

Exploring how outdoor experiences and in particular a beach and rockpool activity can support young children's holistic development and learning.

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This piece of work evaluates the benefits and challenges of exploring natural environments with young children. The author planned a beach and rockpool visit for a group of 20, Foundation Phase children. Initially the author set the scene for the children by reading Donaldson's (2005) *Sharing a Shell* story book in the classroom. This was also an opportunity to discuss with children the importance of protecting habitats for wildlife with support from Natural Resources Wales (2021a; 2021b) and RNLi (2021) documents. The activity was situated at a local beach in which children would be exploring rockpools and the marine life that inhabit coastal areas. The intention of the activity was to provide children with a structured, stimulating outdoor learning experience encompassed by first-hand experiences with nature and wildlife and to encourage children's physical and cognitive development, fine and gross motor skills, and an awareness of environmental sustainability. During the activity children would be guided to find and look at creatures in the rockpools, use the help of an ID guide to identify what they discovered, be supported to treat the creatures found with care and empathy, and replace all creatures back carefully in the rockpool having observed them. Children would use nets and buckets and other tools to explore the site. The following discussion places experiences such as exploring the beach and rockpool in the context of early years literature and theory.

According to Jacobi-Vessels (2013), research results indicate that the use of outdoor environments provide children with opportunities for effective holistic learning. Furthermore, Acar (2014) agrees noting that environments surrounding children are influential to the progression of cognitive, physical, social and emotional development. This coincides with David and Hamilton (2016) who note that the use of the outdoors as a learning environment is essential to holistic development. Similarly, Holland (2020) states that using the beach as a learning environment provides opportunities for skill development and holistic learning. Therefore, utilising the beach as the outdoor environment for this activity could support children's holistic development and skill progression. Moreover, Maynard, Waters and Clement (2013) suggest a further benefit of using the outdoor environment is that children can satisfy their need for challenge and excitement.

Additionally, Wilson, (cited in Ernst and Tornabene, 2012) notes that early childhood exposure to nature and outdoor learning environments encourage children to develop a positive understanding of self-awareness, introspection and lifelong attitudes towards nature and the environment. This is agreed with by Fisher (2013) who suggests that experiences with nature from a young age will foster an appreciation of wildlife and ecological compassion. However, there are concerns that children are not encouraged to learn within a natural environment as noted by Welsh Assembly Government (2007) thus resulting in a lack of adequate knowledge to the significance of environmental awareness and sustainability. Therefore, exposure to marine life within the beach and rockpool activity could encourage the development of empathy for wildlife and habitats.

The activity also supports the ethos of the Welsh Assembly Government's (2008) Education for Sustainable Development and Global Citizenship themes where children will have an opportunity to be in the natural environment, to consider how their choices and decisions have implications for their environment, and by actively moving and exploring, supports the children's wider health and wellbeing. Furthermore, the activity also supports the Well-being of Future Generations (Wales) Act 2015 in terms of understanding how awareness of environmental issues links to the future well-being of Wales. This coincides with Donaldson (2015) who states that outdoor learning should be accessible to children, providing opportunities to gain experience and develop metacognition and emotional development from diverse environments, thus enabling them to become ethical, informed, capable learners and citizens of the world.

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However, despite the beneficial qualities gained by outdoor environments, Waite, cited in Kinver (2016) suggests that pressures on teachers or practitioners to achieve academic results within the classroom leads to insufficient time to appreciate the qualities of outdoor learning. Similarly, as suggested by Little, Wyver and Gibson (2011), parental attitudes towards outdoor activities and the risks involved have a significant impact on the opportunities for children to explore and develop in outdoor environments. This coincides with Orestes (2015) who suggests that parental concerns, perceived health and safety regulations and accountability if a child is harmed, contribute to practitioners' reluctance to provide children with outdoor learning opportunities. In contrast, Brussoni et al. (2012) states that placing excessive restrictions on opportunities to encounter risk can obstruct a child's development. This coincides with Eager and Little (2011) who states that risk is not acting recklessly, it is engagement with uncertainty to achieve a goal, thus the beach and rockpool activity could encourage children to go beyond their comfort zone, to enhance their capabilities, perceptions and holistic development, which would be unavailable in an indoor classroom environment.

Moreover, Copeland et al. (2012) suggest that teacher personalities and preferences such as a dislike for cold weather may also be factors in prohibiting children from outdoor learning experiences, therefore resulting in children experiencing less opportunities to engage and learn in an outdoor natural environment. Additionally, Donaldson (2015) in the Successful Futures Framework notes that within the new curriculum, practitioners and teachers will be permitted to use their own knowledge, skills and judgements to develop appropriate methods of educating, in turn producing positive outcomes for children. Therefore, adults who acknowledge the significance of natural outdoor learning and provide access to these types of environments, support children's holistic development. This is supported by Bandura's views, as noted by Morgenroth, Ryan and Peters (2015), in which adults should act as role models for children, motivating their determination and instilling core values. Therefore, this could be supported within the beach and rockpool activity where the adults take the children outdoors, provide demonstrations of curiosity and exploration and scaffold learning.

By visiting the beach, the activity supports Pickering (2017) who suggests that the outdoor learning environment is not limited to the school grounds. This is supported by Welsh Government (2015) in the Play Sufficiency Assessment Toolkit where a significant objective is children having experiences outdoors. Similarly, the Welsh Assembly Government (2007) suggests that environments away from the school grounds should be used to accompany work undertaken in the classroom. This could signify that the Sharing a Shell story, read in the classroom prior to the activity taking place could encourage sustained shared thinking, metacognition and empathy. This is supported by Simon (2021) who discusses the adult's role in encouraging children to make connections between stories and their environment, by exposing children to the world around them. Therefore, the beach activity could enhance empathy and provide a deeper understanding of natural environments such as rockpool areas.

Additionally, Welsh Government (2015) state in the Foundation Phase Curriculum Framework that outdoor learning environments should be used as a learning resource to offer children the opportunity of first-hand experiences that promote exploration and development. This coincides with Froebel's belief, as stated by Tovey (2020), in which outdoor learning activities are essential if children are to have direct experiences of different plants, animals and habitats. These direct experiences could also provide children with new possibilities, interests and knowledge, which was a significant component of the beach and rockpool activity. Similarly, Sikander (2015) notes of Dewey's views on the importance of children learning through 'real', concrete experiences and

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interactions with the environment, which is also a feature of the beach and rockpool activity. However, restrictions and limitations on outdoor learning activities have limited opportunities for children to directly engage with nature and wildlife, as suggested by Mustapa, Maliki, Aziz and Aswati (2019). Furthermore, this disconnection to nature has been noted by Witt (2011) as a significant concern to children's development which could lead to a future disregard for protecting the environment and potential Nature-Deficit Disorder (Louv, 2019), where children are not given sufficient opportunities to connect with the natural world. Therefore, the beach and rockpool activity could support the development of environmental knowledge, behaviours and attitudes through direct interaction with marine habitats.

Furthermore, Mackintosh (2017) discusses that the distinctive landscape and features of a beach environment offer opportunities for physical development as a part of the child's formal and informal learning. As suggested by Hives and Scheffel (2019), the unsteady and ever-changing landscape of the beach provides challenges that children must overcome. Therefore, the activity could encourage the enhancement of physical development, problem solving skills, confidence and competence as children pursue and balance on varied terrains. Similarly, within the activity children will be expected to manoeuvre on sand and rocky terrain and will be introduced to uneven ground. Therefore, the activity could support the sense of proprioception as children will need to sense and detect their joint positions without consciously looking at them in order to navigate across the stones and respond to stimuli to avoid injury (Rees, 2020). Playworld (2018) also highlights the progression of gross motor skills and vestibular sense as children determine the appropriate solutions to reach the expected location within the activity. Similarly, the activity could enhance cognitive development and concentration skills (Active Health 2021) as children determine the correct steps to take to progress. Moreover, Hanscom (2016) suggests that the beach environment offers a whole-body experience that stimulates children's senses, not only felt by hands alone, and includes sights, smells and noises encountered at the beach. The author planned for children to wear appropriate footwear, however the activity could have included the opportunity for children to explore barefoot on the sand to appreciate and receive different stimuli furthering their sensory development.

The beach and rockpool activity involved opportunities for water-play and exploration. Harvoth (2012) notes that water play stimulates the development of children's thought processes in which they alter their way of thinking and develop new concepts. Piaget's views, as discussed by Lefa (2014) also support the interaction between children and water-play as enhancing imagination, problem solving skills and language skills as they manipulate and alter the flow of the water. This was also highlighted by Crosser (2021) who noted that water play can encourage collaborative play among children thus enhancing sustained shared thinking and cognitive development. Therefore, the beach and rockpool activity could be significant to fostering mathematical concepts, social and cooperative skills and encouraging children to make sense of the world around them. Furthermore, the activity could influence these developments by requiring the adult to ask questions thus encouraging the child's thought process.

White (2013) notes that adequate preparation and planning is needed to achieve optimal learning and play experiences in the outdoor environment. Furthermore, Allen (2016) highlights the significance of adult-led, structured play in enhancing a child's development. This coincides with Healey and Healey (2017) who suggest that a structured approach to activities and play can foster self-regulation as children will need to be patient while waiting for their turn and control frustrations, thus providing increased reductions to aggression and hyperactivity, in turn improving and supporting wellbeing and mental health problems. In addition, Elwin and Rossi (2017)

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suggest that research illustrates a positive connection between structured activities and play with improved cooperative learning, teamwork and academic results. Furthermore, scaffolding techniques by adults in structured activities can aid in the development of new knowledge and cognitive development through cooperative learning and social interaction, as noted by Vygotsky (1978). Therefore, the structured plan of the beach and rockpool activity could support children to surpass their comfort level, acquire new knowledge and social skills and aid in the development of self-esteem and control.

However, natural outdoor environments such as the beach offer numerous prospects for unstructured play, as noted by Herrington and Brussoni (2015) which allows children to play freely, thus enhancing their imagination. Similarly, Ginsberg, cited in Olsen and Smith (2017), states that children should be encouraged and provided with opportunities to engage in unstructured play and activities in order to achieve developmental milestones. Additionally, Sundquist (2021) highlights the significance of child-led activities, formed from children's own desires and curiosities, thus enhancing a better understanding of the world, as they challenge hypothesis and concepts during play. Furthermore, Caro (2012) suggests adults should only interfere in child-led activities if invited, taking a passive role thus allowing children to learn as they lead their own play. Therefore, the adult-led structured beach and rockpool activity could potentially obstruct opportunities of further learning experiences for the children as they are confined to a certain area and expected to complete the activity under adult instruction. Therefore, revising the beach and rockpool activity plan, allowing children to lead their own play and activities on the beach, as opposed to responding to the adult's lead, could enhance the children's development progression.

Moreover, during child-led play, as stated by Play Wales (2017) children are able to play with objects and materials within the environments in ways other than their intended purpose, thus allowing the enhancement of the imagination. However, this is not included in the beach and rockpool activity as the structured activity does not involve child-led play therefore is insufficient in promoting imaginative qualities for children. In addition, Gibson's (2014) affordance theory suggests the environment in which children play encourages interaction with nature in ways unique to every child, depending on their perception of what objects in the environment can do or be used for; thus influencing a child's behaviour in that environment. Furthermore, Nicholson's (1971) loose parts theory highlights how a child's play experience can be impacted by engaging with loose parts (open ended, transportable materials) in the immediate environment in terms of supporting collaborative play, decision making skills, sustained shared thinking and improved health and wellbeing (Play Wales 2017). Similarly, Gencer and Avci (2017) state that it is essential for children to obtain loose parts and materials that can be used freely within their play to understand the world and enhance their creative skills. Therefore, the beach and rockpool experience could be criticised for lacking opportunities for creative thinking by the children, as the objective is to explore the beach and rockpool using defined equipment provided by the adults.

To conclude, the beach and rockpool activity could be beneficial to the development of ecological awareness, sensory and cognitive development, fine and gross motor skills, and encouraging children to challenge themselves in a different learning environment. However, the activity may not provide opportunities for play or child-led activity, thus not supporting their creative thinking. Therefore, including within the beach and rockpool activity an opportunity for children to play on the beach, uninterrupted by adults could enhance the quality of their outdoor learning experiences.

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