of this report, the largest group (over 88%) felt that the promotion of environmental best practice, using the outdoor learning, was a key area of underperformance, yet only 33% prioritised this for development at their school or setting.

When asked about the outdoor environment in which schools and early years settings taught, the number that didn't use specific equipment/areas tells us more about the opportunity for development of Environmental Citizenship skills. Whilst it may not be surprising that only 25% had a dedicated eco-classroom, 45% did not use any form of shelter outside for teaching. Of those remaining, a staggering 41% did not even use their playground space for outdoor learning. 11% stated categorically that they 'did not teach outdoors'. This has great implications, as the research thus far, has shown, for Environmental Citizenship and understanding.

It would seem that understanding of outdoor space plays a big part in this. 19% stated that they simply 'didn't know' how much outdoor space they had at their school or setting, with 11% of those surveyed stating that they didn't know how much of it they were allowed to use for outdoor learning and development. Nearly 50% of those surveyed cited the 'need to develop space' as the reason for under-use, with 30% saying that the weather (and suitable facilities) restricted outdoor learning. 44% said that they would like an outdoor classroom/eco-classroom but funding restrictions prevented it.

The survey then moved on to discuss the existing environmental schemes for schools and settings to join. 71% of those surveyed had registered for the Eco-School scheme with 44% still working on the first (Bronze) level. 66% had an Eco-Committee with almost half having also completed an Environmental Review. 5% did not know what an Environmental Review was. Over half had an Environmental Action Plan for their school/setting and, again, 5% did not know what this was. Over 52% had joined the 'Love Where You Live' campaign, yet almost all of the remaining people surveyed did not know what this was.

Turning to learning techniques, we asked those surveyed the age at which they started Environmental Citizenship learning. Encouragingly 79% said this started at the Early Years stage. Worryingly a further 10% stated that this did not start until KS3.

91% of those surveyed said that their approach to Environmental Citizenship was to include references within relevant lesson plans. Only 45% ran specifically focused campaigns but 69% provided focused lessons, from time to time.

Leading by example was key, for schools and settings, with 91% having recycling bins throughout the site, as well as dedicated outdoor space for growing vegetables. Many ran 'walk to school' campaigns as well as

having space set aside for learning about mini-beasts, the weather and water awareness. One school listed their school's farm, as a current project, with another proudly announcing that they had reduced their energy bills by 75% over the last five years.

Although there appears to be much being done towards Environmental Citizenship learning, it was when the survey focused on specific barriers that the areas for development became apparent. Over 42% of those surveyed were unable to estimate the percentage of the school day that children were exposed to direct or indirect learning about environmental citizenship.

Over the past ten years, those surveyed felt that the amount of time spent on the topic has stayed relatively constant (between 32 and 45% of the time), with 29% feeling that there has not been any improvement in learning time dedicated to this field.

When asked about the 'secret to success', those surveyed listed the following elements: having a whole school approach, ownership by the children, having an action plan, integration within the curriculum, having more time, the children having a voice, passion by staff, having experience of learning in this area, the inclusion of all stakeholders, the opportunity for children to interact at first hand with real-life examples.

When asked about the biggest barriers to successful development of Environmental Citizenship, unsurprisingly, 'Lack of funding' featured highly (26%). However, the biggest barriers mentioned were the 'pressure to cover other curriculum areas' (45%) and 'lack of staff understanding/training' (39%). Surprisingly, 'poor facilities' came very low down the list (only 11%), with 'lack of home support' being listed by 16%.

Interestingly, however, when asked what they needed to 'solve the problem', the majority of schools/settings said that they needed 'more money' (53%) with 'staff training' close behind (42%). 'Support from the Government on curriculum matters' came low down at only 11% and 'parental support' was only 3%.



The answers to these last two questions, when viewed within the context of the wider survey, suggest that there are two key areas for improvement:

1. First, we need to work with schools and settings to demonstrate and train on ways to integrate the topic more pro-actively within the existing curriculum topics.
2. Second, we need to show them how they can work with what they have to make the most of existing equipment and outdoor space and lead through example, involving children at each stage. A part of this process can then be identifying areas for improvement and support with fundraising for projects.

Whilst funding is clearly a consideration, the survey seems to suggest that it is a lack of understanding as to how to integrate Environmental Citizenship within the school day, whilst consistently encouraging 'outdoor time' for children in greater quantities, that is the greatest barrier to change.

If staff can be shown how to include outdoor time within curriculum learning then this will lead them to make more informed choices about facility development needs and priorities. Importantly, and perhaps first, staff need to be encouraged to understand more about their outdoor space and the ways in which they should be encouraging their children to 'get outside and use it'.

To this point, this report has focused on 'getting children outside' to learn, interact and play. This chapter clarifies the concept of Environmental Citizenship, demonstrates the importance of direct nature experience and introduces the question of how we can make our technically 'indoor' space more engaged with nature to support this.

3. *What is Environmental Citizenship and how can we teach about it?*

The UNESCO-UNEP International Environmental Education Programme has focused on the incorporation of Environmental Education into primary and secondary curricula and activities.

It takes the view that:

*'Environmental education (EE) is a lifelong process with the objective of imparting to its target groups in the formal and non-formal education sectors environmental awareness, ecological knowledge, attitudes, values, commitments for actions, and ethical responsibilities for the rational use of resources and for sound and sustainable development.'*⁵⁶

The report and activities stress the importance of a holistic approach, reflecting the way the environment permeates through every activity in day-to-day life. Interdisciplinary and problem-solving activities need to start as early in education as possible. The primary school is the natural place to introduce children to environmental education, since at this level they instinctively have a holistic view of the environment; they have not yet been trained to compartmentalise their learning into separate subjects as they will have to do in secondary and higher education.

In the same way, the introduction of critical thinking and problem-solving approaches in EE, especially at primary school level, is fundamental if students are to become skillful in the identification and solution of environmental problems as students and later on as adult citizens and possibly decision-makers.

This *Outdoor Environment* report seeks to stress the importance of 'Environmental Citizenship' above and beyond Environmental Education. When combined with play and outdoor learning, the skills learnt as a result of EE have already been proven, earlier in this report, to aid in health, social and wellbeing development as well as EE understanding.

The UN Convention of the rights of the child states that:

'All children and young people have the right to have a say in the decisions that affect them, to access relevant information and to express their feelings. This statement includes all the children in the world.'

Surely this, also applies to the environment and the part that they might play in its future and its effect on them?

Most primary schools teach citizenship as part of their PSHE (personal, social and health education) programme. Lessons in citizenship

help children to understand their rights and responsibilities, to understand how society works and to play an active role in society. Education about citizenship also helps children to:

- recognise their worth as individuals, knowing that they are unique
- understand that we are all different in many ways
- see things from other people's point of view
- recognise right from wrong and to have the confidence to choose right
- understand that they have rights and responsibilities
- understand the democratic process.

*Developing a Global Dimension in the School Curriculum*⁵⁷ contains advice on how to implement a global thrust to citizenship with examples of what schools are already doing at different key stages. The eight key concepts are citizenship, sustainable development, social justice, diversity, values and perceptions, interdependence, conflict resolution and human rights.

The Sustainable Development module picks up the following points:

Objective: Understanding the need to maintain and improve the quality of life now without damaging the planet for future generations.

- recognising that some of the earth's resources are finite and therefore must be used responsibly by each of us
- understanding the interconnections between the social, economic and environmental spheres
- considering probable and preferable futures and how to achieve the latter

- appreciating that economic development is only one aspect of quality of life
- understanding that exclusion and inequality hinder sustainable development for all
- respecting each other
- appreciating the importance of sustainable resource use – rethink, reduce, repair, re-use, recycle - and obtaining materials from sustainably managed sources⁵⁸

*Every Child Matters*⁵⁹ (DfES publication) states that:

'children and young people have told us that five outcomes are key to wellbeing in childhood and later life; being healthy; staying safe; enjoying and achieving; making a positive contribution; and achieving economic wellbeing.'

Under 'Make a positive contribution' in the outcomes framework of that document, five specific aims are highlighted:

- engage in decision making and support the community and environment
- engage in law-abiding and positive behaviour in and out of school
- develop positive relationships and choose not to bully or discriminate
- develop self-confidence and successfully deal with significant life changes and challenges
- develop enterprising behaviour.

Proof, as if proof were needed, that the key to successful environmental citizenship learning is 'involvement' – note the use of the words 'engage' and 'develop'.

To get the most from this it is important to start where the children are already, instinctively developing their roles as ‘good citizens’. Without even knowing it, children use outdoor play to learn about teamwork, moral reasoning, social interaction, conflict, risk-assessment and negotiation. By integrating environmental education into this environment we can instill a ‘care for the future’ as a fundamental part of their role as a responsible citizen. It is through this approach, rather than formal teaching, that we will ensure the future for our world.

The Littledyke research⁶⁰ into *Primary children’s views on science and environmental issues* only viewed environmental education within the context of science teaching but suggested the greatest barrier to success is the fact that:

‘many teachers may be teaching science in a way which is disconnected to how it applies in the world. [This] can contribute to missing an essential opportunity to provide a critical understanding of issue which the adults of the future will have to increasingly face as environmental problems intensify.’

In summary, it is clear that successful environmental citizenship learning relies on both a formally ‘taught’ process and structured play and outdoor learning.

The good news is that children want to learn about environmental citizenship. The Co-operative *Green Schools* initiative⁶¹, launched in 2011, released data that demonstrated that there was a willingness to learn – something we must surely leap on and support.

The survey of 1,027 youngsters aged seven to 14 revealed that 82% of children rated learning about green issues as important, putting it ahead of science, history, IT and art, and only slightly behind English and maths.

Two-thirds want to learn more about wildlife and nature, almost as many (62%) want to learn about green issues, and almost half (47%) want to learn more about where food comes from.

This compares with just 37% who want to learn more about art, 36% for IT and 35% for science, the survey found.

Almost all the children (96%) were either very or a little bit worried about people damaging the planet, and almost as many (93%) said they recycled, while 85% turn off the tap when they brush their teeth and three-quarters (77%) turn off lights and appliances.

Almost two-thirds (64%) say they have an influence on their parents’ green behaviour and a poll of 1,002 adults who have children aged seven to 14 suggests the children are right.

Importantly, when considering legacy, six out of 10 parents say their children could persuade them to be greener.⁶²

4. So, what now? Suggestions for making a difference?

When presented with data that demonstrates the positive effect that outdoor play and involvement have on citizenship and understanding and that demonstrates a willingness to learn about environmental issues and nature, it seems logical to look for ways to integrate direct nature experiences within learning.

With increasing pressure on teachers to meet curriculum requirements (and Government learning standards) the reality is that there is always going to be a need for a mixture of classroom and 'indoor' activity, as well as free-flow play and outdoor learning.

The key to success, however, is to join up the two areas. For example, learning about maths can be taught just as effectively through studying shapes in nature, as studying shapes on a whiteboard. Similarly, counting rings on tree-stumps, measuring angles on leaf veins and identifying shapes on mini-beasts. Or, growing vegetables helps children to feel engaged with the concept of sustainable, healthy eating, as well as understand about the water-cycle, gestation and how plants interact with other areas of the natural world such as mini-beasts, composting and birds.

In a similar way, the way schools approach their own role in environmental citizenship is key to leading by example. Introducing recycling programmes and supporting best practice through 'Walk to School Week' is important but so too the link between classroom space and the outdoors. When looking at classroom space and development projects, demonstrating a commitment to the use of environmentally sustainable resources is key. Similarly, looking at ways to introduce classroom teaching outdoors or in a 'part outdoors' environment (for example, using an eco-classroom) is also key to success.

As this report shows, it is not a case of overtly hammering home the environmental message that will get results. Direct nature experiences will teach children as a by-product of day-to-day life. It will encourage them to 'care' in a way that becomes second-nature. The fact that these activities also help them to develop other important skills further emphasizes their importance.

Our suggestions for making a difference in this area are as follows:

1. Lead by example: The most important thing is that Schools and Early Years settings lead by example. That means practicing what you preach and setting up recycling programmes, supporting Walk to School week and encouraging healthy, sustainable eating at lunchtime. As has already been established, children learn by the example set by teachers. To best engender a sense of environmental citizenship you must first set the best example.
2. Take the curriculum outdoors: Environmental Citizenship is best communicated as a part of (rather than instead of) curriculum learning. Consider ways to use the natural environment to teach curriculum subjects – the best examples come from nature and help children to understand application, as well as theory. By planning lessons with practical, outdoor activities you can get the best of both worlds (natural interaction and curriculum learning) without the need to 'find extra time' for Environmental Citizenship learning.
3. Use examples and get children involved: Don't just tell the children about the water-cycle, get them to plan a garden and set up experiments to measure water levels. See how mini-beasts interact with plants and get children involved in making compost. If you're planning an eco-classroom, get the children involved in the design and planning process.
4. Encourage them to 'pass it on': As the Co-operative report demonstrates, parents feel that they have much to learn on the subject too. Consider putting together a fact-sheet for parents on the subjects you're

covering, to help them carry on the learning at home.

5. Support a scheme like Eco-Schools: Eco-Schools is an international award programme that guides schools on their sustainable journey, providing a framework to help embed these principles into the heart of school life. There is a framework to work through, rewarding best practice, as well as teaching and learning resources to help you on your journey.
6. Reward good environmental citizenship: Saying well done to children that play an active role helps them to see the benefits of good environmental citizenship. Consider introducing competitions and campaigns that create a focus on particular areas, as well as day-to-day learning. Make environmental citizenship fun!
7. Consider how you bridge the gap: Taking an 'either or' approach is never going to solve the problem we face. Whilst there is much Schools and Early Years settings can do to engage their

children with nature outdoors, there is also much they can think about in terms of how to bridge the gap between the indoor classroom and the playground. Think about where you teach – does it need to be indoors or could you use an outdoor space? Can you structure lessons to involve both indoors and outdoors? Can you encourage play in specific areas to carry on the learning experience?

8. Consider your classrooms and buildings: When considering a building project, leading by example is, again, key. Rather than instantly plumping for a portakabin, why not consider an eco-classroom that uses the best, sustainable materials? Think about positioning and design to allow it to bridge the gap between indoors and outdoors. If you're having a new library, why not build it from wood with bi-fold doors so children can enjoy reading outdoors? Or consider a science building that enables children to run experiments both inside and outside.



The Learning Escape has drawn together resources, lesson plans, activities and helpful links on

<http://www.thelearningescape.co.uk/the-outdoor-environment>.

These also include guidance notes on creating a positive learning environment in an eco-classroom and managing an eco-classroom project to promote environmental citizenship.

Much of the data contained in this report has been sourced from the 2012 *Natural Childhood* report, published by the National Trust. A copy of this report can be downloaded by [clicking here](#).

References

¹OfCOM October 2011: reported in Guardian 25 October 2011.

www.guardian.co.uk/technology/2011/oct/25/teenagers-lose-tv-internet-mobile

²Institute for Public Policy Research, March 2008

www.ippr.org/pressreleases/111/2598/a-generation-of-youth-are-being-raised-online

³Sigman, A. (2007) 'Visual voodoo: the biological impact of watching television'. *Biologist* 54 (1) 12-17; BMRB International (British Market Research Bureau). (2004) 'Increasing Screen Time is Leading to Inactivity of 11-15s'. Youth TGI Study. Both quoted in Sigman, A. (2007) *Agricultural Literacy: Giving concrete children food for thought*.

www.face-online.org.uk/resources/news/Agricultural%20Literacy.pdf

⁴Pyle, R. (2003) 'Nature Matrix: reconnecting people and nature'. *Oryx* 37(2): 206–214.

⁵Gaster, S. (1991) 'Urban Children's Access to Their Neighbourhoods: Changes Over Three Generations', quoted in Louv, R. (2005) *Last Child in the Woods*, p.123

⁶Hillman, M., Adams, J., and Whitelegg, J. *One False Move: A Study of Children's Independent Mobility*. London: Policy Studies Institute, 1990.

⁷Natural England (2009) *Childhood and Nature: a survey on changing relationships with nature across generations*.

www.naturalengland.org.uk/Images/Childhood%20and%20Nature%20Survey_tcm6-10515.pdf

⁸Natural England (2009) *Childhood and Nature: a survey on changing relationships with nature across generations*.

www.naturalengland.org.uk/Images/Childhood%20and%20Nature%20Survey_tcm6-10515.pdf

⁹National Trust (2008) *Wildlife alien to indoor children*.

www.nationaltrust.org.uk/what-we-do/news/archive/view-page/item737221/

¹⁰Health Survey for England 2008: *Physical Activity and Fitness – Volume 1*. The NHS Information Centre, 2009.

www.ic.nhs.uk/pubs/hse08physicalactivity Quoted in *Statistics on obesity, physical activity and diet: England 2010, NHS 2010*. www.ic.nhs.uk/webfiles/publications/opad10/Statistics_on_Obesity_Physical_Activity_and_Diet_England_2010.pdf

¹¹Health Survey for England 2008: *Physical Activity and Fitness – Volume 1*. The NHS Information Centre, 2009.

www.ic.nhs.uk/pubs/hse08physicalactivity Quoted in *Statistics on obesity, physical activity and diet: England 2010, NHS 2010*. www.ic.nhs.uk/webfiles/publications/opad10/Statistics_on_Obesity_Physical_Activity_and_Diet_England_2010.pdf

¹²Foresight – *Tackling Obesities: Future Choices* (2007)

www.bis.gov.uk/foresight/our-work/projects/published-projects/tackling-obesities/reports-andpublications

¹³Davies, Justin H., Reed, Joseph M., Blake, Elizabeth, Priesemann, Max, Jackson, Alan A. and Clarke, Nicholas M.P. (2011) Epidemiology of vitamin D deficiency in children presenting to a paediatric orthopaedic service in the UK. *Journal of Pediatric Orthopaedics*, 31, (7), 798-802 – reported on BBC News website 4 February 2011
www.bbc.co.uk/news/health-12357382

¹⁴See BBC News website 25 October 2011 www.bbc.co.uk/news/health-15427954

¹⁵Glasgow University study, 2009; see BBC News website 3 March 2009
www.news.bbc.co.uk/1/hi/7918576.stm

¹⁶*Acta Paediatrica* (2011), see Guardian 21 May 2011
www.guardian.co.uk/society/2011/may/21/children-weaker-computers-replace-activity

¹⁷Essex University study; see Guardian 22 December 2009
www.guardian.co.uk/society/2009/dec/22/childrens-fitness-declining-acrossworld

¹⁸Office of National Statistics: Mental health of children and young people in Great Britain, 2004.
www.ic.nhs.uk/webfiles/publications/mentalhealth04/MentalHealthChildrenYoungPeopleSummary310805_PDF.pdf See also: Mental Health Foundation www.mentalhealth.org.uk/help-information/mental-healthstatistics/children-young-people/

¹⁹The Lancet, Vol. 379, Issue 9812, pp.236–243 (2012) The natural history of selfharm from adolescence to young adulthood: a population-based cohort study.
[www.thelancet.com/journals/lancet/article/PIIS0140-6736\(11\)61141-0/abstract](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(11)61141-0/abstract)

²⁰Chief Medical Officer (2004) At Least 5 a week: Evidence on the impact of physical activity and its relationship to health. A Report from the Chief Medical Officer HMSO April 2004.
www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4080994
Quoted in Bird, W. (2007) *Natural Thinking*. RSPB.

²¹Byron, Tanya, quoted in Hillsdon, M. (2009) *Getting Kids Back to Nature*, Tourism Insights.
www.insights.org.uk/articleitem.aspx?title=Getting%20Kids%20Back%20to%20Nature

²²Gill, T. (2009) 'Now for free-range childhood', in Guardian, 2 April 2009.
www.guardian.co.uk/commentisfree/2009/apr/02/children-safety

²³Ofsted (2008) *Learning outside the classroom*.
www.ofsted.gov.uk/resources/learning-outside-classroom

²⁴Sigman, A. (2007) *Agricultural Literacy: Giving concrete children food for thought*.
www.face-online.org.uk/resources/news/Agricultural%20Literacy.pdf

²⁵Dillon, J. et al (2005) *Engaging and Learning with the Outdoors*. National Foundation for Educational Research.

²⁶Matsuoka, R. H. (2008). *High school landscapes and student performance*. University of Michigan, Ann Arbor. This study is available online at: <http://hdl.handle.net/2027.42/61641> (Volume 4)

²⁷Moore, Robin, quoted in Louv, R. (2005) *Last Child in the Woods*, p.65.

²⁸UNICEF/Ipsos MORI Social Research Institute (2011) *Children's Well-being in UK, Sweden and Spain: The Role of Inequality and Materialism*. www.unicef.org.uk/Documents/Publications/UNICEFIpsosMori_childwellbeing_reportsummary.pdf

²⁹Palmer, S. (2006). *Toxic Childhood: How the Modern World is Damaging Our Children and What We Can Do About it*. Orion Books, London.

³⁰Sue Palmer, quoted in Daily Telegraph 14 September 2011.
www.telegraph.co.uk/news/politics/8760558/Cycle-of-compulsive-consumerismleaves-British-family-life-in-crisis-Unicef-study-finds.html

³¹Kuo FE and Sullivan WC (2001) *Environment and Crime in the inner City. Does vegetation reduce crime?*

³²UK National Ecosystem Assessment. uknea.unep-wcmc.org/

³³www.rspb.org.uk/Images/naturalthinking_tcm9-161856.pdf, p.55

- ³⁴See Moss, S. (2009) 'Birding Past, Present and Future – a Global View', in del Hoyo, J., Elliott, A. & Christie, D. (eds) (2009), *Handbook of the Birds of the World*. Vol. 14, Lynx Edicions, Barcelona.
- ³⁵Porter, R. (2012) Hearing tests for bird survey workers? In *British Birds*, Vol. 105, pp. 152–3.
- ³⁶Key, R. (2005) A New Generation of Naturalists (paper to Natural England People, Places & Nature Board).
- ³⁷Bebbington, Anne. (2005) 'The ability of A-level students to name plants', *Journal of Biological Education*, 39:2, 63-67 <http://dx.doi.org/10.1080/00219266.2005.9655963>
- ³⁸Louv, R. (2005) *Last Child in the Woods*, p.158.
- ³⁹Hillman, M., Adams, J., and Whitelegg, J. *One False Move: A Study of Children's Independent Mobility*. London: Policy Studies Institute, 1990.
- ⁴⁰DEFRA (2011) *The Natural Choice: securing the value of nature*. www.defra.gov.uk/environment/natural/whitepaper/
- ⁴¹Louv, R. (2005) *Last Child in the Woods*, p.115.
- ⁴²BBC News website 24 June 2010. www.bbc.co.uk/news/10408417
- ⁴³Daily Mail, 15 June 2007: How children lost the right to roam in four generations. www.dailymail.co.uk/news/article-462091/How-children-lost-right-roamgenerations.html
- ⁴⁴Hillman, M., Adams, J, Whitelegg, J. (1990) *One False Move*. Policy Studies Institute. www.psi.org.uk/publications/publication.asp?publication_id=790
- ⁴⁵Play England (2008), quoted in the Observer 3 August 2008. www.guardian.co.uk/education/2008/aug/03/schools.children
- ⁴⁶ All figures from Child Alert website: www.childalert.co.uk/safety.php?tab=Safety
- ⁴⁷ Cotton Wool Kids, Channel Four, 2008. www.channel4.com/programmes/cotton-wool-kids
- ⁴⁸Ofcom (2009) UK children's media literacy: 2009 interim report. stakeholders.ofcom.org.uk/binaries/research/media-literacy/full_report.pdf
- ⁴⁹Adams, J. (2003), 'Risk and morality: three framing devices', in Ericson, R.V. and Doyle, A. (eds.) *Risk and Morality*. University of Toronto Press.
- ⁵⁰See, for example, Daily Telegraph 7 August 2010. www.telegraph.co.uk/education/educationnews/7930611/Teachers-who-are-afraid-of-insects-stopchildren-learning-about-natural-world.html
- ⁵¹Play England (2008), quoted in the Observer 3 August 2008. www.guardian.co.uk/education/2008/aug/03/schools.children
- ⁵²Tim Gill, quoted in the Observer 1 February 2009. www.guardian.co.uk/society/2009/feb/01/child-welfare-inquiry
- ⁵³Louv, R. (2005) *Last Child in the Woods*, p.27.
- ⁵⁴Reported in the Daily Mail 23 July 2006. www.dailymail.co.uk/news/article-397240/Children-arrested-DNA-tested-interrogated-locked--playing-tree.html
- ⁵⁵Baker, N. (2009) Last of the pond-dippers, in *Natural World* magazine September 2009. www.wildlifetrusts.org/node/3956
- ⁵⁶UNESCO-UNEP International Environmental Education Programme Environmental Education Series 21 ENVIRONMENTAL EDUCATION ACTIVITIES FOR PRIMARY SCHOOLS
- ⁵⁷Developing the global dimension in the school curriculum DfES 1409-2005DOC-EN
- ⁵⁸Developing the global dimension in the school curriculum DfES 1409-2005DOC-EN

⁵⁹Every Child Matters – The Stationery Office - Cm 5860

⁶⁰Primary children's views on science and environmental issues: examples of environmental cognitive and moral development - Michael Littledyke - University of Gloucestershire - 2002

⁶¹www.co-operative.coop/green-schools-revolution/

⁶²www.guardian.co.uk/environment/2011/sep/20/children-learn-environment-co-operative

the learning escape



The Learning Escape
Unit A, Dutton Road
Aldermans Green Industrial Estate
Coventry CV2 2LE

Tel: 0800 917 7726
www.thelearningescape.co.uk