

the learning escape

by TG Escapes



The Outdoor Environment in Secondary School

*Understanding nature deficit and
environmental citizenship at Key
Stage 3 and Key Stage 4*



Forward

The Learning Escape specialise in designing and building innovative modular ecobuildings for schools. We know firsthand the impact your surroundings can have on your ability to work and learn. In a place where young minds are moulded it's important to create an environment that is both inspiring and motivating. Our ecoclassrooms have provided schools across the country with tranquillity and inspiration through closeness to nature; they're also having a proven effect on students' concentration, self discipline and behaviour.

It is of incredible importance to us that children experience both the environment around them and environmentally sound buildings, from a young age. If we are to raise a generation of children who are not only concerned for their environment, but ambassadors for change, then we have to start these discussions now. And what better way to engage children, than to integrate environmental studies into their daily lives.

MD Richard Harvey



Introduction

As we write this report, the Government's public health programme Change4Life broadcasts a television advert that sums up the effect that modern lifestyles have had on our nation's children. The advert begins with a child falling out of bed, his bedroom is littered with pizza, crisps and fizzy drinks. The same child then embeds himself into a sofa, and flicks through television channels aimlessly. This, we are told, is how most children have spent their summer holidays'.



We are at a crucial tipping point when it comes to the wellbeing and happiness of our children. Obesity and depression are on the up, and young people's sense of belonging to a community is diminishing. More and more young people are locking themselves away with only televisions and game stations for company. As a nation, we no longer seem to value the once "great" outdoors, and our children are growing up estranged from the natural world.

This change in lifestyle has led to what the National Trust referred to as "**Nature Deficit**" or the absence of nature in young people's lives.

This report, written by The Learning Escape, seeks to discuss the impact of Nature Deficit on adolescents (11-16 year olds). It will look at every aspect of a child's life, and address the longterm benefits of getting secondary school children off the couch and outside. Drawing on many of the themes of our previous report, ***The Outdoor Environment: How can our children learn to care about their futures?***, it will explore the idea that the great outdoors not only improves the quality of life for young people, but also improves their ability to learn and become valued, integrated members of society.





The Great Indoors

*“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’”*³.

The National Trust, 2012.

It is now impossible to deny the widespread perception that secondary school children live largely screenbased lives. The research is readily available and the rising rates of obesity in the UK act as a visible reminder.

- 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 2007⁴.
- Britain’s 11-15 year olds spend about half of their waking lives in front of a screen. That’s 7.5 hours a day, which is an increase of 40% in just ten years.⁵
- Over a third of 9-12 year olds have a social networking account on Facebook.⁶

- 84% of year 7 students at the Marine Academy Plymouth had never been to Plymouth Hoe⁷, despite it being a few short miles from the campus, and in 2010, two fifths of Cornish children had never been to the beach⁸.

Unlike in our previous paper⁹, which focused on the impact of Nature Deficit on primary school children, the secondary school age group do have a degree of autonomy. They are able to make decisions about what they want to do in their free time. However, research suggests that a lack of experience with the outdoor world has led to adolescents preferring to stay indoors.

- 60% of children would actually prefer to stay inside playing computer games or watching television¹⁰.
- A third of children aged between 6 and 15 have never climbed a tree, and one in ten cannot ride a bike¹¹.
- Modern children play outdoors just half as much as their parents did when they were young¹².

Yet a recent survey by the Open University asked hundreds of children what they prefer to do, and the results showed that

children are happiest when playing outside with other children¹³.

What does this discrepancy between what children say makes them happy, and what they choose to do with their time, tell us? In an article by Dr Tessa Livingstone, an expert in child psychology and creator of the Child of Our Time project, she highlights that the goals of families have changed. “Our children and their parents may wish for happiness but they aim now for success, with material goods and money as their goal”¹⁴. In other words, children are being brought up to value material possessions and money over their own happiness. Sue Palmer, author of Toxic Childhood commented:

*“We are teaching our children, practically from the moment they are born, that the one thing that matters is getting more stuff”*¹⁵

We are in danger of raising a generation of children who see the world from a purely consumerist perspective, and what more could we expect if that’s the only world they get to experience.

This isn’t just an issue within the home, either. New research undertaken at Plymouth University also suggests this change happens within the school environment as well. During a test, in which they recorded the activity of 32 pupils, they discovered a significant drop in the amount of time spent outside as a child moves from primary to secondary education¹⁶. This is significant when you consider that for some children, who live in towns and cities, or who come from poorer backgrounds, organised outdoor learning at school may be their only experience of the natural world¹⁷.

The Impact of Nature Deficit

There have been far reaching consequences of this new, screen based lifestyle. Research suggests that almost every aspect of an adolescent’s life is affected by Nature Deficit, including education, health, general wellbeing and the sense of community and belonging.

Education

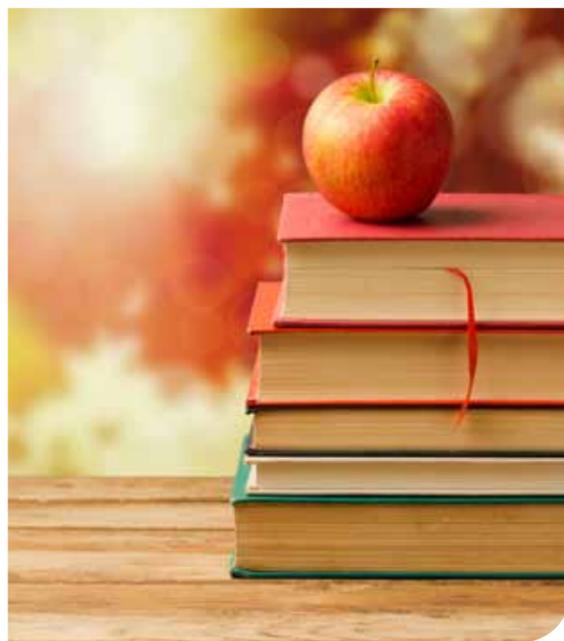
Without external experiences children struggle to apply the things they learn within the four walls of their classrooms to the real world. If we are hoping to raise a generation of kids who can solve problems like global warming, we need to encourage them to start making connections between their curriculum subjects and their surroundings.

Child Psychologist Aric Sigman found that, even by adding plants and better views to educational environments, children exposed to nature scored higher on concentration and self-discipline; whilst also improving their awareness, reasoning and observational skills. He also found that they did better in reading, writing, maths, science and social studies; that they were better at working in teams and showed improved behaviour overall. He called this *“The Countryside Effect”*¹⁸.

Health

Despite government recommendations, a disturbingly high number of young people in the UK aren't reaching the target of 60 minutes of physical activity every day (15% of boys and 19% of girls)¹⁹.

- **Around three in ten children in England aged between 2 and 15 are now either overweight or obese²⁰.**
- **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 girls²¹.**
- **Obesity in childhood carries with it long term implications. Severely overweight people are estimated to die 8-10 years earlier than those in the healthy weight range²². What's more it has an impact on general wellbeing and quality of life, as obese children are more likely to suffer from bullying, self confidence issues, depression and under achievement in school²³.**



There are other health problems teens will face from spending too much time indoors.

It has been linked to near-sightedness, where objects in the distance appear blurry and out of focus. A study involving more than 10,000 youngsters found that each additional hour spent outdoors during the week decreased the risk of developing near-sightedness by 2%²⁴.

Those who spend more than a few hours outside have also been shown to be at a lower risk of hay fever and eczema. The study followed 415 people from birth to the age of 16, and found that the benefit of time spent outdoors was most significant at the age of 16²⁵.

General wellbeing

We have also seen a dramatic decrease in the overall happiness of our children.

- **A recent National Trust survey revealed that 80% of the happiest people in the UK said that they have a strong connection with the natural world, compared with less than 40% of the unhappiest²⁶.**
- **One in ten children aged between 5 and 16 have a clinically diagnosed mental health disorder²⁷.**
- **One in 12 adolescents are self harming²⁸.**
- **Around 35,000 children in England are being prescribed antidepressants²⁹.**

Community

As well as the startling facts above, by staying indoors children are missing out on making friends, getting to know their communities and learning crucial social skills.

“It’s a sad reality that many kids don’t get outside to play every day anymore. And because they don’t go out, they don’t know their communities as well as their parents did, they don’t have as many friends in the area and they don’t have the same opportunities for fun that many of their parents did”³⁰

Cath Prisk, Director of Play England.

The implications of this are far reaching. We only have to look back to the London Riots of 2011 to see a generation disconnected with its community. When surveyed, 36.6% of young people claimed that the riots started because of boredom, and 37.9% said they felt that the Government did not do enough to address the needs of young people³¹.

The Great Escape

“Natural Places are singularly engaging, stimulating, life-enhancing environments where children can reach new depths of understanding about themselves, their abilities and the relationship with the world around them”³²

Tim Gill, leading commentator on childhood.

The good news is, there are already many projects underway, proving that enriching young people’s lives has a far-reaching, positive, knock-on effect. The Inside Out project helps secondary schools apply their classroom learnings to the real world by offering opportunities to see wild habitats including aquatic ecosystems, urban meadows and park landscapes. The Eden Project also offers opportunities for schools to visit and experience outdoor learning, as well as providing training for primary school teachers.

There is a need, however, for more to be added to the curriculum and afterschool activities, specifically in secondary school education. Paul Tombs, Head of Education at Zurich Municipal commented, ***“while achievement in core subjects is vitally important, so is acquiring skills that make a child a rounded person. When educating children you have to look at the whole environment in which they learn and at constantly improving that.”³³***

Scotland has now made big commitments to adding outdoor learning to the curriculum. Their manifesto on the subject Curriculum for Excellence states that ***“learning outdoors can be enjoyable, creative, challenging and adventurous and helps children and young people learn by experience and grow as confident and responsible citizens”³⁴***. Furthermore, ***“different outdoor learning experiences offer opportunities for personal and learning skills development in areas such as communication, problem solving, information technology, working with others and thinking skills.”³⁵***

They outline the key benefits of outdoor learning as helping children and young people become smarter, safer and stronger, healthier, greener, wealthier and fairer³⁶. This becomes even more poignant when we consider that the Every Child Matters (Department For Education) 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.”³⁷

More can be learnt by exploring these specific areas in detail.

Achieving more

By spending time outdoors, adolescents are able to make connections between curriculum subjects. It allows them the opportunity to see real world application of what they have been taught in the classroom. Initiatives such as the RSPB's Pulborough Brooks Programme, bring subjects such as Science and Geography to life with fieldwork and field trips to nature reserves.³⁸

An Ofsted report found that outdoor learning *“contributed significantly to raising standards and improving pupils' personal, social and emotional development”*³⁹. During The Guardian's Round Table, one teacher commented that *“schools should be made aware of the crosscurricular benefits of school trips – a visit to first world war battlefields could encompass Geography and English Literature as well as History, while a trip to an art gallery could take in Maths and Science”*. Another said that following a field trip, student grades had significantly improved⁴⁰.

Being Safer and Stronger

Playing outside helps children to assess risk. By taking part in new activities, they quickly learn when they've gone too far. As we highlighted in our previous paper, studies have also shown that even the lightest contact with nature makes for stronger communities; that even in cases where the only difference was the view of green space from a window, incidences of crime were reduced by 50%⁴¹.

Getting Healthier

It goes without saying that spending more time outside in the fresh air, and doing exercise based activities will make our children healthier. But it can also encourage children to try new sports and hobbies, meaning they may spend more time outdoors of their own accord.

Going Greener

*“Frequent and regular outdoor learning encourages children and young people to engage with the natural and built heritage”*⁴². Spending time enjoying their local surroundings will increase their knowledge and respect for their hometowns. It will enable them to join in community discussions and play a more active role in society. What's more, it will help young people make connections between what they are taught at school about environmental issues and how those issues affect them in the real world.

Becoming Wealthier and Fairer

Learning outdoors can be an opportunity for a child to shine outside the classroom. They may learn a new skill, or discover they are really good at something. It will also help to show just what they can achieve when they set their mind to it. An example cited in The Daily Mail from the Director of Play England, Catherine Pisk was that of learning to climb a tree. *“They are learning to overcome a physical challenge and it will stand them in good stead for overcoming other challenges in life, such as learning to read”*⁴³. It can also be a chance for teachers and peers to see and share in their success, which can *“lead to profound changes in life expectations and success”*⁴⁴.

An article on the Forest School Associations website tells the story of a young boy with Autism, who had been causing trouble at school. By simply spending time outdoors, learning new skills, he was able to find his own strengths:

“You'll have to watch this one” said an accompanying teacher, *“he has been thrown out of every class in the school – we just don't know what to do with him.”* Max was 14 and on the Autistic Spectrum – he struggled with relationships and the environment in which he was being taught. The Forest School programme was truly amazing for him and he went from strength to strength over the weeks. His progress was humbling to see as he found his natural strengths – the positive learning experiences gave new opportunities for everyone (teachers as well) to see Max in a different and positive light. He said he felt free. The positive ripple effect was felt back in school⁴⁵.

Head of Environment at the New Economics Foundation, Aniol Esteban summarised the above when he wrote

*“Environmental experiences and contact with nature in childhood promote physical and mental health, delivering improved education and development. Green spaces and outdoor locations provide key environments for effective learning, in particular for children not engaged with formal education, and can stimulate children's learning abilities and development. Nature is also a key resource to help reduce crime levels and reoffending rates and to strengthen community cohesion by providing a neutral space for people to meet and interact.”*⁴⁶

What's stopping us?

There are many barriers to implementing outdoor learning nationally. As Richard Louv suggests, *“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 intentions.”*⁴⁷



There is also a vast amount of advertising to contend with. Games, TVs, MP3 players and tablets are perceived as “cool”, nature is not. Getting the kids on board, and showing them the benefits of outdoor play in their own time isn't as easy as one would imagine. 43% of parents asked in a JCB Kids survey said their children would *“rather watch television than go outside to play with friends”*. Another 42% said their children preferred to play computer games⁴⁸.

There is also the issue of funding. While wealthier parents, who are able to fund school trips and additional learning resources, see the benefit and are happy to contribute, there needs to be more support for children of poorer backgrounds⁴⁹.

The Guardian Round Table threw up some interesting feedback. *“While teachers and heads may be enthusiastic about outdoor learning, there is a growing unwillingness among parents to allow their children to take risks. As one head said ‘In less privileged communities, even children themselves can be apprehensive about going outside their local area if they haven’t done so before’”*⁵⁰.

On top of this, teachers told The Guardian that they also have to deal with a mountain of red tape. There are concerns over missing targets if the children take too much time out of the school’s four walls, as well as having to justify the trip if it doesn’t match a particular curriculum point. There has also been a shift from arts based subjects which would have had more field trips, to mathematics and science based subjects. Some teachers even felt that this shift was in part due to wanting to keep the children within the school’s four walls⁵¹.

It is safe to assume that most teachers recognise the benefits of outdoor learning, but the red tape and lack of parent support is holding them back. Therefore the challenge to success is to convince parents and politicians of the benefits of outdoor learning, and make it a matter of priority that teachers are given the tools they need to make it happen.



Conclusion

*“Schools have a vital role to play in helping our children and young people get more active, by promoting physical activity and providing opportunities for, and knowledge about, the activity our children need”*⁵²

The British Heart Foundation.

It is impossible to deny that we need to do more to get our children engaged with the great outdoors, to promote exercise and socialising both in education and outside it. If we can inject more outdoor learning into the curriculum and afterschool activities, we’ll not only be improving the overall happiness and wellbeing of adolescents in the present, but we will be equipping them with a set of skills for life, and a love of the natural world that can’t be pacified with a games console.

As a teacher said at The Guardian’s Round Table on the subject of outdoor learning, *“If you lose [outdoor] activities some children will not bother – they will grow obese and vegetate and play computer games. Others, of course, will make their own activities, and some of these will be dangerous and some will be deeply antisocial”*.⁵³

The Learning Escape

Putting theory into practice

In order to help children learn in an environment that integrates the natural world into their day, The Learning Escape specialise in building ecofriendly classrooms, extensions and learning spaces. With large windows, sun pipes, living sedum roofs and solar water systems, they are a fantastic way of immersing children in nature and helping them to understand their own environmental impact.

Woolwich Polytechnic Art Block⁵⁴



In our biggest project to date, we assisted Woolwich Polytechnic in developing a two-storey ecobuilding to accommodate their growing intake of students. They wanted a building that was flexible, sustainable and different, they wanted something innovative and unique for their school.

On a tight budget, we were able to create a bespoke learning space, and the two storey ecobuilding contains eight classrooms for an extra 210 pupils and 8 staff. The building is also home to the art department, so the children are able to draw inspiration from the natural world that now surrounds them. The school tells us that they now have a solid link between their school and their environment, and that the eco-friendly materials create an easy transition between the outdoors and indoors. Importantly it has helped their pupils *“form a new connection with their natural surroundings”*; and they are beginning to understand how and why they should be looking after their natural resources.

Brompton Hall School⁵⁵



We were approached by Brompton Hall, a school for boys with social, emotional and behavioural difficulties, to create a learning space to cope with their growing intake of children. They had extensive school grounds and wanted to know how to make to most of the space.

We designed a modern and innovative building that has given them the space they needed. Their new classroom gives the pupils the opportunity to bridge the gap between the outdoors and indoors. The large glass windows allow them to see what’s going on outside from the comfort of their desk. The school tells us that the natural light has boosted their productivity and having the option to interact with nature has inspired them to be more creative and imaginative.

Top Tips

Now that you've read our report, you may wish to start integrating direct nature experiences into your own school. Below are some suggestions for how you could go about this.



- 1** Discuss the benefits of outdoor learning with parents and other members of staff.
- 2** Take the curriculum outdoors. 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.
- 3** Encourage children to 'pass it on'. Consider putting together a factsheet for parents on the subjects you're covering to help them carry on the learning at home.
- 4** Consider how you 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?
- 5** Support a scheme like Ecoschools, which 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.
- 6** When considering a building project, lead by example. Why not consider an ecoclassroom that uses the best, sustainable materials? Think about positioning and design to allow it to bridge the gap between indoors and outdoors.
- 7** Look out for grants in your local area. Useful websites like www.grants4schools.info and www.mypebble.co.uk/en/sff/ will show you what's available now, and there is often funding available for the promotion of outdoor learning and play.

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⁵³ Guardian Roundtable, 2012: Reported in The Guardian, 4 December 2012.
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⁵⁴ Learning Escape, found 26 September 2013.
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