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From Desks to Dens. (Outdoor and Adventurous Activities)

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This Chapter considers the role of Outdoor and Adventurous Activities in the Primary School. It is divided into two distinct sections.

The first section outlines a rationale for Outdoor and Adventurous Activities as an integral part of children's learning.

The second section looks at how schools can achieve this.

Introduction

There has been much reported in the Media demonstrating growing concerns in society about the lack of opportunities for children to roam and play in green spaces (The Times, 2007; The Mail, 2008; The Telegraph, 2010). In recent years, the ever increasing developments in technology and the loss of green spaces available for children's play in both urban and rural areas has inevitably meant that children spend more of their leisure time on electronic games, in front of televisions and computer screens (Palmer, 2006). Parental fears of children being hurt by traffic, or being snatched by strangers has increased with highly publicized cases in the press and on television resulting in a situation where children are growing up without the same opportunities for physical and free play that were experienced by past generations. Allied to this is an increasing awareness of the outdoor environment as an integral and valued resource for children's learning and development (Maynard and Walters, 2007; Louv, 2005; Garrick, 2004; Waite, 2010), in particular the natural environment, where learning incorporates increased levels of physical activity (Mygind, 2007) and improved motor development (Fjortoft, 2004).

Outdoor and Adventurous Activities, a must for Physical Education

This section explores existing research and literature that create a strong rationale for Outdoor and Adventurous Activities being a part of all children's Physical Education and wider learning experiences. The field is extensive, and so for the purpose of this chapter, key themes that are particularly relevant to the primary school are considered under separate sub-headings. Although each aspect cannot be discussed in great depth, the aim of this chapter is to give the reader an understanding of the full potential of this area of the curriculum, and the possible consequences if pupils do not have opportunities for Outdoor and Adventurous Activities.

The importance of movement

The importance of movement in Physical Education is obvious, but how that early physicality affects a child later in school, in physical education and all aspects of learning, is something that not all teachers are aware of.

Early movement experiences are vital for brain development. It is the motor and sensory input experienced in early childhood that 'will 'mold' the neurons and interconnections to form sensory and motor processes' (Ayres, 2005 p 37).

The development of balance is particularly important, children need to develop good gravitational awareness in order to be able to sit, walk run and move with competence. This development of balance and postural control is supported by visual and motor systems. The training of these systems takes place gradually over at least 7 years, but also continues through puberty and beyond (Goddard Blythe, 2005). If this system does not have the necessary stimuli and experiences to mature then children may have problems later in life. As Blythe and McGlown (1979) explain; 'Immature vestibular functioning is frequently found amongst children who have specific learning difficulties such as Dyslexia and Dyspraxia, problems of

attention, language impairment, emotional problems (cited in Goddard Blythe, 2005 p17.)

The increase in the number and variety of baby gadgets available for parents has meant that busy parents are able to entertain babies with relative ease. A baby may be in a car seat, bouncy chair or buggy for much of the day, with little chance for movement, and due to the seat design the baby is supported and has no need to develop core stability and balance. The baby can only interact with its immediate surroundings; opportunities to explore the world are extremely limited. The consequences of this are becoming evident in our schools, with young children unable to sit properly on chairs and lacking the strength and stability required to develop fine motor control.

Children need rich movement experiences, involving, crawling, climbing, swinging, balancing, and inverting the body to ensure maturation of the systems required throughout life. With increasing numbers of children struggling in schools due to poor concentration, a lack of co-ordination and balance, and delayed speech and language many pupils follow motor programmes as an intervention. These children often find Physical Education particularly challenging, often missing lessons with a note, forgetting kit, or are so slow changing that they miss much of the session. Ironically, these are the pupils that desperately need good movement experiences.

Outdoor play and adventure can be a means for all pupils to experience high levels of movement in a low stress, meaningful context.

Giving pupils opportunities to use the outdoors as an integral part of their learning in natural settings in particular, results in improved motor development. The landscape provides dynamic and rough playscapes that challenge motor activity and obstacles that encourage a variety of bodily skills (Fjortoft, 2004). 'Outdoor playgrounds develop strength, flexibility and co-ordination due to the types of activities facilitated by play equipment such as climbing swinging and balancing' (Munoz, 2009 p11).

Waite (2010) highlights wider benefits suggesting learning outside the classroom enables observation of children's natural behaviour that is not tied to a particular

learning outcome. Teachers have opportunities to view the holistic social and emotional aspects of learning that have long been linked with Outdoor Education. This holistic nature of learning in the outdoors gives young children, exploratory experiences in a meaningful context, enabling them to develop an understanding of the embodied self and creating 'opportunities to become risk literate and physically literate' (Maude, 2010, p 113).

Health and Well-being

The development of Physical Literacy contributes to life long physical activity, and is defined by Whitehead as:

" Appropriate to each individual's endowment, Physical Literacy is the motivation, confidence, physical competence, knowledge and understanding to maintain physical activity throughout the lifecourse"

(Whitehead, 2010 p11).

Physical Activity is an important factor in the maintenance of health, with childhood health and well-being constantly in the media. In recent years the particular obsession has been with obesity (The Times, 2010; The Telegraph, 2011), although there are also concerns about children's mental health (The Times, 2010; The Guardian, 2006). Research shows that learning in a natural environment incorporates increased levels of physical activity helping significantly towards children achieving their recommended daily activity levels (Mygind, 2007). It also encourages greater levels of activity in girls than in normal schooling (Groves and McNish, 2008). However it is not just physical health that is improved, contact with nature is also needed to maintain mental health. Louv (2005) highlights the increase in psychological and emotional problems in young children, who have reduced contact with natural environments. He goes so far as to identify this as 'Nature-deficit Disorder (which is) the human costs of alienation from nature, among them: diminished use of the senses, attention difficulties, and higher rates of physical and emotional illnesses' (Louv, 2005 p36).

In the report "Natural Thinking", Bird (2007) also makes a strong case for the importance of engagement with nature linked to a variety of issues. He identifies

evidence that suggests nature impacts positively on children's concentration, reducing levels of stress and aggression. It can be used to treat children with poor self-discipline and ADHD (Attention Deficit Hyperactivity Disorder) as well as improve wellbeing and mental health. Louv (2005) describes this restorative quality of the environment as "Nature's Ritalin" (p 105).

Risk

Outdoor play has also been linked to the development of children's understandings of risk (Frost, 2006 cited in Munoz, 2009). This is particularly of relevance in light of the much publicized 'cotton wool' society, where children who play in parks and outdoor spaces are usually under the supervision of their parents. Children become more dependent on this supervision and ironically, less careful (Walsh, 2004). A decrease in the amount of time children spend in free play, roaming woods and parks, results in a loss of opportunity for children to learn about risk and Gill (2007) suggests learning to be safe is about understanding risk. By seeking to protect children, parents are potentially putting them in more danger. Children inevitably seek adventure and challenge and if they have no sanctioned opportunities for this, they may seek out their own and be exposed to greater risk. Or, if as Mortlock (2009) suggests adventure in the natural environment has been replaced by adventure in the form of computer games, then children are not having the necessary real experiences from which to learn to make good judgments. Gill (2007) gives a further argument for exposing children to risk: '...that children build their characters through facing up to adverse circumstances' (p16)

Environmental awareness

Environmental awareness has also long been associated with learning in the outdoors. At a time when the earth's resources are increasingly under pressure there has never been a greater need to develop children's understanding of these issues, and to foster in them the desire to safeguard the environment. Children engaged and learning in the outdoors develop a greater connection with nature

(Tunncliffe, 2008). This recognition is nothing new, and work by Steve Van Matre and Joseph Cornell in the 1970s focused on engaging young people with nature, through multi sensory approaches to learning in the outdoors. The awareness of the environment does not stop with the knowledge of the biodiversity, but also encompasses students developing an awareness of humanity's impact on the landscape, both historically and in the present. Children will begin to understand their part in that landscape developing a 'sense of place'. Reading the stories of a landscape and being aware of the historical events in a place will develop understanding and empathy for all life dependant on and linked to the land (Stewart, 2008). This understanding shapes the view people have of the land and the environment, which influences their treatment both of that place and the people within it.

Equal Opportunities

The development of empathy through engagement with the landscape is only one aspect of personal growth long associated with learning in the outdoors. The use of Outdoor Education to engage disaffected pupils is widely acknowledged. There are those that would argue Outdoor and Adventure Activities should not be in the curriculum, that it is not a subject, or area of activity, but a way of experiencing learning and a means of personal growth. Perhaps this difference is a reason in itself to ensure all pupils can experience it. There is no doubt that for most schools the types of specialist experiences that outdoor centres can offer would be impossible and the unique value of a residential experience should not be replaced. With growing numbers of pupils experiencing regular Adventurous Activities and needing to extend these experiences beyond the school curriculum, the demand for centres may even increase.

Physical Education in schools has long been dominated by sport and traditional games in particular (Kirk, 2010), and although what schools are able to offer is a 'curriculum version' of Outdoor and Adventurous Activities it is still a means to engage and motivate the many pupils for whom the traditional Physical Education

experience lacks meaning. The unique nature of many of the challenges in Outdoor and Adventurous Activities mean that pupils of all abilities and disabilities are able to engage in the processes required for tasks. This gives an opportunity for those that are not 'sporty' to engage in physical activity and be successful, 'key in becoming and remaining intrinsically motivated' (Glover and Anderson, 2003, p11). Unfortunately it has all too often been an aspect that only takes place at a residential visit, or as occasional orienteering and problem solving around the school grounds (Williams and Wainwright, 2011). However, the opening line of the Qualifications Curriculum Authority (QCA) definition of Physical Education states:

"A high quality physical education curriculum enables all pupils to enjoy and succeed in many kinds of physical activity."

(QCA, 2007, cited in Kirk, 2010, p13)

Outdoor and Adventurous Activities therefore needs to be an integral part of the Physical Education Programme of Study to ensure a broad experience with a range of activities.

21st Century Learners

The lack of emphasis on Outdoor and Adventurous activities may be set to change. In Wales this has already happened. The revised curriculum in 2008 saw Adventurous Activities become a statutory element of the Physical Education programme of study at Key stages 2 and 3 and optional at KS 4. Early Years and Key Stage 1 were replaced by The Foundation Phase, a play-based curriculum with a greater emphasis on learning in the outdoors. A Skills Framework was introduced to underpin the whole of the curriculum for 3 -19 year olds, and requires the development of the Key Skills of Thinking, Communication, IT and Number, through all aspects of learning. This change in the curriculum was brought about to suit the aptitudes and interests of learners and to meet the requirements of employers and others (DCELLS, 2008).

It is a well acknowledged fact that the pupils of the 21st century will not need to know information, as much as they will need to know how to find, process and use

information (Henton, 1996). Teachers are acutely aware of the pressure to enable pupils to become critical thinkers and problem solvers. Research into the implementation of Adventurous Activities in the New Physical Education curriculum in Wales highlighted the strength of these activities in delivering opportunities for children to develop these Key Skills (Wainwright and Williams, 2011). One factor that develops metacognition is an environment that encourages pupils to take risks with their learning, developing learners who are not afraid to make mistakes when attempting new challenges, and able to reflect on their experiences.

Team building and adventure activities have often been seen as an ideal vehicle, not only for developing leadership skills and group work, but also as means of creating situations that enable young people to overcome challenging situations. These activities often result in raised levels of confidence and self esteem, vital qualities in any context, and especially necessary for confronting failure (Katz, 1993). Our pupils need to develop into dynamic, active learners able to deal with the challenges of the 21st century. They will need a variety of experiences to develop the resilience and creativity to solve problems they encounter in life. Outdoor and Adventurous Activities have a significant contribution to make in helping them achieve this.

How does a school put this into practice?

This section will discuss practical issues for implementing Outdoor and Adventurous Activities in Physical Education and across the curriculum.

Every school is unique, and one of the challenges for teachers is knowing what will work for their school. There is no easy one size fits all toolbox; every local area and community is different, with a variety of needs and expectations. The individual abilities of pupils, their readiness for activities and challenges, and their perceptions of adventure may be very different in each context.

In every school the grounds, facilities and range of staff expertise will be different. As well as considering the resources in the school, opportunities in the local

community also need to be assessed. Parents, clubs and organisations may be able to support Outdoor and Adventurous Activities and offer extra curricular opportunities.

Developing the School Environment

There is a growing focus on the design of children's play spaces and the need to facilitate access to outdoor spaces where children can engage in outdoor activities (Munoz, 2009). Not only are the designs important, but the way in which schools use their grounds and access the local environment will impact on the quality and amount of outdoor learning available to the children. Many urban schools may not have access to the types of landscapes and wild places that Mortlock (2001) used for adventurous activities when working with children and this will generally remain the role of Outdoor Centres. However much of the research evidenced by Bird (2007) demonstrates the impact of nature to be so profound that even minimal exposure to nature can be beneficial (Taylor et al, 2001-Cited in Bird, 2007). Much can be done with limited space and Moore and Wong (1997, cited in Munoz, 2009), highlighted a wide range of benefits to pupils and staff resulting from the transformation of a tarmac yard into an 'environmental yard' (p15) with the addition of natural elements.

Key to the success of most school ground developments is the involvement of the pupils. School and class councils need to be consulted about the things they want in their school grounds. Children need to be observed to see how they play, the range of activities and areas and landscapes that they prefer.

Many books and websites are available to support and give ideas for school ground development such as the use of areas, zoning and resourcing outdoor spaces. (see useful references and resources)

Planning and progression

Curriculum expectations in the UK require children to undertake activities that involve problem solving, co-operation, challenge and the use of the outdoors. These are usually delivered in schools in the form of team building and problem solving

activities and orienteering. In Wales schools have also introduced camp craft and bouldering following the introduction of resources and training in the form of 'Outdoor Learning Cards' produced by The Outdoor Education Advisors Panel (OEAP).

Activities

Activities will be considered in turn, and mapped out from early years through to the end of Key Stage 2. This is **NOT** a tick list of activities, but ideas to help initiate or develop the delivery of Outdoor and Adventurous Activities. All activities should to be used only if developmentally appropriate for the child.

Campcraft / shelter building

These activities begin in their simplest form with very young children creating dens under a table or chair, or in boxes. Older Key Stage 2 children may be able to plan and carry out a camp on a school site or in the local area.

This may develop through the use of some of the following activities:

- Dens in class for child and / toys
- Dens outside for child and / toys
- Dens in pairs and groups
- Dens to shelter from the sun/wind/ rain etc.
- Dens / shelters to read/listen to stories / tell stories
- Dens/shelters for relaxing / thinking /hiding....etc.
- Dens / shelters made out of a variety of material and fabrics
- Dens / shelters made from natural materials
- Dens / shelters using purpose made equipment, poles and bivvies.
- Explore the properties of a range of materials for shelter
- Identify appropriate sites for shelter in a variety of weather conditions
- Become familiar with a variety of tents, and be able to use them.
- Learning to cook safely in a camp / outdoor setting.

- Know the range of equipment needed for camping and be able to use it safely.

Orienteering

Orienteering begins initially with young children being able to distinguish an aerial view of an object. This begins with small toys and objects in the class. Older Key Stage 2 children may be able to undertake orienteering races in and around the school site and in the local environment.

This may develop through the use of some of the following activities:

- Pick out pictures that match a view of an object
- Matching games using pictures of aerial views
- Drawing aerial views of a variety of objects
- Drawing plans of desks, table tops objects on trays
- Drawing plans of class
- Treasure hunts
- Photo trails
- Taking photos and creating photo trails
- Drawing plans of playground / areas of the playground
- Orientation of map
- Games to learn compass points
- Identifying symbols on plans / simple maps
- Identifying and using a key
- Drawing a map of the playground
- Creating a key for a map
- Using own maps for treasure hunts to identify locations of clues
- Matching symbol games for official map symbols
- Star course orienteering activities using orienteering map
- Use of orienteering maps to find objects on school grounds.
- Variety of orienteering courses on school site.
- Use of compass and bearings.

- Map work / orienteering in the local environment.

Bouldering

Climbing and bouldering are body management skills, and when watching an experienced climber move up or across a route, the similarities to dance and gymnastics become clear. There is fluidity to the movement, which is balanced and controlled; the climber appears to flow with a series of smooth linked actions. For children to develop their skills for climbing, this begins with early body management, balance posture and co-ordination. Children are natural climbers and most will be climbing in many aspects of their play when given the opportunities. Children will start to climb on small pieces of equipment and frames in the early years, and by the end of Key Stage 2 may develop into confident climbers on a school bouldering/traversing wall. This may develop through the use of some of the following activities:

- Climbing on and over apparatus and soft play equipment
- Climbing on small logs
- Using purpose built frames in the hall / playground
- Climbing up steps for slides
- Climbing ladders on frames
- Moving around uneven natural terrain, with slopes and mounds.
- Climbing small trees and fallen trees on woodland visits / forest schools
- Climbing on rocks and boulders in school grounds / local environment / local woodlands.
- Hanging and swinging from monkey bars / similar equipment in school hall / grounds.
- Climbing on and using trim trail equipment, involving balancing, and swinging.
- Learning to spot for a partner for a bouldering wall.
- Learning weight management using footholds on bouldering wall.
- Travelling techniques for use on the bouldering wall.
- Foot placement.

- Hand holds.
- Body positions.
- Variety of games to practice and refine skills.
- Visit to local climbing wall.

Team Building / Problem Solving

Team building and problem solving activities are perhaps the most used and versatile aspect of Outdoor and Adventurous Activities. These activities are particularly relevant in the present climate with the emphasis on developing critical thinking and communication skills. Developing co-operative skills are particularly important for young children starting school, who may need to develop their social skills. By the end of Key Stage 2 pupils will be able to solve demanding challenges in creative and innovative ways drawing on the abilities of all members of a group, such as the 'toxic waste' challenge (Bucket in a rope circle, which has to be removed without anyone touching it). The challenges listed are well known team building activities, descriptions of them can be found in books, in the Internet and on the Outdoor Learning Cards.

Team building skills may develop through the use of some of the following activities:

- Early co-operative games in circle time
- Taking circle time games to the hall and outside
- Parachute games
- Keep up games with balloons
- Moving balloons through raised hoops
- Frozen bean game
- Travelling in pairs or small groups whilst keeping contact with each other.
- Magic carpet
- Islands
- River crossing games, across hall or playground
- Bench sorting ordering games
- Human knots

- Spider web games
- Electric fence challenges
- Obstacle courses
- Blind trails
- Robot races
- Leaky tube
- Roller ball
- Toxic waste.

There are many more examples of activities for all of the areas of activity. Many are available on the Internet, and in books, as well as training and resources that have been produced to support the curriculum, such as the Outdoor Learning Cards produced by the OEAP.

Schemes of work and lesson ideas for Outdoor and Adventurous Activities exist in most local authorities, with many more available on the Internet.

Examples from schools

This section contains examples of how some schools have delivered Outdoor and Adventurous Activities. These examples show a range of approaches. Every school will have different facilities and needs, but some of the strategies used by other schools may help to stimulate ideas for different contexts.

Key Stage1

Year 1/ Foundation Phase.

Developing early orienteering skills, teamwork/problem solving and communication, mathematics, geography and literacy.

Year one pupils have been looking at shape in mathematics and have drawn plans of the playground. The children choose simple symbols to represent aspects of the playground. The teacher hides small bags around the grounds with words in them,

and marks on the children's map where the bags are hidden. The children work in groups with a map to find the bags and collect words. They then assemble the sentence from the collected words. The sentence asks them to choose a good place to listen to a story in the school grounds. The group must all agree on the place.

There are many variations on this type of activity; the finding of the bags can be in a PE lesson, as simple orienteering activity, or a way of ensuring a physical and outdoor approach to other curriculum areas, leaving the PE lesson time still available for more PE!

Mixed year groups, reception year 1 and year 2 / Foundation Phase.

With a mixed age group the teacher needs to ensure that there is some focused input with the groups.

The session involves Problem solving /team work.

Sending and receiving / ball skills.

Treasure hunt / orienteering.

Bouldering wall.

The Teacher has the support of a Teaching Assistant. The pupils are put into four groups.

Group 1 Problem solving (older year 1 and year 2 pupils).

The children have a problem-solving task in a large construction area outside in the school grounds. The area has an assortment of tyres, logs, crates and planks, following a theme in the class the children are challenged to construct a fire engine from the materials available. The group work on this task, supervised from a distance by the teaching assistant.

Group 2 bouldering wall (older year 1 and year 2 pupils).

The children have been taught to spot for each other in a previous Physical Education session. They use the Outdoor Learning Cards to remind them what to do and practice traversing across the area in pairs.

Group 3, Treasure hunt / orienteering (reception and year 1 pupils).

Working with the teacher, the children are given maps of the ground and are sent to find 'treasure' from marked places on the maps. The treasure is a clue, which is a mathematical problem. The children work out the answer in their pair and return to the teacher to explain their answer, before going to find the next.

Group 4 sending and receiving/ball skills (reception and yr 1 pupils)

The children are consolidating previously learned skills, they have a variety of small equipment and balls of various sizes and weights, they devise games in pairs or small groups to practice throwing and catching. The teaching assistant supports the group.

Groups 1 and 2 swap over half way through, groups 3 and 4 swap over half way through.

Key Stage 2

Year 4 Physical Education

Shelter building

The pupils are using map skills learned in previous Outdoor and Adventurous Activities sessions to collect the equipment needed for this session. The class is split into groups. Each has a map of the grounds with numbered locations. The groups find the locations and collect equipment that is there (an assortment of materials, e.g. ropes, bungies, pegs and tarpaulins). They bring all their equipment to the final location on the map and use it to construct a shelter. Once each group has finished they sit in shelter and reflect on activity. They have a list of initial questions to consider for reflection but may develop these. Once they have all finished the groups inspect and evaluate each shelter to identify good aspects and areas for improvement.

YR 5 Physical Education

Mountain Biking (Capitalizing on teacher expertise)

The school is in an area of social deprivation. The children do not all own mountain bikes, but have bikes that they ride on the estate, wasteland and in the park. The class teacher is a keen mountain biker. In order to engage and motivate the children, the school has recognized the need to listen to pupils and ensure the learning is relevant and meaningful to the children. Following discussion with the children, mountain biking was chosen as an Adventurous Activity to develop in Physical Education. IT sessions were used to research mountain bike trails and routes. Key features of the routes were highlighted. The children did a survey of the school grounds. They planned and designed a mountain bike route around the school grounds. During PE sessions the class teacher worked in improving their balance and cycling skills, which the children practiced doing circuits around their course.

Yr 6 Problem Based Learning (PBL)

Problem based learning is a powerful tool for developing pupils' independent learning strategies.

The head teacher of the school is enthusiastic about using the outdoors as an integral part of children's learning. The children are experienced in PBL. They have used their local environment throughout their time in primary school. Pupils are given a problem / scenario that they work through in groups to identify key issues.

The scenario:

'A year 6 class from our partner school in Finland are coming to stay. The head teacher has decided it would be good for our class to take them on a walk in the local environment and camp in the school grounds. We need to plan, organise and prepare for the visit'.

The groups identify several aspects to research and prepare/ practice:

Map reading skills for the local environment.

Areas of interest, historical, environmental, geographical.

Hazards and risk assessment.

Fitness and physical capabilities of the group.

Weather.

Clothing

Camping area.

Camping and cooking equipment.

Food.

Problem Based learning requires careful planning. The teacher's role is more of a facilitator. Resources need to be well prepared enabling the children to research and access information and equipment independently. It may be challenging for teachers to let go and allow children to lead their learning, but this is part of the ethos of Outdoor and Adventurous Activities.

Conclusion

By exploring the impact of Outdoor and Adventurous Activities on children's health, wellbeing and aptitude for learning this chapter has sought to develop a rationale for ensuring that all pupils experience this aspect of the curriculum. It is hoped that the discussion raises questions and highlights the importance of the outdoors as a vehicle for learning. The research and literature suggests that the potential impact is considerable. Changes in society, children's pre school experiences, and in their play opportunities mean it is crucial that schools act to ensure children have high quality Outdoor and Adventurous Activities in Physical Education. It is also vital that children have the chance to engage in outdoor learning opportunities across all aspects of the curriculum.

The challenge is for schools to recognise this and act to ensure meaningful, challenging outdoor experiences for all pupils, helping to equip them for life in the 21st century.

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