



From muddy hands and dirty faces...
to higher grades and happy places

Outdoor learning and play at schools around the world

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*'Happy hearts and happy faces
Happy play in grassy places –
That was how, in ancient ages,
Children grew to kings and sages.'*

Robert Louis Stevenson, A Child's Garden of Verses, 1888

A report looking at how much time children around the world spend playing and learning outside as part of the school day. The report includes a review of the wide-ranging literature about why outdoor learning and play are important and an overview of the impact of the Outdoor Classroom Day movement.

Sign up and find out more about Outdoor Classroom Day by visiting: www.outdoorclassroomday.com

The global website gives access to dedicated pages for country-specific campaigns.

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Foreword

The future will belong to the nature smart

Not long ago, I visited a school in Georgia where elementary school students spent a third of their school days learning outside about an array of subjects – in school gardens or on learning trails in the surrounding forest.

In that school, a six-year-old student rushed into his classroom, grabbed his head and exclaimed to his teacher:

“There’s so much nature out here and I only have two eyes and one brain, and I think it’s going to explode!”

Such enthusiasm is infectious. In countries around the world, teachers and other educators are incorporating nature play and learning into their school days and they’re getting results.

Through the global Outdoor Classroom Day campaign, over 40,000 schools in over 100 countries have encouraged more than 4 million students and teachers to step into the largest classroom in the world.

Today, as this report makes clear, there is a growing body of research indicating that a high percentage of parents now consider outdoor learning and play an essential ingredient in the daily lives of their children, or think it should be. According to the Outdoor Classroom 2017 survey, 93 percent of US teachers express a desire to take lessons outdoors more. Government policies in Australia, Scotland, Finland, and Germany already support outdoor learning and play – isn’t it time that it’s recognised everywhere?

This increase in awareness has been stimulated over the past decade by a relatively new and growing body of research indicating how learning and playing outdoors can improve cognitive functioning, reduce student (and teacher) stress, lower the symptoms of attention-deficit disorder, raise test scores, improve creativity and social skills and, most importantly, ignite a sense of wonder.

This is not to say that the barriers to getting outdoors at school have disappeared. In the US, for example, even as awareness of the effectiveness of outdoor play and learning expands, some school districts continue to cut back on the number of hours available for recess; and children in the US experience far less time outdoors than their European cousins, or their neighbours in some parts of Canada. Though parents and teachers may be more aware of the positive influences that playing in nature has on children’s health, they continue to struggle with urban design that reduces available nature, digital encroachment on everyday life, intensifying economic pressures, and fear of strangers and of nature itself.

Even so, a countertrend toward more nature in children’s lives continues. We see a dramatic increase in the number of nature-enriched preschools; K-12 language and literature teachers who encourage children to write poetry under the trees; science teachers who take advantage of the creek at the edge of the schoolyard to teach biology; high school

administrators who establish natural learning expeditions far beyond their campuses; and educators, parents and students who work together to create native-species gardens and natural schoolyards; especially important in densely-populated urban neighbourhoods.

Many of us now believe that the future will belong to the nature smart – those young people with hybrid minds, who become leaders by developing both ways of knowing the world, the virtual and the natural. Each school that participates in Outdoor Classroom Day will help young people take a step into that future. And then another.



Richard Louv

Chairman Emeritus of the Children & Nature Network and author of ‘Last Child in the Woods’, ‘The Nature Principle’, and ‘Vitamin N’.

**'No-one will protect what
they don't care about and
no-one will care about what
they have never experienced.'**

David Attenborough



The Outdoor Classroom Day movement

Building a community to help children get outdoors more

‘Too many of London’s children have little or no meaningful contact with natural places in the city. As a result, they may be denied the many and varied benefits that experiences in nature bring: experiences that many adults understand at a deep emotional level from their own childhood memories.’

Tim Gill, Sowing the Seeds report for the London Sustainable Development Commission, 2011

In 2011, London’s Sustainable Development Commission asked Tim Gill, an expert in childhood, to produce a report on how best to reconnect children with nature in order to grow the next generation of environmentally-conscious young people. *Sowing the Seeds* offered a depressing analysis. Gill found that a number of children rarely or never went to a green space – a park, woods or beach. In London, one in seven families did not go to a green space over the course of a year.¹

Anna Portch, an environmental educator, was in the audience at the launch and was particularly struck by the finding that possibly as few as 4% of London’s 1.1 million children under the age of 12 were being ‘engaged in nature’ through their schools. Enlisting the help of other nature-based organisations, Anna started a campaign to encourage schools to celebrate how they connected children to the outdoors and to inspire other schools to have a go.

The campaign, then called ‘Empty Classroom Day’, started small, just a few schools in South London. By 2015, over 600 schools in 15 countries were involved. The following year, Project Dirt, one of the founding organisations, partnered with Unilever’s Dirt is Good team to grow the campaign and expand it internationally.

The campaign became ‘Outdoor Classroom Day’ and since then Project Dirt has joined forces with ten leading education NGOs and teams from Dirt is Good brands to build local campaigns in sixteen countries, engaging with over 4 million children worldwide. Schools in over 100 countries have signed up, from Alaska to Tasmania, Patagonia to Sulawesi.

Outdoor Classroom Day is now a truly global movement to inspire and celebrate outdoor learning and play. The movement has two campaign days, one in each half of the year, so schools in different countries can participate on a day that suits their climate and fits with their term times. As well as being a lot of fun, Outdoor Classroom Day shows teachers and parents how beneficial and easy it is to allow children to enjoy more time outdoors.

¹ Gill, (2011).

The Outdoor Classroom Day movement has three simple but ambitious goals to make sure the campaign is about more than just one day:

- **Outdoor learning part of every school day.** Outdoor learning is part of every school day for every child.
- **A consistent minimum target for recess/playtime.** Every child has great recess/playtime at school every day for at least 60 minutes, with the longer-term aim of 90 minutes.
- **Schools to advocate for more time outdoors.** Schools act as advocates for more time outdoors so that outdoor play becomes part of every child’s everyday life.

From the Outdoor Classroom Day 2017 survey of teachers who have taken part in the campaign, it is evident that the campaign is already making some headway in achieving its longer-term goals. Over one fifth (22%) of respondents to the survey worldwide said they have increased playtime since getting involved; and more than two fifths (44%) said they have increased the frequency of outdoor learning. Almost every teacher surveyed – 97% worldwide – said that time to play outdoors is critical for children to reach their full potential.

With the increasing pressures on our time from all angles, it’s vital that we allow children the space to experiment, understand the world around them, and express themselves. Access to the outdoors helps our youngest generations to develop into creative, healthy and socially responsible adults, who in turn will become active participants in the development of healthy and productive societies.

Project Dirt has been proud to be a part of this campaign from the outset, and I hope this report will help the movement build so that getting outdoors at school becomes part of the new normal.



Nick Gardner

*Co-founder and CEO Project Dirt:
Connecting Communities for Good*

*Global Lead Organisation for the
Outdoor Classroom Day Campaign*



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Executive summary

Outdoor Classroom Day is a global movement to inspire and celebrate outdoor learning and play. It was created to raise awareness about the importance of playing and learning outdoors, highlighting the benefits it brings to children, families and whole communities. The campaign is led by the organisation Project Dirt, who have joined forces with ten leading education Non-Governmental Organisations (NGOs) and teams from Unilever's Dirt is Good brands to build local campaigns in sixteen countries, engaging with millions of children worldwide. Schools in over 100 countries have signed up, from Alaska to Tasmania, Patagonia to Sulawesi.

In this report, we set out the goals, impact and evidence base for the campaign and the wider case for why getting outdoors is so important, advocating 'every day and often' as a recommended prescription for time outdoors: for all children, both during and after the school day.²

The Outdoor Classroom Day movement has three simple but ambitious goals to make sure the campaign is about more than just one day:

Outdoor learning part of every school day. Outdoor learning is part of every school day for every child.

A consistent minimum target for recess/playtime. Every child has great recess/playtime at school every day for at least 60 minutes, with the longer-term aim of 90 minutes.

Schools to advocate for more time outdoors. Schools act as advocates for more time outdoors, so that outdoor play becomes part of every child's everyday life.

These goals support the World Health Organisation's guidance on time needed per day for physical activity³, the Sustainable Development Goals⁴ and the UN Convention on the Rights of the Child⁵, which expects States to ensure children connect to nature, have access to good quality schooling, and have time to play.

Since the campaign started in the UK in 2011, over 40,000 schools in more than 100 countries have signed up. In 2017 over 2 million children from over 20,000 schools in more than 100 countries got involved and there were dedicated campaigns led by world-class educational and children's non-profits in eight countries. In Australia, the Government in Queensland wrote directly to every teacher to encourage them to get involved. In Indonesia, the Government also supported schools to get involved by contacting the Heads of Education in territories across the country.

As a result of their involvement in the campaign, schools are reporting that playtime and outdoor learning has increased:

- 22% of primary schools worldwide who responded to the survey said they have increased playtime since taking part in Outdoor Classroom Day.
- Over 70% of those who signed up prior to 2016 have now increased the frequency of outdoor learning.
- More than two fifths (44%) of all schools engaged in the campaign said they have increased the frequency of outdoor learning.
- Almost every teacher who responded – 97% worldwide – said that time to play outdoors is critical for children to reach their full potential.

Tens of thousands of schools around the world are now taking lessons outside and prioritising playtime, as well involving parents and volunteers from their communities – which helps spread the message that outdoors should be an essential part of every day.

Defining play and outdoor learning

Outdoor learning, playful learning and outdoor play all have their place in a school day and are valuable in their own distinct way. This report seeks to tease apart the benefits of each, using the following definitions:

Outdoor learning refers to any adult-directed lessons that are held outdoors.

Playful learning is learning planned or directed by an adult but with the child controlling their own engagement – the intention is that it should be fun, playful and experiential.

Play is directed by the child, is not constrained or directed by an adult and is a process engaged in for its own purpose.

Playtime refers to all break times throughout the school day.

This report does not include 'outward bound' activities such as hiking, canoeing or climbing.

Part 1 - A snapshot of outdoor learning and play at school around the world

The first part of the report summarises findings from the Outdoor Classroom Day 2017 survey, building a picture of the time children around the world spend playing and learning outdoors as part of the school day.

The survey team asked teachers about their experience of taking lessons outdoors and the availability of opportunities for outdoor play within their school (that is, free time

² Yogman et al. (2018)

³ <http://www.who.int/mediacentre/factsheets/fs385/en/>

⁴ <https://sustainabledevelopment.un.org/sdgs>

⁵ <https://www.unicef.org/what-we-do/un-convention-child-rights/>



97% of teachers say that time to play outdoors is critical for children to reach their full potential.

Outdoor Classroom Day 2017 survey

outdoors where children can enjoy self-directed activities, for example, during recess). The team received sufficient responses to build a comparative set of data from Australia, Canada, the UK and the US.

The data was collated between November 2017 and April 2018 and brought together responses from 713 teachers answering questions about outdoor learning and 629 teachers answering questions about outdoor play. The survey team received responses from 44 countries. As far as we are aware, this is the first large-scale global survey of the length of time children spend outdoors while at school.

The analysis focuses on comparative data from Australia, Canada, the UK and the US, as each of these countries had over 90 respondents. When considering length of playtime and frequency of outdoor learning, the data was further refined to focus solely on primary schools (ages 6 to 12).

Although the data can only represent a snapshot (as we can assume responses came from teachers and schools already predisposed to outdoor learning and play) we can, nevertheless, draw some interesting, if at times worrying conclusions. Even in Australia, Canada and the UK – where most state or regional Governments formally recognise outdoor learning and break time as important – children are still by no means learning outdoors every day or playing outdoors either for the minimum one hour recommended for physical activity, or for the 25% of school time that some psychological research on mental wellbeing suggests is optimal. Again, given this was a survey of schools who had engaged with the Outdoor Classroom Day campaign, and therefore with an interest in allowing more time outdoors, we can infer that the results in the wider population could be even lower.

Headline statistics from the data

Frequency of outdoor play

- 99% of teachers in Australia, Canada, the UK and the US (and 97% worldwide) agreed that time to play outdoors throughout the day is critical for children to reach their full potential.
- Nevertheless, two thirds of primary teachers worldwide (65%) said children at their school get less than one hour of playtime a day; 12% said children get less than 30 minutes.

Frequency of outdoor learning

- Almost a third (29%) of American primary teachers said they take lessons outdoors less than once a month, by far the least worldwide.
- By contrast, almost three quarters (72%) of Australian teachers surveyed said they take lessons outdoors at least once a week.

What stops children going outside at school every day?

- Eight out of ten teachers said the weather prevented outdoor play, and seven out of ten said it prevented learning outdoors.
- One in five teachers worldwide said poor playground behaviour stops children going outside (despite consistent research worldwide saying more play can lead to better behaviour).
- One in five (19%) of children in the US were kept in at playtime to catch up on lessons, compared to less than one in ten of children in Canada (9%) and Australia (8%).

- Behaviour was also perceived as an issue for taking lessons outdoors for at least one in seven teachers worldwide, rising to over a quarter (28%) in Australia.
- One in five teachers (20%) said they were worried about the extra preparation needed to take lessons outdoors, rising to over a quarter (26%) of teachers in the US.
- Australian teachers were most likely to say nothing stops outdoor play (21%), while teachers from the UK were most likely to take lessons outdoors in all weathers, as 24% said nothing keeps them inside.

Perceived benefits of outdoor learning and play

- The majority of teachers said that children gain a better understanding of the environment through outdoor play (92% of Australian and 88% of Canadian teachers identified this as an outcome, compared to 83% in the UK and 82% in the US).
- Teachers across the world believe playing outdoors develops key skills for life, including social skills, imagination and creativity, improved fine motor skills and the ability to focus on a task.
- Teachers believe playing and learning outdoors helps children in their learning, through improved behaviour and by enabling them to better engage with learning and retain information.
- Playing outdoors and outdoor learning makes children happier.

Part 2 – Why outdoor learning and play should be part of every school day

The second part of the report presents an overview of the wide-ranging literature about outdoor learning and play, highlighting why it is important at school and every day.

The literature reviewed shows that outdoor learning and play has a huge range of benefits for children. Being out in fresh air, whatever the weather, has been shown to improve mood, reduce stress, improve eyesight and increase physical activity.⁶ We have referenced a number of robust research studies, which show that encouraging children to play freely can improve their educational outcomes.⁷ The fun that comes from play is a crucial part of childhood, and is essential to health, wellbeing and learning.

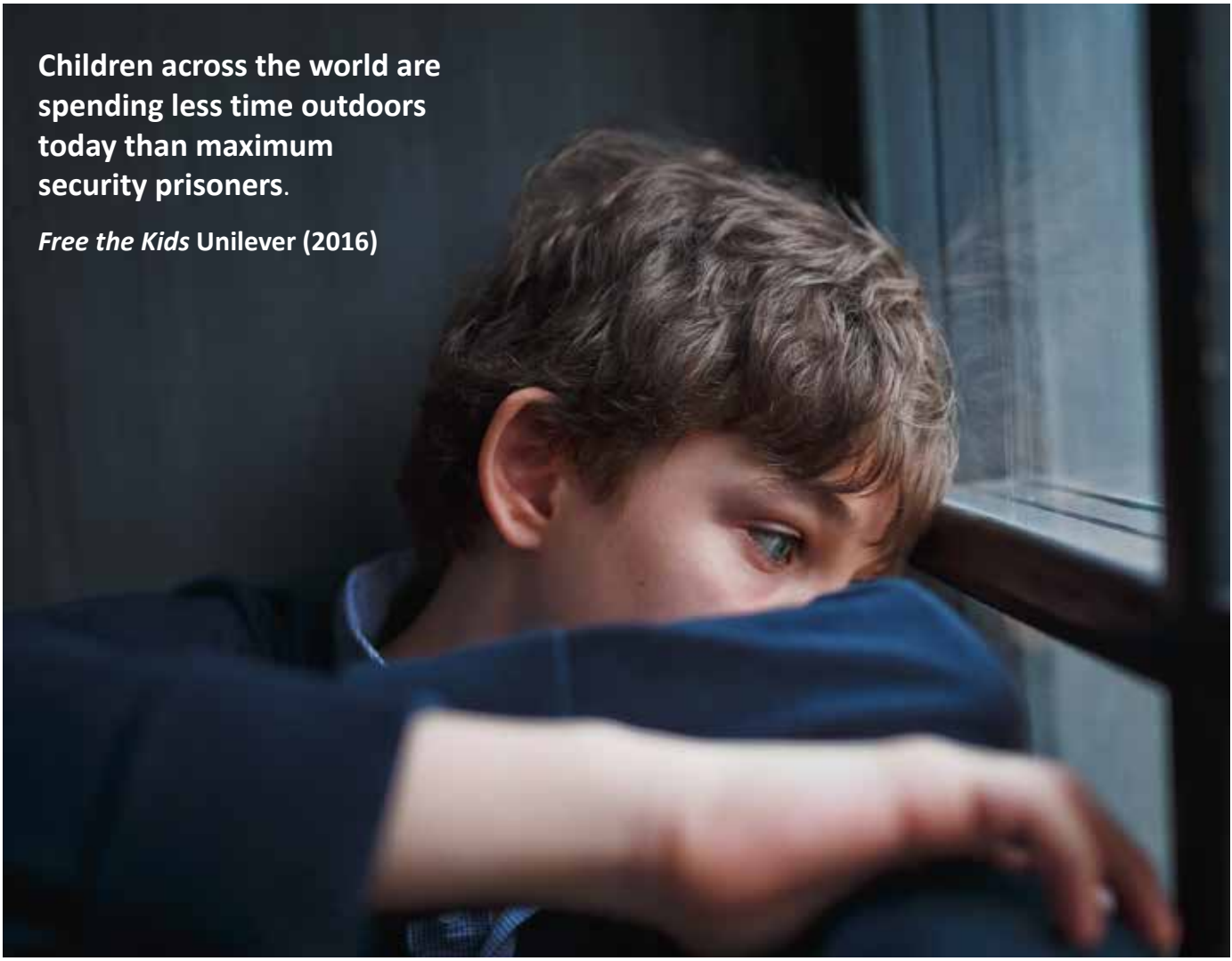
Key themes identified within the available literature:

Getting outdoors connects us to the places we live and the environments we will want to protect. Environmental stewardship and connection with place is strongly related to the amount of time we are immersed in nature as children.⁸

6 Gill, (2011) & (2014b); Children and Nature Network, (2018); Dowdell et al, (2011); Herrington & Brussoni (2015); Kellert (2013); Maller (2006).

7 Sobel, D, (2004)

8 Louv, (2008); Dowdell, Gray & Malone (2011); Sobel (2013); Williams, (2017); Ballantyne & Packer, (2008).



Children across the world are spending less time outdoors today than maximum security prisoners.

Free the Kids Unilever (2016)

Children who are outdoors in nearby spaces often love their environment and grow up wanting to protect it.⁹ We protect what we love, and we love what we know deeply and intimately. Distant mountains make for great adventures, but every day and often is the recipe for growing tomorrow's environmentally-responsible adults.

Getting outdoors results in better learning outcomes, across the board. Outdoor learning can create improvements across all academic disciplines¹⁰, helping with problem-solving and enthusiasm for learning; and can contribute to improved test scores and grade averages.¹¹

The benefits of outdoor learning and play last beyond early education. Preschool children who enjoy large amounts of outdoor time have been shown to consistently score better on standardised tests for executive function, attention and short-term memory than children attending preschools that have fewer outdoor hours in the school day. Those children who enjoy more outdoor time during preschool continue to score better on standardised testing once they have moved into primary education.¹²

Outdoor play gets kids more active. Children everywhere are leading significantly less active lives than children a generation ago¹³ and this inactivity has significant health implications.¹⁴ When engaged in play, children will stay active for long periods of time¹⁵ and are more active outdoors compared to indoors.¹⁶ Studies done using GPS tracking in the UK show that children are more than two-and-a-half times more active when outdoors compared to indoors.¹⁷

Outdoor learning and play creates healthier kids. Children come to school more often, can concentrate better, physically sit at their desks for longer, can see better and can learn more.¹⁸ Active free play is also critical in helping children develop balance, co-ordination and improved motor fitness.¹⁹

Time spent outdoors boosts mental health. Research from around the world points to the ability of nature to restore our sense of wellbeing.²⁰ Children feel better and perform better after they have been outdoors.²¹ Getting outdoors helps children feel calmer, helps process their day and builds the holy grail of capabilities: resilience. Above all else, being outdoors simply makes us feel alive, feel joy; and feeling joy on a regular basis is an essential foundation for a good childhood²² and healthy later life.

9 Louv, (2008); Gill, (2014a).

10 Sobel, (2004); CDCP, (2010); Baines & Blatchford, (2011); Chawla et al (2014).

11 In Sobel, (2004) p36.; Kuo et al, (2017).

12 Ulset et al. (2017).

13 Active Healthy Kids Australia, (2016); Duncan & McPhee (2015); Kellert, (2013); Planet Ark, (2011).

14 Tremblay et al, (2016); Active Healthy Kids Australia, (2016); WHO.

15 Active Healthy Kids Australia, (2016); Baines & Blatchford, (2011); Beresin, (2016); Center for Disease Control and Prevention, (2010).

16 Cooper et al, (2010); Herrington & Brussoni (2015); Jansen & LeBlanc, (2010).

17 Cooper et al, (2010).

18 Langford et al, (2014); Brussoni et al, (2015); Robinson & Aronica, (2018); Strauss & Hanscom, (2014).

19 Fjørtoft (2004).

20 Williams, (2017); Chawla et al (2014).

21 Stixrud and Johnson, (2018) p209.

22 Stixrud and Johnson, (2018).

Schools as influencers: making outdoor learning and play part of every child's life

In the concluding section, we discuss how schools can act as catalysts in their communities to help increase opportunities for children to play outside of the school gates.

Many schools are now making outdoor days happen at least once a term, sometimes once a month and even committing to outdoor lessons every day. For those who are just starting on their journey, there is a huge range of resources, guidance and support for both outdoor learning and outdoor play via specialist sites and communities on social media platforms.

Worldwide, 93% of parents agree that children's learning would suffer without opportunities to play, and 95% say that, without play, children cannot reach their full potential.²³ Survey after survey in Australia, the US, the UK and around the world says that parents value play and outdoor learning.

Schools, by sending the clear message that getting outdoors is important to children's wellbeing and development, can help make outdoor learning and play become part of every child's everyday life.

Many governments around the world actively support outdoor learning and play. Parents and teachers want it. Children want it. All that is required is the catalyst to make it happen.

‘The intention here is to make the case for more time to be spent outdoors on a daily basis, supporting ‘every day and often’ as a recommended prescription for all children both at school and beyond.’

23 Edelman Intelligence, (2016).

Introduction: about this report

This report explains why playing and learning outdoors is a critical part of the school day, not just an optional extra. It sets out why time outdoors should not be seen as an added burden, but as a space to improve outcomes: by making lessons more memorable, by improving focus and concentration, by reducing absenteeism and increasing creativity and imagination. More than anything, outdoor play makes children happy, and happy children thrive.

Part one of the report presents the key findings from the Outdoor Classroom Day 2017 survey, with comparisons between the four focus countries (Australia, Canada, the UK and the US) and all schools worldwide. We highlight that teachers report children have a better understanding of the environment after playing outdoors and reflect on some of the barriers to getting outside.

Part two of the report shines a light on why outdoor play and learning should be a critical part of every school day. The focus of much of the literature is on schools, in part because that is where children spend a large amount of their time, but also where most research is done. It should be noted the report does not cover literature about children with additional needs in any depth, but much of the research does emphasise that great outdoor play environments and green school yards can help schools meet all children's requirements.

Part three of this report focuses on opportunities for campaigners, teachers and experts. It looks at how – through policy and cultural change – the Outdoor Classroom Day campaign goals can be achieved. It notes that schools are extremely well placed to be beacons in their own communities, highlighting the importance of getting outdoors regularly.

Griffin Longley, CEO of Nature Play Australia, which is leading the consortium of organisations driving the campaign in Australia, says:

'We've found teachers have a pent-up appetite for finding curriculum-based reasons to get kids outdoors. They know we need to get outside to learn, they're just pressured with everything else they have to do.'

This report seeks to provide the foundation of evidence teachers need to show that time outdoors isn't just 'one more thing to do'. It's a solution that will make teachers' lives easier, schools better and children happier – as well as being plain common sense.

'More than anything, outdoor play makes children happy, and happy children thrive.'

What we mean by outdoor play, playful learning, and learning outdoors

Outdoor learning, playful learning and outdoor play all have their place in a school day and are valuable in their own distinct way. This report seeks to tease apart the benefits of each, using the following definitions:

Outdoor learning refers to any adult-directed lessons that are held outdoors.

Playful learning is learning directed by an adult, but where the child controls their own engagement – the intention is that it should be fun, playful and experiential.

Play is directed by the child, is not constrained or directed by the adult and is a process engaged in for its own purpose.

Playtime refers to all break times throughout the school day.

The term 'outdoors' here refers to any outdoor space: the playground and sports field as well as the streets and parks around a school. Parents and educators should not think that children need to go deep into the forest, up a mountain or to a National Park to connect with nature or enjoy playing. Frequently visiting a single outdoor space can build a sense of ownership much more firmly than a once-a-year visit to the wilderness.²⁴ While green features and increased wildness are beneficial in their own right, they are not essential to the outdoor experience.

It should be noted this report does not focus on 'outward bound' activities such as hiking, canoeing or climbing, or off-site visits. As valuable as these bigger adventures are, the intention here is to make the case for more time to be spent outdoors on a daily basis, supporting 'every day and often' as a recommended prescription for all children both at school and beyond.²⁵

There is a wealth of research that shows the benefits of outdoor play. Simply being out in fresh air, whatever the weather, has been shown to improve mood, reduce stress, improve eyesight and increase physical activity.²⁶ But, crucially, being outside supports children's agency and self-direction, providing a space where there is more to do, more incentive to physically move and more opportunities to develop games and activities that children can think up themselves and sustain.²⁷

²⁴ Williams, (2017).

²⁵ Yogman et al. (2018).

²⁶ Gill, (2011) & (2014a); Children and Nature Network, (2018); Dowdell et al, (2011); Herrington & Brussoni (2015); Kellert, (2013); Maller et al, (2006).

²⁷ Louv, (2012); McCree et al, (2018); Play Wales, (2015); Rhea, (2015); Kellock, (2015); Jarrett, (2013).

This report is not attempting to present a new theoretical framework for play²⁸, but aims to outline the complexity and opportunity that children’s play, and in particular outdoor play, presents.

Play as a process/activity/state is famously difficult to describe.²⁹ Often viewed as the antithesis of ‘work’, it can be thought of as frivolous, a pastime, or even a waste of time. Certainly, some teachers – and administrators governing teachers’ health and safety at work – think about playtime in terms of the break that it gives to their day, time to get a coffee and prepare for the next lesson. But playtime is – and should be – much more than that.

Human geographer Tara Woodyer defines play as:

‘...an inherently social practice, an open process that prioritizes the intrinsic value of becoming through a performative engagement with the world.’³⁰

Through play, children both learn the skills they need for a good adulthood, and learn who they are in their own present. Through play, children ‘co-construct’ their own unique viewpoint of what the world is and could be. In this respect, every object and environmental element can shape what that viewpoint is. This applies to the tiniest baby just learning to play peekaboo; to the 8 year-old building a den in the woods; or the 17 year-old trying out ever more outrageous festival outfits with her friends.

In *The Power of Play*, a paper by the American Academy of Pediatrics³¹ (AAP) play is referred to as something ‘elusive’, something that is both internal and personal:

‘...an activity that is intrinsically motivated, entails active engagement, and results in joyful discovery. Play is voluntary and often has no extrinsic goals; it is fun and often spontaneous.’

One of the simplest definitions of play, however, was given by a child, taking part in a consultation with school playtime expert Michael Follett:

‘Play is what I do when you stop telling me what to do!’³²

This definition fits with many children’s understanding of play – if you tell me what to do, then it may be playful, it may be instructive, it may indeed serve a higher purpose, but it is no longer play.

The one thing lacking in these definitions is the dangerous edge to play that is reflected in one of Brian Sutton-Smith’s famous quotes:

‘As they play, children re-arrange their worlds to make them either less scary or less boring.’³³

In *Unfinished adults and defective children: On the nature and value of childhood*, Gheaus³⁴ wrote about how children

are uniquely fitted for childhood, with the drive to play hard-wired in them. The late Stuart Lester, a highly respected English play academic, talked about the value of the ‘nonsense, ordinariness and triviality of play’, which is sure to strike a chord with anyone who has spent any amount of time observing children. If adults were to replicate what children are doing in their play, they would find it extremely boring, which possibly explains why we so often trivialise it. Children’s play is indeed occasionally trivial and ordinary – but so is making a cup of tea for a neighbour or remembering to take the recycling out. Out of those trivial everyday interactions societal structures are formed. Similarly, from what might seem to be endless repetitions of minute actions – putting a ball in a cup, jumping off a wall, cycling around an estate – children weave their sense of agency, their cultural foundations and their sense of place.³⁵

Outdoor learning is far easier to define – more likely, although not necessarily, adult-led and often taking place in the context of formal or informal education. There is a continuum of control implied in the different literature about outdoor learning, but for the sake of this report we generally mean a session that a teacher has planned that is outdoors.

There is a huge amount of research and writing on the specific Forest School³⁶ approach. This is a pedagogy – a teaching and learning methodology – that started in Europe and can be summarised as a play-based, child-led and playful way of enabling a learning experience outdoors, usually for children between 2 and 6 years-old. However, the Forest School approach can also be applied at all levels of learning. The Forest School Association in the UK defines it as ‘an inspirational process, that offers all learners regular opportunities to achieve and develop confidence and self-esteem through hands-on learning experiences in a woodland or natural environment with trees.’³⁷

When defining outdoor play against outdoor learning, it is best to think of a blurring of lines along a continuum: from free ‘real’ play; through Forest School-style child-led explorations (where adults may frame the environments but not direct the activities); to playful learning styles and hands-on, experiential teaching, and ultimately to directive teaching that is taking place outdoors³⁸. For the purpose of this report, and to simplify the message when speaking worldwide across multiple education systems, we are simply talking about outdoor learning being when a teacher has a purpose in mind for a session, and outdoor play being when the child decides the purpose of the activity.

Within the school day there are many opportunities for child-led, intrinsically-motivated ‘real’ play outdoors – principally through playtime and breaks, as well as manifold opportunities for learning outdoors. Capitalising on these opportunities need not impose any additional burden on teachers, and in fact (as many schools demonstrate every day³⁹) can help children thrive and achieve more effectively.

28 References to theoretical perspectives are in the bibliography

29 Sutton-Smith, (2009); Lester & Russell, (2008); Zosh et al, (2018).

30 Woodyer, (2018).

31 Yogman et al, (2018).

32 Follett, (2017).

33 Sutton-Smith, (1999) in Lester & Russell, (2010).

34 Gheaus, (2015).

35 Lester & Russell (2008), (2010), (2014); Whitebread (2012); Yogman et al (2018); Griffiths, (2017).

36 Also known as ‘Bush Kinder’ in some of the referenced Australian texts.

37 <https://www.forestschoollassociation.org/what-is-forest-school/>

38 Stixrud, (2018); Zosh et al, (2018); Lester and Russell, (2008); Smith, P.K., (2009).

39 <https://outdoorclassroomday.com/get-inspired/>.



1 A snapshot of outdoor learning and play

Findings from the Outdoor Classroom Day 2017 survey

‘Outdoor Classroom Day was the best day EVER! ... children loved being outside... they made cubbies, climbed trees, built teepees, moved logs, ran, fell over, picked themselves up... and went home happy.’

Teacher in Australia, Outdoor Classroom Day 2017 survey

This section presents the findings from the Outdoor Classroom Day 2017 survey.⁴⁰ The data set was collated between November 2017 and April 2018 and brings together responses from 713 teachers answering questions about learning outdoors, and 629 teachers about outdoor play. Worldwide, we received responses from 44 countries. As far as we are aware, this is the first large-scale global survey of the length of time children spend outdoors while at school.

In the following sections ‘all schools’, ‘global’ or ‘worldwide’ refer to the average data across the full data set. In the main, we focus on data from Australia, Canada, the UK and the US for comparison, as each of these countries had over 90 respondents. We have included feedback from schools in other parts of the world within our analysis of the qualitative responses.

When looking at the length of playtime and the frequency of outdoor learning, we further refined the data set to focus solely on responses from primary schools (ages 6 to 12), including ‘all-through’ schools. In order to obtain this data for analysis, our results excluded early years (ages 0 to 6), secondary schools or colleges for children aged 16 and over.

The tables relating to this data can be found in the appendices. Within the tables we have indicated which data is previously unpublished and which were included in a global release of preliminary findings in May.⁴¹

As valuable as this data set is, it is only a snapshot, as we can assume that responses generally came from teachers and schools already predisposed to outdoor learning and play. Nevertheless, the responses are interesting, if at times worrying.

Even in Australia, Canada and the UK – where most state or regional governments formally recognise outdoor learning

⁴⁰ The full methodology and tables are in the appendices.

⁴¹ Prisk, (2018).

‘Children need room to learn... four walls don’t help ... they feel trapped. As soon as we take our learning outside its less stress for them and they actually focus more!’

(Teacher in Canada)

and break time as beneficial – children are still by no means learning outdoors every day or playing outdoors; either for the minimum hour recommended for physical activity, or for the 25% of school time that some psychological research on mental wellbeing suggests is optimal.

1.1 Time for play – breaks, playtime and recess

99% of teachers in Australia, Canada, the UK and the US (and 97% worldwide) agreed that time to play outdoors throughout the day is critical for children to reach their full potential.

Nevertheless, two-thirds of primary teachers worldwide (65%) said children at their school were given less than one hour of playtime a day; 12% said children at their school got less than 30 minutes.

Teachers at elementary (primary) schools in the US reported the shortest playtimes – 89% said children were given less than one hour, four out of ten (40%) said children at their school were given less than 30 minutes of playtime across the school day.

Australian primary teachers reported the longest playtimes – 58% said children have more than one hour and 11% said children have more than 90 minutes across the school day.

In the UK, 60% of primary teachers said children get less than one hour of play per day, only 8% said children have more than 90 minutes.

In Canada, 66% of teachers said children at their school have less than one hour of playtime and 10% have more than 90 minutes.

By comparison, no Australian (or Finnish) schools in the survey said children are given less than 30 minutes playtime per day.

The data shows there are no clear standards applied to playtime as the reported length of playtime was different both within countries and across different education systems.

The first question in the survey asked teachers: What do teachers and staff at your school think about outdoor play/recess/break time generally?

The qualitative responses to this question were illuminating, showing that outdoor learning and play are not necessarily embedded within the culture of schools:

'We are a middle school and do not have play/recess/break time built into our schedule.' (Teacher in the US)

'I cannot comment as I've never discussed this, or been a party to this topic in debate with colleagues' (Teacher in the UK)

These were not isolated examples, but were repeated across a number of schools in each country. Schools in the US most frequently cited multiple barriers to children playing outdoors; UK teachers were most likely to say they 'didn't know' what others thought about outdoor play or break time; while Australian teachers indicated that recess was mostly a given. Across the rest of the world we saw similar variations.

The follow-up question focused on how long children usually get to play outdoors during the school day, specifically during playtime or recess, asking teachers to disregard time spent eating lunch.

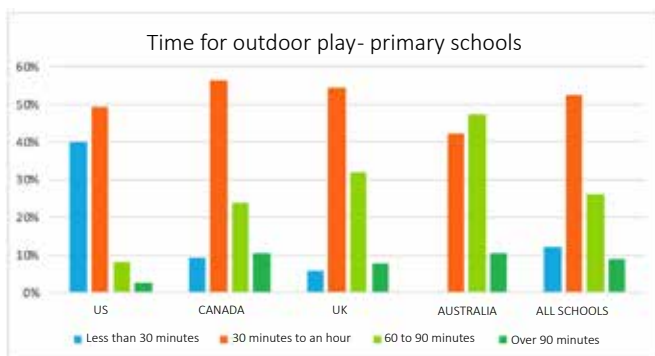


Fig. 1 Time for recess/playtime in primary schools worldwide.

As Figure 1 shows, Australian teachers reported the most amount of playtime at primary levels (children aged 6 to 11 years old), with 11% reporting more than 90 minutes of playtime a day.

Over half (58%) of Australian teachers said children enjoyed more than an hour, the recommended time for daily physical activity for this age group. This compares with 40% of UK primary schools and just 11% of elementary schools in the US.

Teachers in the US reported significantly less playtime than other countries surveyed at all ages. It was also the only country where secondary schools had no recess as a matter of course, and where four out of ten of all elementary (primary) schools (40%) had less than 30 minutes. Nine out of ten (89%) had less than an hour. By contrast no Australian primary schools recorded less than 30 minutes.

The only other countries where secondary schools reported they had no break times were Brazil and Indonesia, but there were not enough responses from these countries to tell whether this was usual practice.

Given this was a survey of schools already involved in Outdoor Classroom Day, and therefore with an interest in allowing children to enjoy more time outdoors, we can infer that the results in the wider population could be even lower.

1.2 Frequency of outdoor learning in primary schools

Almost a third (29%) of teachers at elementary schools in the US said they take lessons outdoors less than once a month, by far the least worldwide.

Almost three quarters (72%) of Australian teachers surveyed said they take lessons outdoors at least once a week; more than any other country represented in the survey. Nonetheless, one in six (17%) said they take lessons outdoors less than once a month.

87% teachers worldwide said they would like to increase time for outdoor learning. In the US, this figure rose to 93% of teachers.

The most striking feature of the data in relation to the frequency of outdoor learning in primary schools worldwide is the lack of consistent practice within countries.

Almost a fifth (18%) of Canadian primary school teachers reported taking lessons outdoors every day, more than elsewhere, however 18% of schools took lessons outdoors less than once a month.

Almost three quarters (72%) of Australian teachers surveyed said they take lessons outdoors at least once a week; more than any other country represented in the survey. However, one in six (17%) reported taking lessons outdoors less than once a month, in line with the worldwide average of 16%.

Again, US schools had the least amount of time outdoors. Almost a third (29%) of respondents from elementary schools in the US said they have lessons outdoors less than once a month, by far the least worldwide.

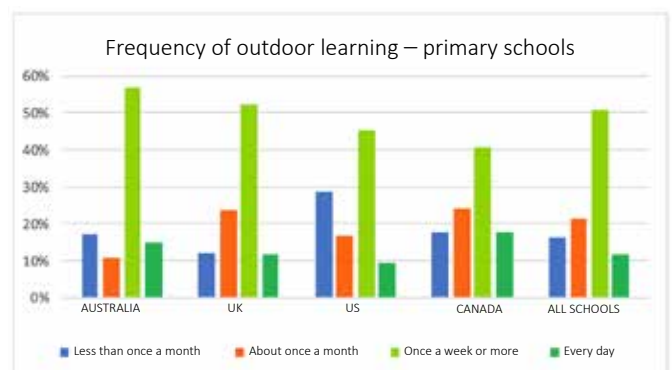


Fig. 2 Frequency of outdoor learning amongst primary schools

Further research needs to be done to understand both the quality of outdoor learning and why there is such a variation between schools within the same education systems, even in countries that actively support outdoor learning.

Perhaps unsurprisingly, more than nine out of ten (93%) schools in the US said they would like to take children outdoors more frequently. This number was lower in countries where children are learning outdoors more – but everywhere more than four out of five teachers said they think lessons should be outdoors more often.

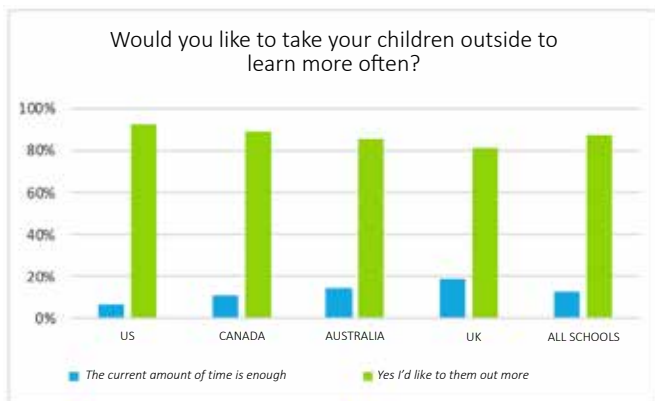


Fig. 3 Percentage of teachers who want to take lessons outdoors more

1.3 What stops children going outside at school every day?

One in five teachers worldwide said poor playground behaviour could stop children going outdoors (despite consistent research worldwide saying more play leads to better behaviour). In the UK over one third (36%) of teachers reported that children had been kept inside for poor behaviour.

One in five (19%) of US children were kept in from playtime to catch up on lessons, compared to less than one in ten (9%) in Canada or Australia (8%).

Behaviour was also perceived as an issue when taking lessons outdoors for at least one in seven teachers worldwide, rising to over a quarter (28%) in Australia.

One in five teachers (20%) said they were worried about extra preparation needed to take lessons outdoors, rising to more than a quarter (26%) of teachers in the US.

However, teachers in the US said they did not consider parents' perceptions of learning outside as a problem (only 2%) compared to 10% of Canadian teachers and 11% of Australian teachers.

Eight out of ten teachers said the weather prevented outdoor play and seven out of ten said it prevented learning outdoors. The severity of weather that stopped outdoor play varied considerably: from light rain in parts of the US and UK to weather that has a 'clear risk of death' in Canada, South Africa and Australia.

Australian teachers were most likely to say nothing stops outdoor play (21%), while teachers from the UK were most likely to take lessons outdoors in all weathers, 24% saying nothing keeps them inside. Teachers from the US were least likely to say nothing stops them getting outdoors – only 6%.

Lack of space, lack of support for children with special needs and inclement weather were the most mentioned reasons for not getting outdoors in the qualitative data. It is notable that over one third (36%) of UK teachers (one in five worldwide)

said poor playground behaviour stops children going outdoors. Behaviour was also perceived as an issue for taking lessons outdoors by at least one in seven teachers, rising to over a quarter (28%) in Australia.

These findings contradict the two thirds of teachers in the survey (and evidence from multiple research reports⁴²) who said behaviour improved as a consequence of outdoor play.

'Since getting involved in outdoor learning the children have better self-regulation, problem-solving, communication, investigation, co-ordination and co-operative play behaviours.' (Teacher in Canada)

'[After outdoor play] children are calmer, more regulated in their behaviour and [are] open to learning' (Teacher in Australia)

'This year I have a class that has a lot of challenging behaviours. They respond well to learning outside, but when I don't have a TA (Teaching Assistant) this can be difficult.' (Teacher in the UK)

Other teachers cited the quality of play at breaktime or the character of outdoor lessons as factors affecting behaviour:

'Sometimes there is an improvement [in behaviour] if they have enjoyed and been fully engaged in their outdoor play. However, if there has been any unhappiness outside this then has a negative impact on their mood/behaviour when they enter the classroom.' (Teacher in the UK)

Fewer teachers said they kept children in at playtime to catch up with school work than we had expected, although one in five (19%) US teachers said this was a reason to stop outdoor play, compared to fewer than one in ten teachers in Canada (9%) and Australia (8%).

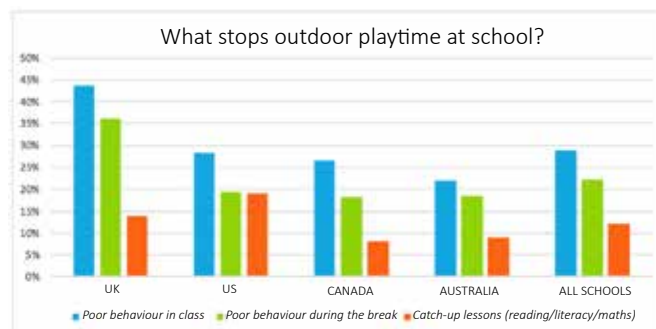


Fig. 4 What stops outdoor playtime at school?

This discrepancy could be due to external factors – for example, in Australia, government guidelines set clear expectations that playtime is required. Further research is needed to understand this.

One in five teachers (20%) said they were worried about the extra preparation needed to take lessons outdoors, rising to more than a quarter (26%) of teachers in the US.

One in ten of Australian (11%) and Canadian (10%) teachers said they felt restricted from taking lessons outdoors by the perceptions of (some) parents that learning outside is not time well spent. However, teachers in the US did not regard parents' perceptions of learning outside as a problem – only

42 Holmes, Pellegrini and Schmidt (2006); Rhea, (2015).

2% reported this as a factor. While this is a minority of teachers, this is still a concern, particularly given that we were surveying schools more likely to be supportive of outdoor learning and play.

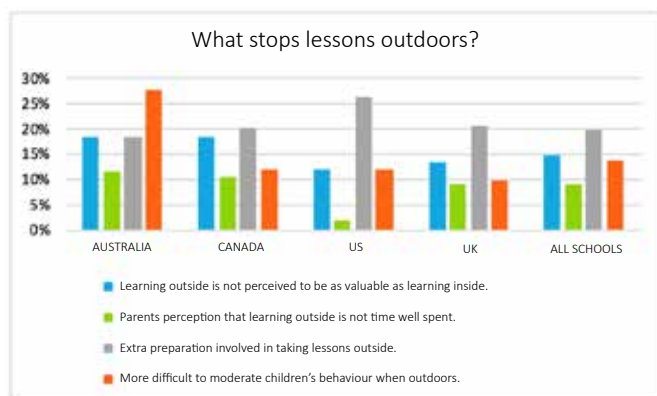


Fig. 5 What prevents teachers from taking children outdoors for lessons?

The weather was a major theme: eight out of ten teachers said the weather stopped outdoor play and seven out of ten teachers said it stopped learning outdoors. The qualitative responses highlighted how teachers in different parts of the world defined problematic weather: in parts of the US and UK light rain was enough to prevent outdoor learning and play; in many parts of Canada, South Africa and Australia time outdoors was only prevented by weather that presented a 'clear risk of death'.

'We are not allowed to take the children out when the temperature is -20°C or colder.' (Teacher in Canada)

'Note our weather restrictions are tornados, frost bite and hail so large it can cause concussion.' (Teacher in Canada)

'Only the heat in India. During summers it's not practical to take them outdoors.' (Teacher in India)

'Cannot go out if temps are below 28° (-2°C).' (Teacher in the US)

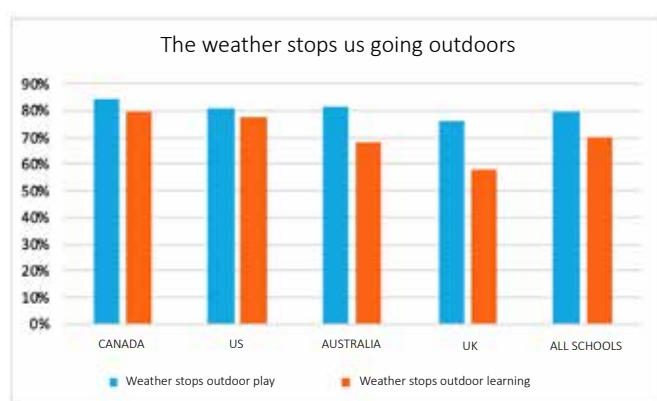


Fig. 6 The weather as a barrier to getting outdoors

By far the most frequently mentioned barrier to getting outdoors was a lack of all-weather clothing, or a lack of suitable protection from the elements:

'[Our school lacks] areas to sit under cover in the wet and windy storms and we get lots of storms, so weather can impede hearing and children can often get cold quickly.' (Teacher in UK)

'Florida weather is unpredictable, it could rain in any moment. At times, it may be too hot to have the students outside for too long.' (Teacher in the US)

'The children don't always come dressed appropriately and complain of being cold.' (Teacher in Canada)

'Parents [are] unable to provide suitable clothing.' (Teacher in the UK)

'Lack of 'stuff' in the school yard – no trees, no outdoor cover from sun, rain, etc.' (Teacher in Canada)

'We are currently applying for funding to purchase a class set of gumboots, raincoats, rain hats and umbrellas to allow us to use the outdoor areas throughout the year regardless of the weather.' (Teacher in Australia)

Teachers in the US were alone in reporting specific restrictions from going outdoors imposed by the administrator of the school or district:

'Per district guidelines, we are only allowed to take students outside for 20 minutes on non-PE days and there are limitations on time and the amount of students that are outside at one time.' (Teacher in the US)

A few teachers mentioned the pressure of curriculum and pressure from others to be indoors, but some also admitted they just don't think about it. Respondents in all countries touched upon 'limiting beliefs' which they had to address in order to make learning and playing outdoors a regular opportunity:

'The children love it, they really enjoy being outdoors and take in so much. The parents are very supportive and the feedback is good. The teachers tend to shy away from outdoor activities as they can be hard to organise and children are so excited to finally be outside it may not always go to plan. This combined with the added workload pressure in class often means it's easier to work indoors.' (Teacher in the UK)

'I can't think of lessons to do outside' (Teacher in Canada)

'It's easier to do arts and crafts indoors as all our equipment is inside' (Teacher in South Africa)

'I just don't remember to step out of the classroom when we are working our way through the standards. I should go out more!' (Teacher in the US)

'Some teachers already learn and play outdoors but I would like to see it become something important in our school.' (Teacher in Australia)

The survey asked about lack of outdoor space and whether the school was in a dangerous neighbourhood – both issues that parents in the UK, US, Brazil, Australia and India had raised, but responses were low enough to be statistically insignificant. A total of four schools (out of 629) said they didn't go out because their school was located in a dangerous neighbourhood (one in the US, one in Canada, one in India and one in Australia – note, none in the UK or South Africa). Four schools said they had no outdoor space (two in the US, one in Romania, one in Canada).

Twenty two schools said air pollution was a problem – nine in the US, four in India, two in the UK and one each in Thailand, South Korea, Spain, Israel, Hungary, Australia, Canada and China. This is an issue that has only just begun to be recognised – and one that greening the school yard and prioritising children’s active travel can help address.

1.4 One sixth of schools said nothing keeps children indoors

“For the most part, nothing keeps our children indoors... [although] at least once a week [we] have to provide clothing to allow them to partake in outdoor activities in rainy or cooler weather.” (Teacher in Canada)

“The only time we don’t take the children outdoors is in the case of high winds or lightning.” (Teacher in Germany)

“There is no such thing as ‘bad weather’, only ‘poor clothing choices.’” (Teacher in Canada)

“Nothing keeps us indoors!” (Teacher in Wales)

Australian teachers were the most committed to playtime in this survey, with 21% saying that nothing keeps children indoors at breaktimes. This compared with 6% of teachers in the US, 11% in Canada and 16% in the UK. Similarly, 18% of Australian teachers said nothing stops them taking lessons outdoors, but here they were behind the UK at 24%.

Teachers in the US were least likely to say nothing stops them getting outdoors – only 6%.

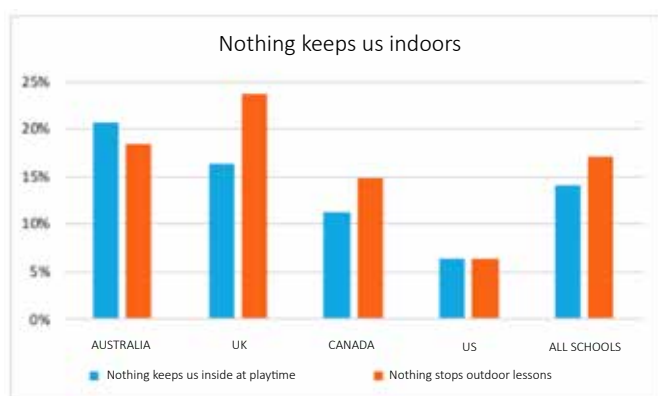


Fig. 7 Nothing prevents getting outdoors at school

There are, of course, some things that will inevitably prevent outdoor play:

“Sometimes the children get harassed by vervet monkeys who steal food out their hands and chase them threatening to bite them. On these days we have to play inside and close all the doors and windows because the monkeys will come inside if they find a way in.” (Teacher in South Africa)

“Snakes” (Teacher in Australia)

1.5 Getting outdoors creates a better connection to nature and place

The survey showed that, overwhelmingly, teachers think children gain a better understanding of the environment through outdoor play (see Figure 8). Across countries there

“Playing outdoors builds an appreciation for the natural environment – from head to heart to hand (learning, appreciating and taking action for conservation).”

(Teacher in South Africa)

were small variations, with 92% of Australian and 88% of Canadian teachers identifying this as an outcome, compared to 83% in the UK and 82% in the US. It could be this reflects the fact that outdoor learning is part of the curriculum in Australia and Canada, and is explicitly linked to sustainability outcomes, in a way it is not (yet) in the UK or the US.

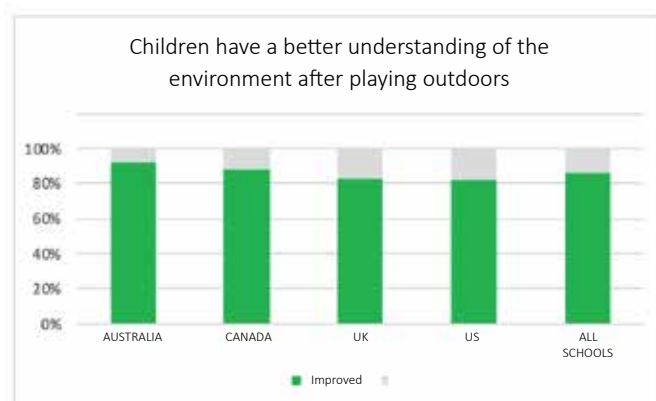


Fig. 8 Percentage of teachers identifying that children have a better understanding of the environment after playing outdoors

The development of a connection to nature and place showed through consistently in the qualitative responses, both in answer to questions about playing and learning outdoors:

“When taking lessons outdoors children develop positive attitudes to environmental issues and increased pride in their school grounds.” (Teacher in Australia)

“Playing outdoors builds connection to nature that fosters their role in taking responsibility for their environment.” (Teacher in Canada)

“I think that all skills can be acquired from playing outdoors, but certainly environmental understanding can only truly come from being in it!” (Teacher in Canada)

“They are more caring towards other living things – plants and animals.” (Teacher in the UK)

“Increased awareness for conservation efforts. Our third-grade students compared the biodiversity of a nearby natural area with mowed areas. They had an idea! We should increase the biodiversity in our school’s landscape. We received a grant and we’re going to see their dream become a reality.” (Teacher in the US)

“When they are outdoors more children are more connected to nature and have a deeper respect for nature and looking after it.” (Teacher in Australia)

1.6 Building key skills for school, for childhood and for life

Worldwide, teachers agreed that playing outdoors helped to develop key skills for life, contributing to improved:

- social skills (97%)
- imagination and creativity (94%)
- improved fine motor skills (90%)
- ability to focus on a task (65%).

Teachers agreed that learning outdoors had a positive effect on children's aptitudes, saying they were:

- more able to retain information (62%)
- more engaged with learning (88%)
- better behaved (65%)
- happier (89%).

Teachers also agreed that playing outdoors can help children when they return to the classroom, as they were:

- more able to retain information (64%)
- more engaged with learning (79%)
- better behaved (67%)
- happier (88%).

Almost every teacher who responded to the survey said taking children outdoors had a positive effect on children's skills and capabilities. They reported that children were more engaged in learning (88%), better able to retain information (62%) and better behaved (65%), so it is perhaps not surprising that nine out of ten teachers (87%) said they wanted more time to take lessons outdoors.⁴³

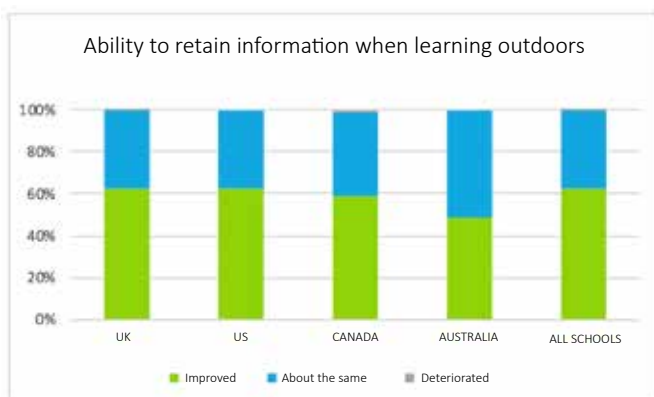


Fig 9. Does taking lessons outdoors affect children's ability to retain information?

The differences worldwide were negligible, but there were some interesting inferences to make. For example, teachers in the US and UK reported equal improvements in children's ability to retain information, even though outdoor learning is not prioritised to the same degree in these countries.

⁴³ See the appendices for data on each country.

Worldwide, there was little divergence from the view that playing outdoors both improves children's ability to retain information and focus on a task. Given the extensive research showing how outdoor play can increase on-task behaviour (see Part 2), it is striking that more teachers didn't report this within the survey. However, some teachers said children at their school did not have enough playtime, and this had a negative effect on subsequent behaviour in the classroom.

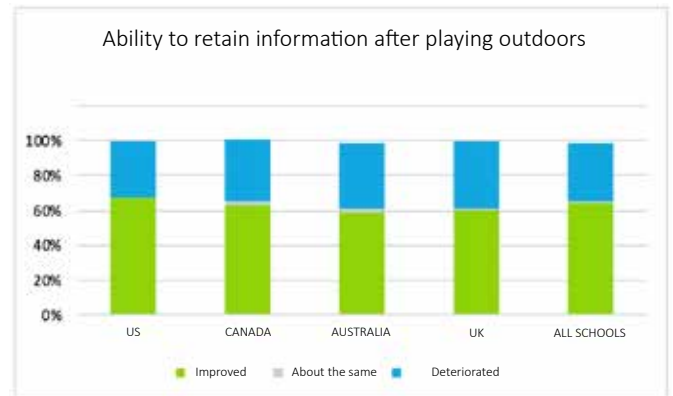


Fig. 10 Does playing outdoors affect children's ability to retain information?

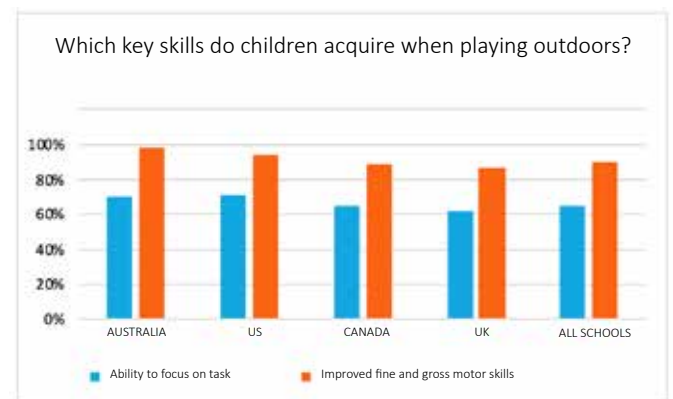


Fig. 11 Key skills acquired through playing outdoors

Gross and fine motor skills are an often-overlooked predictor of academic outcomes⁴⁴, so it is important to note how much in agreement teachers were about the importance of play for developing these skills. Note again that 94% of teachers in the US agreed – and yet almost half of the children in their care got less than 30 minutes of recess a day.

The qualitative data showed a breadth of positive changes:

'[Outdoor Play] Gives them time to assimilate previous learning.' (Teacher in the UK)

'Three different visitors to my class have commented on the children's' fine motor skills, I have replied that is not something we put an emphasis on as much as gross motor but this proves to others how one impacts the other.' (Teacher in the UK)

'Better self-regulation, problem-solving, communication, investigation, co-ordination and co-operative play behaviours. The children have also improved in their strength and stamina for daily physical activity.' (Teacher in Canada)

⁴⁴ Blatchford, Pellegrini, & Baines, (2015) Ch 4.

'Children are able to use their imaginations more in nature. Children create different social connections when out in nature. It opens up social groups.' (Teacher in Australia)

'Children are more open in their thoughts now...They are improved in their skills also... Children have started working in groups and their bonds have become stronger.' (Teacher in India)

'They can see a context for their learning.' (Teacher in Australia)

'They solve creative problems; they come back in with new ideas and creative solutions.' (Teacher in South Africa)

It is important to recognise that asking teachers to assess the capabilities they observed when taking lessons outdoors tends to give a biased view, and the survey did not gather information on the quality or type of outdoor lessons taking place. Nonetheless, the data align with similar research in this field.⁴⁵

The qualitative data showed that many teachers believe that playtime is essential for developing resilience and confidence.

'Children are calmer, more regulated in their behaviour and open to learning.' (Teacher in Australia)

'They are always more animated! And language conversations increase. All good!' (Teacher in Canada)

'A child with selective mutism (where a child doesn't speak to people other than close family), started to relax outside (over 6 months period) and then actually spoke to her friends at outside time. Over time she did this at inside time too.' (Teacher in Australia)

Almost nine out of ten (88%) teachers said children were happier after playing outdoors and 89% while learning outdoors. Again, the variation worldwide was slight, with UK children, for example, only marginally less happy than Canadian children.

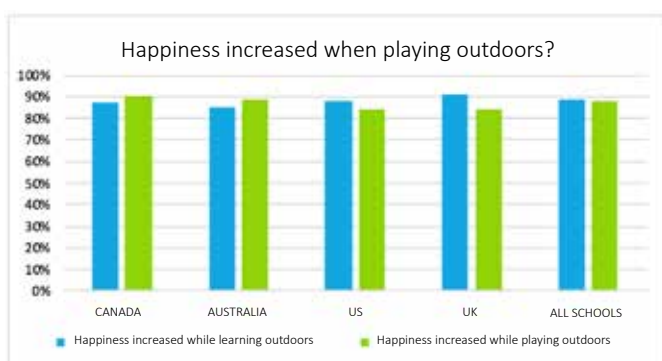


Fig. 12 Children are happier outdoors

'They don't think they are doing work!' (Teacher in the UK)

'The students love to attend the school. Truancy has gone down.' (Teacher in the US)

'When taking part in lessons outdoors we see increased attendance and mood towards friends' (Teacher in the Philippines)

45 See Part 2.

This is extremely important – happy children are less likely to truant or to take time off due to sickness. They are excited about learning and more able to build solid social groups.

1.7 Getting outdoors is good for teachers too

One, perhaps unexpected, trend that emerged in the qualitative data was that staff wellbeing had improved too:

'The teachers are happier as well. When you get outside of your classroom and breathe fresh air it takes a bit of the everyday stress of being cooped up all day away.' (Teacher in the US)

This may be something to explore further.

1.8 Why is outdoor learning and play valued in some schools and not all schools?

Every country had some schools with shorter playtimes and some with very long playtimes

This variation was true both at primary and secondary levels

One striking result was the difference between schools within single countries. Even in countries formally recognising that any topic, subject area and competence can be taught (or learned) outdoors there were marked inconsistencies between schools, both in the length of time allowed for recess, and in the frequency of lessons outdoors. In Canada, where 18% of schools take lessons out every day, 18% of survey respondents also said they take lessons out less than once a month (see Fig 13b).

In most states in Canada outdoor learning is already identified as part of the curriculum or a recognised place to learn – this is also the case in Australia, Wales, Scotland, Finland and Sweden. Nevertheless, one in six (16%) of the schools involved in Outdoor Classroom Day told us they only take lessons outdoors less than once a month (including about the same proportion of schools in Australia and Canada).

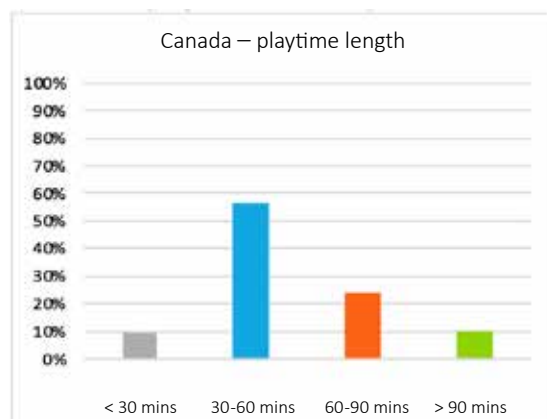


Fig 13a. Time for recess (excluding time for eating) in Canada.

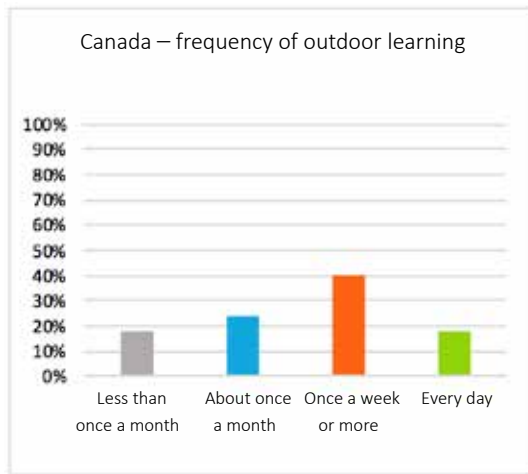


Fig. 13b Time for outdoor learning in Canada. NB This chart focuses on primary (elementary) schools.

This lack of consistency could be due to several factors, including the differences between rural and urban schools, the conflation of early years and older primary classes, and of course different school philosophies. Future research could explore the variations between States and between urban and rural areas.

1.9 The impact of Outdoor Classroom Day

The impact in some schools is beginning to be seen:

- 44% of schools reported increasing outdoor learning since getting involved in Outdoor Classroom Day
- 22% of schools have increased playtime since getting involved in Outdoor Classroom Day

Preliminary data from the 2018 survey suggests these figures will rise.

Playtime was universally recognised as important, with 97% of teachers worldwide – and 99% of teachers in Australia, Canada, UK and the US – agreeing it is critical for children to reach their full potential.

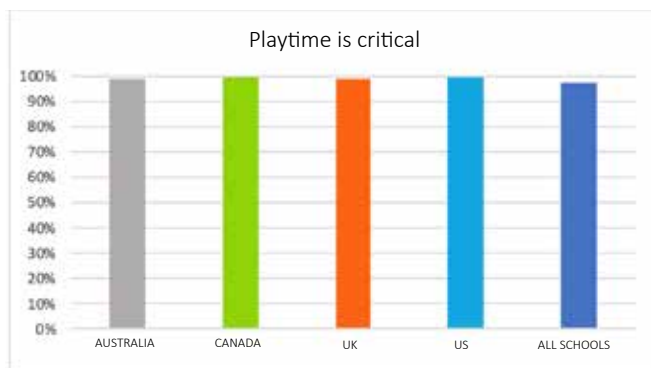


Fig 14. Do you believe play time outdoors throughout the day is critical for children to reach their full potential?

A key outcome for the survey team was that the data helped to identify a number of areas that would benefit from further investigation.

Several key questions emerged that we felt could be used as a basis for future studies:

- Is it possible to set global standards for the amount of play and outdoor learning at school, such as exist for physical exercise?
- Can we push for the wider availability of teacher training specifically aimed at teaching outdoors – so teachers have better resources to tie experiential learning to the curriculum, and are more confident about behaviour management in environments other than the classroom?
- Can we understand better how schools interpret ‘outdoor learning’, as well as gather specific data around the quality and character of playtimes? Could this data be used to shape effective support for teachers and classroom assistants, so they can make sure outdoor learning and playtimes are not only more frequent but also high quality?

‘If we could spend the whole day outside every day we would!’

(Teacher in Australia)





2 Why outdoor learning and play should be part of every school day

‘We feel that learning outdoors is as important as sitting at the desk! We have implemented daily outings for lunchtimes at our school allotment and cover topics such as growing our own veg, water science in the pond and so forth. Our children frequently ask to work anywhere but the classroom as this provides space and independence for them to flourish.’

Teacher in the UK, Outdoor Classroom Day 2017 survey

Childhood is more than a time to simply secure a handful of qualifications. A good childhood is an essential foundation for a good adulthood. Although what constitutes a ‘good childhood’ is contested there is general agreement, worldwide, that getting outdoors every day should be a part of every child’s life.

In the following sections, we have summarised the key literature available to show why getting outdoors is essential: for the environment, for children’s physical and mental health and as part of a happy childhood – at school and beyond.

2.1 Children are getting outdoors less frequently

For a multitude of reasons, while past generations had the freedom to enjoy the outdoors, this is no longer the case.⁴⁶ There is a mounting body of evidence to show that parents are not letting their children go outdoors as much as they did in their own childhood.

In the UK, a Playday poll found that 90% of adults played out regularly in their street as children. Today, 1 in 3 children say they don’t play out in their street at all.⁴⁷ Similarly, a study conducted by the University of Michigan showed that American children currently play outside 12 hours a week less than children did in the 1970s.⁴⁸ A global survey conducted by Edelman Intelligence in 2016 found that over half of all children – 56% – get less than an hour of outdoor play a day, rising to 65% in the US and 74% in the UK. This means, in many places across the world, children are spending less time outdoors than maximum security prisoners.⁴⁹

At the same time, in most countries, the amount of time children spend outdoors while at school has reduced significantly.⁵⁰ As the Outdoor Classroom Day survey makes clear, many teachers say they struggle to take lessons outdoors or allow outdoor play because of the weather, pressures of curriculum or concerns about behaviour. Many schools have access to green spaces or outdoor yards, but many do not. Fifty percent of schools in India, for instance, have no playground, and use local parks or indoor spaces for play.⁵¹

In many advanced economies, and in the developing world too, children are losing out because of increasing restrictions on their independent mobility. The precious time between home and school, a space that can be densely packed with social interactions, connection with the environment and moments to reflect and recharge, is often spent on public transport or in a car, closely observed by adults.

Professor Mayer Hillman⁵² has studied children’s independent mobility since 1970. Initially focusing on the UK, more recently, with the Policy Studies Institute, his research has expanded to compare statistics worldwide.⁵³ The Policy Studies Institute’s most recent report found there were significant restrictions placed on independent travel for children aged 7 to 15, and particularly upon children aged 7 to 11, noting significant differences in the freedoms given to children in different countries.

Children aged 7 in Finland were often permitted to walk themselves to school and cycle after dark. By contrast in England, in 2010, only 25% of children aged 7 to 11 came home from school independently. This compares to 35% of children in 1990 and 86% of children in 1971. In Germany – a country broadly similar to the UK in terms of culture, education and the relative safety of public spaces – children are allowed more freedom. The research team reported that in 1990 nine out of ten (91%) of German 7 to 11 year olds walked themselves home from school, although this had fallen to 76% by 2010.⁵⁴ Yet more restrictions were placed on children’s freedom to roam in France, Brazil and South Africa.

Over a 30-year period, the research teams in Australia, Brazil, Finland and Ireland all noted reductions in children’s independent mobility. The one outlier was Japan, where the study noted that children still have a lot more freedom to roam compared to other children around the world.

It is important to recognise that within countries too, not all children are afforded equal access to the outdoors. In the UK, a report from the National Children’s Bureau showed that children from deprived backgrounds have nine times less access to green spaces than children from the least deprived backgrounds. The research argues that this inequality did not exist 50 years ago. It seems that, tragically, where children

46 Gleave & Cole-Hamilton, (2012); Gleave, (2009); Gray, P. (2013); Louv, (2008); Singer et al, (2009).

47 Gleave, (2010).

48 Juster et al, (2004).

49 Robinson & Aronica (2018) quoting research conducted for Dirt is Good.

50 Pellegrini, Blatchford & Baines, (2015); Cunningham, (2012).

51 Chatterjee, (2015).

52 <https://mayerhillman.com/children/>

53 Shaw et al, (2013).

54 Shaw et al, (2013) p48.

need access to green spaces the most⁵⁵, they are being denied the chance to play out.

For many children around the world, the school playground is the only place where they are licensed to play at all.⁵⁶ Chatterjee reports that, despite most school grounds in India being little more than bare concrete surfaces, these spaces offer many young girls the only access they have to outdoor and social play, as cultural expectation and taboos prevent them playing out in neighbourhood streets.⁵⁷ Similarly, young teenage girls in Nepal are often not permitted to play at home because it is perceived as sign of immaturity. However they can and do still play at school.

2.2 What stops children from getting outdoors?

The causes of this trend are complex and multifaceted, with increased urbanisation, parental concerns about safety and the reduction of green space often cited as key issues. The impact of technology cannot be ignored – TV, gaming and social media all incentivise virtual over real-world interactions, and are activities that tend to take place indoors.

However, this is not simply a matter of ‘choice’. The UK campaign Playday carries out an annual survey of children and parents’ attitudes to play. Every year the overwhelming majority of children say their favourite place to play is outdoors.⁵⁸

Parents, too, recognise the importance of outdoor play. The Dirt is Good survey, supporting the ‘Free the Kids’ campaign, found that 93% of parents agreed that without opportunities to play, children’s learning would suffer. Additionally, 95% of parents worldwide agreed that without play, children cannot reach their full potential.⁵⁹ In the UK a recent survey found that 35% of parents think a day of outdoor play is as important as a day at school.⁶⁰

Parental perceptions of their neighbourhood have a significant and measurable effect on children’s access to play – in a study of 78 parents in a Melbourne suburb, 94% cited safety as their number one concern.⁶¹ Studies from America have confirmed the correlation between parental perceptions of neighbourhood safety and their children’s activity rates.⁶²

A multilevel, longitudinal study of families and communities in Chicago showed that children in lower socio-economic neighbourhoods and neighbourhoods with more outward signs of decay⁶³ spend less time being active outdoors than children from richer or less decayed neighbourhoods. Parents in lower socio-economic neighbourhoods are less likely to encourage or even allow their children to spend time outdoors as the area is perceived as – and sometimes is – too dangerous.⁶⁴

The media undoubtedly play a role in this, though again a complex one.⁶⁵ With the emergence of 24-hour news channels, there is an incessant pressure to provide sensational news – and there is little more sensational than a child being abducted or hurt by a stranger.⁶⁶ Nevertheless, the blanket, and global coverage that such incidents receive helps to build a sense that such events are frequent and likely to happen in any community, when this is far from the case.

It is important to acknowledge that, at least in the ‘developed’ world, children are empirically safer than they have ever been. Worldwide the picture is less clear, as in many countries it is extremely difficult to get child safety data, and, of course, there are areas of the world that are manifestly unsafe.

However, a *Washington Post* investigation into the issue of child safety in 2015 concluded that ‘There’s never been a safer time to be a kid in America’.⁶⁷ In 1935, for instance, the mortality rate was nearly 450 deaths for every 100,000 children aged 1 to 4. In 2015, there were fewer than 30 deaths for every 100,000 children in this age group – more than a tenfold decrease. Reports of missing children had fallen by 40% since 1997 (while the population has increased) – and 97% of the cases of missing children were runaways. Only 0.01% of cases were what is stereotypically considered an ‘abduction’, and even fewer were abductions of young children by a stranger. This is in line with a study carried out for the US Department of Justice in 2002 which found in 1999 there were fewer than 50 cases of abductions of young children by a stranger out of over 70 million children – about 0.0000007%.⁶⁸

Of course even one missing child is one too many, but this has to be weighed against the 31% of children at risk of being overweight or obese⁶⁹, or the rise in the number of children and young people experiencing mental health difficulties. Tim Gill has commented on this imbalance, noting that: ‘fear of strangers itself has unhealthy consequences for children.’⁷⁰

However, given the ubiquity of ‘stranger danger’, the real fears of traffic, and pollution, and a whole extra layer of fear that if children are allowed outdoors unsupervised, then a neighbour or passer-by could report a case of neglect⁷¹ it is hardly surprising parents feel their children are safer when behind closed doors. Recent studies that have documented where children play show that, increasingly, most play now occurs in backyards or indoors.⁷²

In *The History of Childhood*⁷³ Hugh Cunningham notes that the current generation of children is the first in human history to have ‘safety’ as their primary concern. In all previous generations sickness or war would have been the utmost worry.

While technology is also often cited as the reason children stay indoors, professionals often take the view that it’s a

55 National Children’s Bureau, (2013).

56 Chatterjee, (2017).

57 Chatterjee, (2015).

58 <http://www.playday.org.uk/campaigns-3/previous-campaigns/>

59 Edelman Intelligence, (2016).

60 Microsoft, (2018).

61 Veitch et al, (2006).

62 Weir, Etelson, Brand, (2006).

63 The study actively recorded broken windows, public intoxication, graffiti, prostitution and abandoned cars among other things to develop a scale of decayed neighbourhoods

64 Molnar et al. (2004).

65 Gray, P (2011).

66 Franklin, (2011).

67 Ingraham, (2015).

68 Finkelhor, Hammer, & Sedlack, (2002).

69 Hedley et al, (2004).

70 Gill, (2007), p53.

71 Brooks, (2018).

72 Prezza et al (2001); Veitch et al (2006).

73 Cunningham, (2012).

symptom rather than a cause.⁷⁴ Professor Sonia Livingstone, a leading expert on children and technology, has argued that the biggest threat from tech-heavy lives is not the content in itself, but the fact it directly displaces outdoor play, leading to more sedentary lifestyles and fewer real-world experiences.⁷⁵ Technology can, of course, form part of the solution – with the advent of in-your-pocket weather reports, or apps such as Nature Play’s Nature Passport⁷⁶, which actively encourage engagement with the outdoors.

Against this, the literature reviewed in this report shows that outdoor learning and play has a huge range of benefits for children. Being out in fresh air, whatever the weather, has been shown to improve mood, reduce stress, improve eyesight and increase physical activity.⁷⁷ A number of robust research studies show that encouraging children to play freely can improve their educational outcomes.⁷⁸ Moreover, the fun that comes from play is a crucial part of childhood, and is essential to health, wellbeing and learning.

More time outdoors means healthier kids, who attend school regularly, focus on their work, physically sit at their desks for longer, see better and learn more.⁷⁹ Active free play is also critical in helping children develop balance, co-ordination and improved motor fitness⁸⁰, and children who are outdoors in nearby spaces often love their environment and grow up wanting to protect it.⁸¹

2.3 Getting outdoors connects us to place and the environment

‘I think that all skills can be acquired from playing outdoors, but certainly environmental understanding can only truly come from being in it!’ (Teacher in Canada)

While a lack of time outdoors is putting children at an unprecedentedly high risk of developing physical and mental health problems, it is also causing a disconnection from the natural world⁸², which in itself has significant implications for our future as a species.

There is a wealth of literature to suggest that environmental stewardship and connection with place is strongly related to the amount of time we spend immersed in nature when we are children.⁸³ A 1999 study⁸⁴ of 1,259 students from nine countries found that direct experience with nature was more likely to lead to pro-environmental behaviour than simply studying about nature from books.

In his seminal work *Last Child in the Woods*⁸⁵ Richard Louv coined the term ‘nature deficit disorder’ to describe a

damaging lack of engagement with the outdoor world. At the time, there was some research available to support his hypothesis, but little that was conclusive. Ten years later, when Florence Williams published *The Nature Fix*⁸⁶ she was able to draw upon a large number of robust surveys; a wealth of case studies and peer-reviewed research papers; as well as repositories of research such as the one facilitated by the Children and Nature Network.⁸⁷ Recent studies indicate that the smell of pine makes us relax and focus⁸⁸; that trees hold our attention in ways that solid lines of concrete cannot; that time outdoors improves our sleep, our memories, our curiosity, our desire to exercise more and eat better and to simply smile.⁸⁹

In the Outdoor Classroom Day 2017 survey⁹⁰ 86% of teachers worldwide said playing outdoors helped to develop children’s connection to the environment. This reinforces the results of a five-year study conducted by Natural England⁹¹, the largest-ever trial of an outdoor education programme, where 94% of the teachers involved reported that outdoor learning led to a greater understanding of nature.

Teachers responding to the Outdoor Classroom Day survey said that after playing and learning outdoors:

‘Children are more connected to nature and have a deeper respect for nature and looking after it.’ (Teacher in Australia)

‘[They have] Connectedness with the community and an increased interest in sustainability; we had a co-ordinated recycling effort this year, and children studied the trash and what we could do to recycle more efficiently and effectively.’ (Teacher in the US)

‘[They are developing] Stewardship for where they play.’ (Teacher in Canada)

‘Students learn to love and respect their surroundings as well as each other.’ (Teacher in India)

We can all recall the ‘playful geography’ of our childhoods, the islands that loomed large, the lines of marching ants observed for hours, the favourite tree we would climb or sit under. These are, arguably, as important for children’s development of ‘self’ as connections to significant carers, family and friends.

In her book *Kith*⁹² Jay Griffiths talks of the ‘Beginning of belonging, the beginning of love’ as she describes how children become emotionally invested in the features of land; a process that mirrors the way we invest emotionally in relationships.⁹³

The global Nature For All⁹⁴ movement, backed by The International Union for Conservation of Nature (IUCN), is working with the Children and Nature Network to

74 Planet Ark, (2018); Gill (2011)a.

75 Gill (2011)a; Livingstone, (2009).

76 <https://outdoorclassroomday.com/resource/play-explore-learn-nature-passport/>

77 Gill, (2011) & (2014b); Children and Nature Network, (2018); Dowdell et al, (2011);

Herrington & Brussoni (2015); Kellert, (2013); Maller et al (2006).

78 Sobel, (2004).

79 Langford et al, (2014); Brussoni et al, (2015); Robinson & Aronica, (2018); Strauss & Hanscom, (2014).

80 Fjørtoft, (2004).

81 Louv, (2008); Gill, (2014a).

82 Gray, (2013) and on her blog: <https://toniagray.com/>

83 Louv, (2008); Dowdell et al (2011); Williams, (2017); Ballantyne & Packer, (2009).

84 Packer (1999) in Ballantyne & Packer, (2009).

85 Louv, (2008).

86 Williams, (2017).

87 <https://www.childrenandnature.org/learn/research/>

88 Li, (2010).

89 Louv, (2012); Moss, (2012); Williams, (2017) and McGurk, (2017) all summarise the research and how it relates to themselves and their children or children in general.

90 See Section 2.

91 Waite et al, (2016).

92 Griffiths, (2013).

93 Griffiths, (2013) p3.

94 <http://natureforall.global/>

synthesize the evidence linking connectedness with nature to pro-conservation behaviours. They agree that regular connection, especially at a young age, leads to greater consideration for the planet's resources. This connection:

*'... can take many forms, and occur in many ways. It requires places and spaces for people to connect with nature's richness and complexity from backyards to apartment rooftops, on city streets and rural roadways, on school grounds and in urban neighbourhoods, from wild protected areas to public urban spaces.'*⁹⁵

In Tim Gill's 2014 review of the literature charting the benefits of children's engagement with nature⁹⁶ he found that the most robust studies seemed to indicate that more playful interventions – free play or playful learning – are more likely to result in greater concern for the environment and connection to nature, while less playful interventions are most effective for building scientific knowledge.

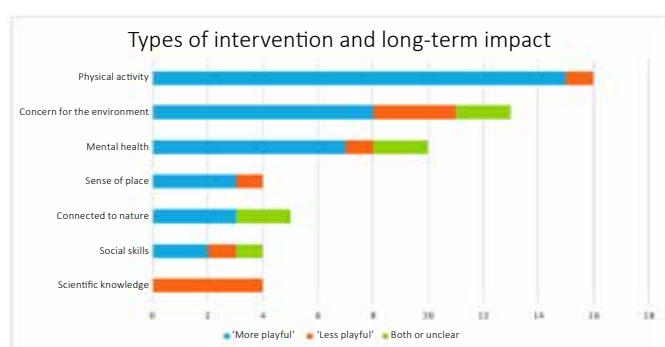


Fig. 15. adapted from Tim Gill's paper on the effect of playful or less playful interventions on children's subsequent behaviour and capabilities.

Outdoor learning is not the only route to cultivating a sense of responsibility for the environment. There are opportunities throughout the school day, as well as before and after school, where children can experience nearby nature and develop a sense of place – experiences which, as Richard Louv points out in *Last Child in the Woods*⁹⁷, are becoming ever more rare.

In Switzerland, 75% of children walk to school independently⁹⁸ from the ages of 4 or 5, rising to almost 100% by the age of 9 or 10. Schools enforce this because they explicitly value the walk to school as an opportunity for physical exercise; a chance to make and develop friendships; and a means to cultivate a stronger connection to place.⁹⁹

In the UK, only 7% of 8 year-olds travel to school independently, rising to about 54% at the age of 10.¹⁰⁰ In Australia, there is evidence that cycling and walking levels are reducing¹⁰¹ and a recent comparison of independent mobility between the UK and Australia¹⁰² found that Australian children

are even less likely to walk or cycle independently to school than their peers in the UK. The walk to school is often where children build up an 'every day and often' connection to the natural world, cultivating a fascination with the sky or the seasons, the geography of their neighbourhood and their place within it.

Greening school yards or visiting nearby wild areas, woods and parks – where children can regularly play and have lessons outdoors increases their connection to a place. Over time, they can become fond of, learn to love and then later want to protect their environment.

The process of 'greening' school grounds, planting shrubbery, trees and other natural stimuli, is a venture which can galvanise the whole school community: parents, teachers, pupils, administrators and practitioners. Rickinson et al. (2004) noted the effects these projects have on developing a sense of community and citizenship. When pupils are involved in the process of regenerating and naturalizing their school grounds they also are more likely to treat them with respect. The process provides an incredible opportunity to learn about our responsibility to protect and steward natural habitats. Moreover greening school grounds has also been found to benefit academic performance on standardised tests.¹⁰³

2.4 Getting outdoors to learn and play improves educational outcomes

'Taking almost any class outdoors can have incredible benefits on children's engagement and enjoyment of education and increase academic attainment. Research shows that even subjects that might seem to have little to do with the outdoors, such as literature or dance, can benefit from being taken outdoors.' (Waite et al. 2016)

How do children learn to be creative, to problem-solve, to deal with constantly changing social interactions and keep persevering in the face of increasing challenges? By simply playing and learning outdoors, especially if activities are playful, self-directed, or with interested adults present who can help scaffold learning.¹⁰⁴

A study of 40 schools across the US showed that using the Environment as an Integrating Context (EIC) in school curricula can result in wide-ranging, positive effects on student learning. The study found that EIC improves student achievement in social studies, science, language, arts and math. Students, teachers and administrators also reported other significant effects including: development of problem-solving, critical thinking and decision-making skills; increased enthusiasm and engagement in learning; and gains in summative measures of educational achievement such as standardised test scores and grade point average.¹⁰⁵

The 2016 Natural England study arrived at a similar conclusion: learning outdoors helps children improve in a range of capabilities. Responses from the 125 schools involved illustrated a variety of positive effects, with teachers reporting

95 Children and Nature Network, (2018).

96 Gill, (2014a).

97 Louv, (2008).

98 https://www.swissinfo.ch/eng/society/cultural-difference-_children-more-likely-to-walk-to-school-in-switzerland/43566390

99 <http://playingout.net/beas-walk-to-school-and-why-it-matters/>. Also see this short: <https://vimeo.com/24103803> Zu Fuss nach Schule.

100 Carver et al, (2013) p.468.

101 Carver et al, (2013) p.463.

102 Carver et al, (2013).

103 Simone, (2002); Danks, (2010).

104 Brown, (2008); Beunderman, (2010); Blatchford et al, (2015); Gopnik, (1996); Gray, P (2013); Gray & Martin, (2012); Kellert, (2013); Kellock, (2015); Palmer, (2015); Robinson & Aronica, (2018); Vygotsky, (1967).

105 Lieberman & Hoody, (1998), in Sobel (2004) p.36.



that outdoor learning increased creativity, added wonder and experience to learning and made subjects come to life.¹⁰⁶ Teachers also specifically used the outdoors as a learning tool:

*'This morning with the numeracy, I know a lot of children would have really struggled with grasping the concept of perimeters, but being able to walk it out [around the playground] ... made a lot more sense to them.'*¹⁰⁷

Teachers involved in the study reported increased attendance and increased productivity among pupils, again demonstrating that learning outdoors increases children's engagement with learning. Eighty-five per cent of staff taking part in the project identified time spent outdoors as having a positive effect on student behaviour.¹⁰⁸

There is good evidence that through exposure to more engaging stimulus, outdoor learning can also have a positive impact on a child's long-term memory – as there is reinforcement between the emotional and the cognitive functions in the brain. Children who are more engaged in their learning are more likely to retain information.¹⁰⁹

A Norwegian study showed that children at pre-school who enjoyed large amounts of outdoor time consistently scored better on standardised tests for executive function, attention and short-term memory than those who went to pre-schools with fewer hours of outdoor time. The study also looked at the lasting effects of outdoor education on 546 children and found that even after the children entered the primary school system, those who had more outdoor time during pre-school continued to score better on standardised testing.¹¹⁰

In a robust study comparing two matched classes, Kuo et al (2018) found that:

'Classroom engagement was significantly better after lessons in nature.'

Free play, often characterised as a break from learning, has a vital role in consolidating and enriching what children have absorbed in the classroom:

'Outdoor play provides the opportunity to improve sensory integration skills. These activities involve the child as an active participant and address motor, cognitive, social, and linguistic domains. Viewed in this light, school recess becomes an essential part of a child's day. It is not surprising that countries that offer more recess to young children see greater academic success among the children as they mature.' Yogman et al., (2018).¹¹¹

In 2018, the American Academy of Pediatrics (AAP) wrote about the importance of play, stating that:

*'Play is fundamentally important for learning 21st century skills, such as problem-solving, collaboration, and creativity, which require the executive functioning skills that are critical for adult success.'*¹¹²

Brown (2008) points out that longer and more frequent breaks lead to optimised learning:

*'Through longer, more frequent and higher quality break times we can ensure that children are learning during classroom time to the best of their potential and we are not wasting time trying to teach brains that have 'shut-down'.'*¹¹³

Further to this, children who have the chance to engage in more risky and challenging outdoor activities are more willing to take risks in their own learning.¹¹⁴

The LiiNK project in Texas, US, most starkly shows how increased recess reduces fidgets and improves on-task behaviour.¹¹⁵ Inspired by Finnish education, the programme has introduced four recess periods throughout each school day to an ever-increasing number of elementary schools. All the schools involved in the trial have, so far, reported improved on-task behaviour, better attention to task, less fidgeting and improved focus among children, when compared to children of a similar age and background not involved in the programme.¹¹⁶

The consensus among teachers is that children are refreshed, more attentive and less disruptive in class after longer break times. They also report that significantly less time is wasted in transitioning between classes and recess, which means that having extra breaks doesn't necessarily lead to a reduction in classroom time.¹¹⁷

'Children are built to move, and having more time for unstructured, outdoor play is essentially like a reset button. It not only helps to break up the day, but it allows children to blow off steam and apply what is taught in the classroom to a play environment where the mind-body connection can flourish' Debbie Rhea – Director of the LiiNK Project

David Sobel, writing in *Place Based Education* (2004) summarised nine studies comparing students taking part in Environment as an Integrating Context (EIC) programmes with students in non-EIC programmes of study. Schools taking part in the EIC programme saw far higher attendance and fewer disciplinary referrals. In one school, teachers made 560 referrals in the year prior to their participation in EIC and 160 referrals in their first year of participation in EIC.¹¹⁸

In one study, Canadian teachers noted that 'energy release from playing outside creates a more positive mind set for children to then concentrate and learn more in the classroom later in the day' (Copeland et al., 2012).

A 2011 comparison study of two early years settings – one indoor, one mostly outdoor – conducted by Kellie Dowdell, Tonia Gray and Karen Malone showed that children who attended the outdoor kindergarten, enjoying a richer, ever-changing environment, were more engaged with their activities, paid more attention and stayed on-task for longer, even though both kindergartens were, in other respects broadly equivalent, offering good quality childcare

106 Waite et al, (2016).

107 UK Primary school teacher as reported in Waite et al, (2016).

108 Waite et al, (2016).

109 Brown, (2008).

110 Ulset et al, (2017).

111 Yogman et al, (2018).

112 Yogman et al, (2018).

113 Brown, (2008).

114 Brussoni et al (2012).

115 Rhea & Rivchun, (2018).

116 Rhea & Rivchun, (2018).

117 Evidence from the LiiNK Project, as reported in Rhea, (2015).

118 Sobel, (2004) pp. 36-37.

and education. Children at the outdoor kindergarten also benefited from richer playful interactions with adults. They invited adults into their play and these sustained playful interactions helped to scaffold learning.

Such findings corroborate those of the Outdoor Classroom Day 2017 survey (as outlined in the previous section).

'I operate a Bush Kindy¹¹⁹ with a balance of indoor/outdoor experiences that builds social skills and emotional resilience, children develop a solid understanding of self-assessing their own capabilities leading to increased cognitive abilities, high order thinking and executive function and become stewards of the environment, which is linked to academic achievement.' (Teacher in Australia)

The Finnish educator Pasi Sahlberg, Professor of Education Policy at the Gonski Institute for Education, University of New South Wales is campaigning to 'Make Recess the Right of the Child'.¹²⁰ He points out that 'Time is a limited yet renewable resource in education' and, additionally, that recess – good quality recess, in grounds that support children's play and development needs with trained staff – is not a waste of time, but a huge and invaluable investment in children.

'Real learning often happens in fresh air, during physical activity, while having conversations with others, or simply because of an opportunity to concentrate on understanding previous lessons.' Pasi Sahlberg, 2017¹²¹

This campaign supports the American Academy of Pediatric's assertion that:

*'Recess is a necessary break in the day for optimizing a child's social, emotional, physical, and cognitive development. In essence, recess should be considered a child's personal time, and it should not be withheld for academic or punitive reasons.'*¹²²

2.5 Getting outdoors to learn and play is essential for physical health

'Outdoor environments naturally inspire children to be more physically active... Consistent exposure to nature decreases stress and anxiety, helps elevate mood, and helps with emotion.' (Teacher in India)

Regular time outdoors has been linked to increased physical activity, improved mood, better eyesight, better bone development and healthier immune systems.¹²³

In just one generation physical activity rates worldwide have significantly reduced.¹²⁴ The Global Physical Health Matrix shows that fewer than 30% of children in Australia, Canada, the US, the UK, Singapore, in fact almost anywhere in the world, are getting the 60 minutes a day of physical activity recommended by the World Health Organisation (WHO).¹²⁵

Children in Belgium, Chile, China, Estonia, Qatar, Scotland and United Arab Emirates are the least active, and in Thailand children get the least amount of active play. More than 80% of the world's adolescent population is insufficiently physically active.¹²⁶

This inactivity has drastic health implications¹²⁷. Sedentary behaviour is seen by WHO and leading health councils in Australia, the UK, the US, Singapore, India and China as the number one reason why children born today are likely to die at a younger age than their parents.¹²⁸

While inactivity is most frequently linked to a rise in obesity, research has also shown it is related to a rise in Type 2 diabetes and low bone density. A meta-analysis of studies worldwide¹²⁹ conducted by Janssen and LeBlanc in 2010 concludes that 90 minutes of moderate physical activity a day lowers cholesterol and blood pressure, increases bone density and aids muscle and cardiovascular development.

Allowing more opportunities for play and for playful learning outdoors – at least an hour a day – could go a long way to meeting WHO's recommendation that every child over the age of five has at least an hour a day of physical activity. While sports and active travel (walking, cycling, running) are important in increasing children and young people's physical activity, outdoor play is often overlooked. Teams reporting on the Physical Activity Global Matrix advocate outdoor play as an easy way to keep fit. Moreover, when engaged in play, children will self-sustain physical activity, often for long periods of time.¹³⁰

*'Letting children go out to play is one of the best things that parents can do for their children's health: outdoor play uses more calories than clubs and tuition.'*¹³¹ Mackett, (2004).

Recess and outdoor play are ideal opportunities for physical activity¹³² and children are far more likely to engage in active rather than sedentary play if they are playing outdoors.

A study by the Department of Health Services, University of Washington, found that children aged 6 to 11 years old were active for 41% of the time while engaged in outdoor free play, as opposed to 18% of the time during indoor free play.¹³³ Studies using GPS tracking in the UK have supported this, showing that children are more than two-and-a-half times more active when outdoors compared to indoors.¹³⁴ A recent study of Dutch Green Schoolyards showed that girls in particular were more physically active when playing outdoors in playgrounds with more green features.¹³⁵ It is no surprise then, that Active Healthy Kids Australia recommends: *'Just let them play!'*¹³⁶

119 Bush Kindy is the Australian version of Forest school – usually half a day to a full week of early years play-led education entirely outdoors.

120 Sahlberg, (2017).

121 Sahlberg, (2017) p.22.

122 Murray et al, (2013).

123 Summarised throughout Williams, (2017).

124 Australia, (2016); Duncan & McPhee (2015); Kellert, (2013); Planet Ark, (2011),

125 Tremblay et al, (2016); <https://www.activehealthykids.org/>; Tremblay, (2016).

126 <http://www.who.int/en/news-room/fact-sheets/detail/physical-activity>

127 Tremblay et al, (2016); Active Healthy Kids Australia, (2016); WHO; Langford

128 World Health Organisation, Key Facts: Physical Activity.

129 Janssen and LeBlanc, (2010).

130 Yogman et al, (2018); McCree et al, (2018).

131 Australia, (2016).

132 Australia, (2016); Baines and Blatchford, (2011); Beresin, (2016); Centers for Disease Control and Prevention (2010).

133 Herrington & Brussoni (2015).

134 Cooper et al, (2010).

135 Dijk-Wesselijs et al, (2018).

136 Australia, (2016) p.20.

Active free play is also critical in helping children develop balance, co-ordination and improved motor fitness.¹³⁷ It helps develop fine motor skills that are essential for holding a pen and a paintbrush, for ball control and for building core strength, skills that will underpin a child's physical fitness for many years to come (and aside from running or jumping, children need core strength just to sit still).¹³⁸

Outdoor lessons, too, are frequently more physically active than lessons indoors, and this is not restricted to the early years:

'My Drama 'A' Level class have been studying 'Antigone' by Sophocles ... I took the students out on the college field and we measured out the size of the Theatre of Dionysus in Athens as it would have been in 441 BC. The students then had to perform to one another in this enormous space and from this they gained not only an understanding of the challenges of performing in a huge amphitheatre, but also an active, practical, out-of-the-ordinary experience of learning that they will remember when sitting in their exam!' (Teacher in the UK, Outdoor Classroom 2017 survey)

Alongside good physical health, getting outdoors in all weathers also improves children's immune systems. In 2010, Qing Li, a South Korean researcher reported on the positive effect of forest bathing – being out in the woods – with the smell of pine being particularly beneficial for increasing T-killer cell counts.¹³⁹

David Sobel (2004) noted how students in an 'Outdoors in All Weather' programme reported suffering 80% fewer infectious diseases (colds, sore throats etc.) than children in conventional programmes.¹⁴⁰ One finding that surprised some of the teachers involved in the 2016 Natural England study was that 72% said getting outdoors to teach regularly improved their own health and mental wellbeing (and 69% said it increased their own job satisfaction and almost four in five (79%) said it improved their teaching practice). This is echoed by teachers who took part in the Outdoor Classroom Day 2017 survey:

'The children have less time off sick – so do the teachers!' (Teacher in the UK)

On top of this, clinical research in the US has shown that conducting activities in a 'natural' outdoor setting has a beneficial and lasting effect on alleviating the symptoms of ADHD, regardless of social contexts¹⁴¹ and in certain contexts the outdoors can be seen as an alternative to drug therapy.

Finally, studies in the US, South Korea and elsewhere have found that myopia – short sightedness – is a significant predictor in how active children are.¹⁴² Although the causal link between myopia and the outdoors is still being investigated, clinical trials show that time spent outdoors is strongly inversely related to myopia. In some parts of the world myopia is becoming endemic, particularly in Asia and South East Asia. In South Korea 80% of children finishing

school are short sighted, far higher than it should be without an external factor imposed on the children. Furthermore, it has been shown that small interventions at school can drastically cut the rate of progress of myopia in school children.¹⁴³

To summarise: healthier children are more likely to succeed at school. Healthy children come to school more often, can concentrate better, can physically sit at their desks for longer, can see better and can learn more.¹⁴⁴

2.6 Getting outdoors is a key part of good mental health

'Principals and teachers perceive that there are benefits to children's mental health and wellbeing from participating in hands on nature-based activities at school.' Maller and Townsend (2005) in Townsend and Weerasuriya, (2010)

The Black Dog Institute in Australia has estimated that just under one in four young people aged 15 to 19 years-old in the country are at risk of serious mental illness.¹⁴⁵ Just as concerning, they also reported a significant increase in the proportion of young people meeting these criteria over a five year period (rising from 18.7% in 2012 to 22.8% in 2016).¹⁴⁶ This echoes findings across the US, the UK, Africa, South East Asia and around the world.¹⁴⁷

Children's lives are now far more stressful than in the past, alongside higher academic expectations, there are pressures created by social media use, which can monopolise children's time and attention, affect their body image, or expose them to age-inappropriate content.¹⁴⁸ Many children are under more time pressure, more peer pressure and more pressure to succeed.

Getting outdoors is the cheapest and easiest way to reduce this pressure so children (and adults) feel less stressed.

The 2010 report *Beyond Blue to Green* by Deakin University, Australia¹⁴⁹ makes the case for nature restoring our sense of wellbeing. It summarises research from around the world, including an epidemiological study conducted in Adelaide which showed that people living in green neighbourhoods rated their mental and physical wellbeing 1.37 to 1.60 times better than those in neighbourhoods lacking in green space.

In a similar vein, a recently published case study of children from deprived and vulnerable families in England highlighted the restorative power of the outdoors for children under stress.¹⁵⁰ The authors illustrate this with one excerpt from a conversation...

137 Fjørtoft, (2004).

138 Rhea, (2015).

139 Li, (2010).

140 Sobel, (2004).

141 Kuo & Faber Taylor (2004).

142 Yogman et al, (2018); Jones et al, (2007); Rose et al, (2008); French et al, (2013).

143 Rose et al, (2008).

144 Langford et al (2014); Brussoni et al, (2015); Robinson & Aronica, (2018); Strauss & Hanscom, (2014)

145 Mission Australia & The Black Dog Institute, (2017).

146 Mission Australia & The Black Dog Institute, (2017) p5.

147 Omigbodun & Belfer (2016); Patalay & Fitzsimons 2017; Sznitman et al. (2011).

148 Mission Australia & The Black Dog Institute, (2017); Chawla et al. (2014); Rickinson et al, (2014); Brussoni et al (2015); Gleave & Cole-Hamilton, (2012).

149 Townsend & Weerasuriya, (2010).

150 McCree et al, (2018).

'When we get into the woods, please can I go and sit somewhere by myself for five minutes?'

Of course. Why would you like to do that?

Because this is the only time I get some peace and quiet.'

(Child F, Y2) in McCree, Cutting, Sherwin, (2018)¹⁵¹

Stuart Lester wrote about play as a means for children to create uncertainty – spinning themselves around, poking a sleeping adult, imagining themselves in ridiculous situations.¹⁵² By experimenting with uncertainty children can develop appropriate strategies and responses to chaotic situations. By creating conditions of mild stress, they learn to live with, to enjoy even, stressful situations. If we shield them completely from opportunities to test their stress responses, they will forever be slightly anxious in facing new situations.

The academic Tonia Gray has discussed how, through play, children begin to understand the self, regulate emotions, make friends and get along with others, develop interests and competencies, make decisions and solve problems.¹⁵³

Play helps children develop resilience or grit, by giving them a chance to run through potentially stressful social situations and learn to overcome challenges.¹⁵⁴ Being able to direct their own activities and play without the intervention of adults helps children develop a critical sense of independence and belief in themselves.¹⁵⁵ This is an indispensable skill for children to have as they grow up, change schools, develop friendships, face exams and explore opportunities. It is also an essential capability for life.¹⁵⁶

Against this, increasing their exposure to external goals in the form of structured activities can lead to increased levels of anxiety, depression and the need for external approval.¹⁵⁷

In *The Decline of Play and the Rise of Psychopathology in Children and Adolescents*, Peter Gray summarises the link between opportunities for free play and positive mental health outcomes as follows:

'Play functions as the major means by which children

(1) develop intrinsic interests and competencies;

(2) learn how to make decisions, solve problems, exert self-control, and follow rules;

(3) learn to regulate their emotions;

(4) make friends and learn to get along with others as equals; and

(5) experience joy.

Through all of these effects, play promotes mental health.'

Gray (2011)¹⁵⁸

2.7 Getting outdoors makes us happy

'To be honest, the students love it.' (Teacher in Australia)

Children play because it's fun. And because it's fun, they keep playing. Play – real play – is always for its own sake. But it is far more than mere indulgence; it is essential to children's health, wellbeing and learning. It is part of a good childhood.

'In a game of chase, children are physically active and maintain the game by negotiating and agreeing to abide by the rules. Yet what they value is the thrill of the chase.' Lester and Russell, (2008)¹⁵⁹

It seems almost self-evident that playing is joyful. But perhaps it's less self-evident that joy is not just a diverting part of childhood, it is essential for healthy development. If children aren't having fun, if they are stressed over extended periods of time, the consequences for their emotional and mental health in the longer term are severe. Stressed children are more anxious, are less willing to take risks in their learning and fare worse at problem-solving. Most importantly of all, play brings happiness and improves children's quality of life drastically.¹⁶⁰

One of the striking findings of the Outdoor Classroom Day 2017 survey was how much agreement there was that children are happier after playing outside and while taking lessons outdoors. Being outdoors simply makes us feel alive, feel joy; and feeling joy on a regular basis is an essential foundation for a good childhood¹⁶¹ and healthy later life.

159 Lester & Russell, (2008).

160 Lester & Russell, (2010).

161 Stixrud & Johnson, (2018).

151 McCree et al, (2018).

152 <http://www.play-o-logy.com/research/stuart-lester>

153 Gray, T (2013).

154 Lester & Russell (2008), Play Wales (2015).

155 Lester & Russell, (2008).

156 Stixrud & Johnson, (2018); Robinson & Aronica, (2018).

157 Rudolph et al (2005); Stixrud & Johnson, (2018).

158 Gray, P (2011).



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3 Schools as influencers: making outdoor learning and play part of every child's day

'At first, parents here did not appear to understand and appreciate the value in outdoor learning. However, once they began to see changes in their children such as eating and sleeping better, eager to get to school and sharing stories of the day's events, parents were on board.'

Teacher from Australia

Over 90% of all children worldwide are in some form of schooling.¹⁶² The Global Goal is for all children to have access to quality education by 2030.¹⁶³ As a collective group, schools have a huge reach and influence, with the potential to not only shape the way that children think about the outdoors, but galvanise parents and decision-makers too.

By prioritising playtime and by using the outdoors as a resource to improve engagement with learning, they reinforce the message that being outdoors is an essential part of a child's life.

Some schools are already leading the way.¹⁶⁴ Many now have dedicated 'outdoor days' at least once a term, sometimes once a month, and some have outdoor lessons every day. Forest Schools go even further, focusing their whole philosophy around enabling learning experiences outdoors. The teachers from these schools are sharing their stories with their networks, encouraging colleagues to see what happens when you take learning beyond four walls. Social media means these messages are reaching further than ever before, and these platforms have become critical to building movements such as Outdoor Classroom Day.

In many countries, the drive for more time outdoors at school is gathering momentum beyond the school gate. In 2017, the Government in Queensland, Australia, wrote directly to every teacher to encourage them to get involved in Outdoor Classroom Day. In Indonesia, the Government supported schools to take part by contacting the Heads of Education in each territory.

Schools are ideally placed to become beacons in their own communities. Children who are playing and learning outdoors at school tell their parents about the wonderful time they had, inspiring more outdoor adventures within family life.

It would be a mistake to think that integrating outdoor learning and play into the school day is a distraction from a school's real purpose. This is about creating an education system which can meet the urgent challenges of the 21st century, where creativity, resilience, emotional intelligence and an understanding of the environment are life skills every bit as important as literacy and numeracy. It is also essentially

egalitarian. A school in the forests of Indonesia which utilises outdoor space for learning can be as resource-rich as the best-funded school in Europe or America.

In many respects, the Western world is in most urgent need of remedial action. Campaigners Lenore Skenazy and Prof. Peter Gray set up Let Grow¹⁶⁵, a campaign to challenge 'worst first' thinking and the risk-averse culture that is increasingly restricting children's freedom to go outdoors, including a schools-based programme of free play. Their statement on the value of play acts as a template for a 21st Century education system:

'Treating today's kids as physically and emotionally fragile is bad for their future, and our country's. With an unpredictable and rapidly changing economy ahead, kids need to be flexible, creative problem-solvers. They can't solve their problems if adults are always right there, solving them first!'

We know lessons learnt outdoors are more memorable. When we are outdoors we move more. Getting outdoors helps children feel calmer, process their day and build the holy grail of capabilities: resilience. We also know that we protect what we love, and we love what we know deeply and intimately. Distant mountains make for great adventures, but every day and often is the recipe for growing tomorrow's environmentally-aware adults.

Worldwide, 93% of parents agree that children's learning would suffer without opportunities to play, and 95% say that, without play, children cannot reach their full potential.¹⁶⁶

Schools, by sending the clear message that getting outdoors is important to children's wellbeing and development, can help make outdoor learning and play part of every day.

Many Governments around the world actively support outdoor learning and play. Survey after survey in Australia, the US, the UK and around the world says that parents value play and outdoor learning. Teachers want it. Children want it. All that is required is the catalyst to make it happen.

To find out how to get involved in Outdoor Classroom Day, visit: www.outdoorclassroomday.com

¹⁶² UNESCO, World Data on Education, Seventh edition 2010/11

¹⁶³ <https://www.globalgoals.org/4-quality-education>

¹⁶⁴ See outdoorclassroomday.com for additional case studies.

¹⁶⁵ <https://letgrow.org/>

¹⁶⁶ Edelman Intelligence, 2016.

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5 Appendices

5.1 Methodology

Just over 20,000 teachers were involved in Outdoor Classroom Day 2017. All those who agreed to ongoing communication, around 17,000 teachers, were invited to respond to two surveys that together make up the Outdoor Classroom Day 2017 survey. The survey questions were developed by the Project Dirt team, and data collected between November 2017 and April 2018 brings together responses from 713 teachers on learning outdoors and 629 teachers and outdoor play, from 44 countries. Outdoor People analysed the data with input from Ed Baines and Helen MacIntyre, of the UCL Institute of Education.

Within this report ‘worldwide’ or ‘all schools’ refers to average data across the full data set. Data from Australia, the UK, the US and Canada were pulled out for comparison as all these countries had over 90 respondents. The set of data for analysis was further refined when looking at the length of time of outdoor play and the frequency of outdoor learning to focus solely on the responses from primary schools (that is, children aged 6 to 12).

To our knowledge, this is the first global survey of this scale asking schools about their attitudes towards, and practice supporting outdoor play and learning. As valuable as this set of data is, it is only a snapshot of current activity, as we can assume that responses generally came from teachers and schools already predisposed to outdoor learning and play – which means that the results here are likely to be a conservative estimate, and that in the total population children are likely to get far less outdoors time at school.¹⁶⁷

The survey questions were translated with support from our partners from: Fee Suomi (Finland), Aprendiz (Brazil), Dividendo por Colombia (Columbia), ADEAC (Spain), Movimento Bloom (Portugal), Aktif Yaşam (Turkey), Kerlip (Indonesia) and the Skip team in France.

The survey was conducted by Project Dirt by emailing teachers taking part in Outdoor Classroom Day who had opted in to receiving communications, or mailed to teachers by the lead NGO partners: Fee Suomi (Finland), Aprendiz (Brazil), Dividendo por Colombia (Columbia), ADEAC (Spain), Movimento Bloom (Portugal), Kerlip (Indonesia), Aktif Yasam (Turkey), Learning Through Landscapes (UK), Nature Play (Australia), Ace Trust (India) and Symphonia for South Africa (South Africa).

All the original data from the Outdoor Classroom Day surveys are owned by Project Dirt, secured as part of the ongoing evaluation to help understand and improve the campaign’s effectiveness. Some of the data were published in May 2017 to support the May campaign date.

This is the first time the 2017 data have been published in full, and new data have been clearly identified in the tables that appear in the appendices.

To build the research frame for the evidence base, the project team drafted a long list of search terms against the main topics – outdoors as a place to learn, to play and explore; nature and education; outdoors and physical health, mental health, stress, resilience and happiness. We used that list to comb the literature, building from core classic texts (Vygotsky, Piaget, Bourdieu, Richard Louv etc), through a range of peer-reviewed literature reviews, books and surveys on related topics including:

- risky play
- active play
- outdoor learning
- outdoor education
- nature connectedness
- mental health
- stress
- resilience
- social relationships
- early education and childcare
- skills for the 21st century
- non-cognitive skills
- STEM knowledge
- experiential learning
- active travel
- school and community design
- philosophical perspectives on play from the West and East.

We also referenced a cross section of grey literature, recognising that some of the more challenging material has appeared online and in papers such as the *New York Times* and *Washington Post*. All the literature reviews note that whilst there are some robust large-scale investigations around effective outdoor pedagogical practice, in particular around outdoor learning; some early years practice; and ‘outward bound’ adventurous activities, the majority of available literature (in particular about play) is qualitative and small scale. As a rule, the literature is focused on the UK, the US, northern Europe and Australia, with a few studies from other English-speaking countries and some literature about other majority world countries (though often not published in those countries). We have tried to compensate for the lack of peer-reviewed texts outside the English-speaking countries with market research, journalism and other literature and we are grateful to all our colleagues who have supported that research. A further report is planned for 2019/2020.

If you know of related research, or would like to discuss the methodology, contact: info@outdoorclassroomday.com.

¹⁶⁷ We make this assumption as our sample consists of teachers and schools who proactively got involved in the Outdoor Classroom Day campaign

5.2 Full tables of responses from the Outdoor Classroom Day 2017 survey

In Ai) and Aii) data from the four focus countries have been highlighted in green. Columns highlighted gold are new data not published in the May report.

A) Countries and total numbers of responses

Ai) Schools that took part – for all but the section on outdoor learning.

Country	Number of schools
Australia	91
Canada	148
China	1
Croatia	2
Finland	2
Germany	2
Greece	1
Hungary	1
Iceland	1
India	16
Indonesia	1
Ireland	15
Israel	1
Latvia	3
Malaysia	1
México	1

Country	Number of schools
Netherlands	1
New Zealand	6
Nigeria	1
Philippines	1
Romania	3
Russia	1
Slovenia	1
South Africa	27
South Korea	1
Spain	1
Thailand	1
Turkey	2
UK	176
United Arab Emirates	1
US	119
All schools	629

A ii) Schools surveyed about outdoor learning (all primary).

Country	Number of Primary Schools
Argentina	6
Australia	93
Brazil	27
Bulgaria	1
Canada	79
Chile	1
Colombia	1
Croatia	4
Finland	18
Greece	1
Hungary	1
India	36
Indonesia	55
Ireland	12
Italy	1

Country	Number of Primary Schools
Latvia	3
Lebanon	1
Macedonia	2
Malta	1
Mexico	1
New Zealand	2
Pakistan	1
Poland	1
Portugal	16
Romania	3
South Africa	11
Sweden	1
Turkey	3
UK	289
US	42
All schools* ¹	713

A iii) Q: When did you first get involved in Outdoor Classroom Day?

Year	Responses	
Before 2016	13.00%	82
2016	21.08%	133
2017	65.93%	416
	Answered	631

B) Play outdoors at school

B i) Do you believe play time outdoors throughout the day is critical for children to reach their full potential?

97% of teachers worldwide said they believe play time outdoors throughout the day is critical for children to reach their full potential (Australia 99%; Canada 99%; South Africa 96%; UK 99%; US 99%).

B ii) Time to play

Q: Length of time for Breaks in Primary and 'All-through' schools

Countries		0 - 30 minutes	31 - 59 minutes	60- 89 minutes	90+ minutes	Total
Australia	Count	0	24	27	6	57
	%	0%	42%	47%	11%	100%
Canada	Count	10	59	25	11	105
	%	10%	56%	24%	10%	100%
UK	Count	7	63	37	9	116
	%	6%	54%	32%	8%	100%
US	Count	30	37	6	2	75
	%	40%	49%	8%	3%	100%
All schools*	Count	51	218	109	37	415
	%	12%	53%	26%	9%	100%

C) Time to learn outdoors

C i) Frequency of outdoor learning

Countries	Less than once a month	About once a month	Once a week or more	Every Day	Total schools
Australia	16 17%	10 11%	53 57%	14 15%	93
Canada	14 18%	19 24%	32 41%	14 18%	79
UK	35 12%	69 24%	151 52%	34 12%	289
US	12 29%	7 17%	19 45%	4 10%	42
All schools	115 16%	152 21%	362 51%	84 12%	713

D) Skills and capabilities developed outdoors

D i): Have you noticed any changes in children’s attitudes and behaviours when they return to the classroom after playing outdoors? Please select all that apply.

Countries	Ability to concentrate	Engagement in learning	Behaviour	Happiness	Ability to retain information*
Australia	53 62%	68 77%	57 65%	78 89%	52 59%
Canada	84 63%	107 80%	96 72%	120 90%	80 63%
UK	109 69%	109 74%	86 58%	125 84%	84 60%
US	74 68%	85 77%	75 68%	93 85%	72 67%
All schools	384 68%	437 79%	371 67%	490 88%	347 64%

D ii): Which key skills do you think children acquire from playing outdoors?

Countries	Imagination and creativity	Social skills	Improved fine motor and gross motor skills*	Ability to focus on a task*
Australia	85 98%	86 99%	85 98%	61 70%
Canada	123 93%	128 97%	117 89%	86 65%
UK	138 94%	144 98%	127 86%	91 62%
US	100 92%	105 96%	102 94%	78 72%
All schools	520 94%	537 97%	501 90%	363 65%

D iii): Have children a better understanding of the environment from playing outdoors?

Countries	Yes, children have a better understanding of the environment after playing outdoors*
Australia	80 92%
Canada	116 88%
UK	122 83%
US	89 82%
All schools	478 86%

Dii) Q: Have you noticed any changes in children's attitudes and behaviours when taking part in lessons outdoors?

Country	Ability to retain information*	Ability to concentrate	Engagement in learning	Behaviour	Happiness
Australia	42 49%	53 62%	72 84%	55 63%	74 85%
Canada	79 59%	84 63%	117 87%	88 66%	116 87%
UK	95 63%	110 72%	141 90%	95 63%	140 91%
US	67 63%	74 69%	100 91%	73 68%	97 88%
All schools	350 62%	385 68%	505 88%	369 65%	508 89%

E) Barriers to going outdoors

E i) What stops children playing outdoors?

Country	Poor behaviour during the break*	Catch-up lessons (reading/ literacy/ maths)*	Poor behaviour in class	Finishing classwork or homework
UK	53 36%	20 14%	64 44%	56 38%
US	21 19%	21 19%	31 28%	26 24%
Australia	16 18%	7 8%	19 22%	19 22%
Canada	24 18%	12 9%	35 27%	32 24%
All schools	123 22%	69 12%	161 29%	155 28%

E ii) Does the weather stop children playing outdoors?

Country	Weather
UK	112 76%
US	88 81%
Australia	71 82%
Canada	111 84%
All schools	441 79%

E iii) Nothing stops children playing outdoors (at school)?

Country	Nothing
UK	24 16%
US	7 6%
Australia	18 21%
Canada	15 11%
All schools	78 14%

E iv) Is there anything that stops you from taking lessons outside?

Country	Pressures caused by curriculum work	Health and safety fears	Extra prep involved in taking classes outside*	More difficult to moderate children's behaviour outdoors*	Learning outside is not perceived to be as valuable as learning inside *	Parents' perception that learning outside is not time well spent*
Australia	34 39%	8 9%	16 18%	24 28%	16 18%	10 11%
US	52 47%	15 14%	29 26%	13 12%	13 12%	2 2%
UK	70 45%	27 17%	32 21%	15 10%	21 13%	14 9%
Canada	44 33%	23 17%	27 20%	16 12%	25 19%	14 10%
All schools	233 40%	87 15%	115 20%	80 14%	86 15%	52 9%

E v) Does the weather stop you from taking lessons outside?

Country	Weather
Australia	59 68%
US	85 77%
UK	90 58%
Canada	107 79%
All schools	405 70%

E vi) Nothing stops you from taking lessons outside?

Country	Nothing
Australia	16 18%
US	7 6%
UK	37 24%
Canada	20 15%
All schools	99 17%

F) Would you like to go outdoors more?

F i) Do you think children at your school should have more time to play outside?

68% of teachers worldwide think children should play outdoors more. Australia 69%; Canada 84%; South Africa 50%; UK 55%; US 72%

F ii) Q10: Would you like to take your pupils outside more often to learn?

87% of teachers worldwide want more time to take lessons outdoors (US 93%; Canada 89%; Australia 85%; South Africa 85%; UK 81%)

G) Impact of Outdoor Classroom Day

G i) Q: Has there been any change in outdoor play since your involvement in Outdoor Classroom Day?

Country	Increased
Australia	16 18%
Canada	30 23%
UK	28 19%
US	18 17%
All schools	125 22%

G ii) Has the frequency of outdoor lessons at your school increased or decreased since taking part in Outdoor Classroom Day?

Country	Increased
Canada	57 42%
US	45 41%
UK	59 38%
Australia	29 33%
All schools	257 44%

5.3 Summary of the known consequences of taking learning and play outdoors

Getting outdoors for any reason in (almost) any weather is a key part of a balanced, healthy day.

Getting outdoors, especially in green spaces, increases our oxygen supply, reduces cortisol levels, decreases blood pressure and lowers anxiety levels. We feel calmer and happier and better disposed to the world. Playing outdoors is how we are designed to develop as human beings.

The latest neuroscience research suggests 'attention' is what children learn about outdoors. Wandering in green spaces allows the 'fight or flight' nerves to relax and a 'soft gaze' to develop. Stress reduces, focus increases, children are happier.

While playing in groups, children learn crucial social skills – how to negotiate, how to make friends, how to fall out and make up. While it is possible to develop literacy and numeracy skills later in life, it is harder to learn how to be kind, considerate and how to co-operate without learning these skills in childhood.

Through playing outdoors regularly, children build a firm connection to the environment so are more likely to protect it, and lessons learned outdoors are often more memorable. Schools that respect and encourage children's outdoor play see increased attendance, lower sickness rates and their teachers report being happier too.

Taking lessons outdoors at school is good both for making lessons memorable and for developing wider skills. In summary outdoor lessons support children to:

- understand better the lessons they are learning
- apply learning to the real world
- increase their knowledge and understanding of the world
- be more creative
- learn to focus in real-world scenarios.

Being outdoors at school, or when travelling to school and around their neighbourhood by bike or on foot helps children:

- connect to their environments
- develop a concern for the environment
- have a clear 'sense of place' and know their neighbourhood
- have a better understanding of 'time' and how long it takes to travel
- be more physically active
- connect to and aspire to have a healthy, active lifestyle
- be less stressed
- make better and deeper friendships
- concentrate better in lessons.

Playing outdoors in nearby spaces, preferably green spaces with plenty of play 'affordances', helps children to:

- connect to their environments
- have concern for the environment
- be more physically active
- be less stressed and have better mental health
- learn how to cope with 'boredom'
- understand deferred gratification
- focus on a task
- make better and deeper friendships
- handle conflict
- observe, interact with and understand their own and other's cultures
- learn from and with peers – skills essential to navigating childhood
- interact with others equally (away from adult 'power') and learn to treat their peers as equals
- have a clear 'sense of place'
- develop skills around teamwork, leadership, collaboration and group dynamics
- develop self-confidence, grit and resilience
- be creative and adaptable
- be more self-reliant
- develop curiosity and initiative
- sustain and develop their creativity
- develop communication skills
- build problem-solving and critical thinking skills
- be more socially and culturally aware

Good quality outdoor play environments at school also help children to:

- feel more respected and trusted at school
- build friendships – including mixed ages, between boys and girls and with children with different abilities
- behave better during school time (or have their natural behaviour more respected)
- have less accidents during school
- have less bullying and conflict (as less tension over space/resources)
- feel happier – so they come to school more often
- stay healthy (especially if they go outdoors every day)
- pay attention to the elements they choose
- concentrate better in lessons after playtime

Outdoor education, field visits and 'big adventures' may happen less often but also have a positive impact that is harder to summarise but includes:

- developing self-belief
- fostering grit and resilience
- managing stress and problem-solving
- understanding deferred gratification.

5.4 Acknowledgements

This report was written by Outdoor People for Project Dirt, the global lead organisation for Outdoor Classroom Day, to be used by NGOs and their partners who lead Outdoor Classroom Day around the world; and by teachers, head teachers and policy makers looking to make the case for more outdoor learning and play at school and beyond.

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Cover illustration by Tom Morgan-Jones.

5.5 Authors

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Get involved in Outdoor Classroom Day!

Outdoor Classroom Day is a global campaign to inspire and celebrate outdoor learning and play. On the day, thousands of schools around the world take lessons outside and prioritise playtime. As well as having fun, they show how important and easy it is to give children more time outdoors. The activation days are part of a wider movement to inspire more time outdoors every day, both at school and at home.

This report brings together the findings from the Outdoor Classroom Day 2017 survey and a review of a wide-range of literature that highlights the benefits of playing and learning outdoors. It aims to inspire schools, parents and policy-makers and anyone who cares about childhood to take action so that children everywhere enjoy their childhood and have the foundations they need for the life they want to live.

Join the movement today: www.outdoorclassroomday.com

The global Outdoor Classroom Day is led by Project Dirt, in partnership with Unilever as part of their Dirt is Good movement.

Do be aware you get involved at your own risk! Be prepared to be amazed...

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