

Portfolio

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(Monaghan, C. (2025) own picture)

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Early Years Outdoor Education at the Beach

Early childhood outdoor learning at the beach is a unique and fascinating experience that benefits children's development in a number of ways. The following are a few key components of early childhood outdoor education at the beach such as beach place an important value on learning by research and discovery, enabling children to spend hours exploring the environment and its changes, from the sea to the rock pool, for example. All senses are stimulated and a solid foundation for subsequent learning is established when subjects are taught in authentic settings. Beach is adaptable and can accommodate a variety of learning styles. They emphasize nature, space, skill development, challenge, and the recognition of children's diverse languages and voices.

Hands-on activities, beach scavenger hunts, paper plate boat crafts, and surfboard crafts are all excellent summer lesson ideas that foster children's creativity and fine motor skills. Playing in the sand and water helps children learn and grow in their verbal, motor, social, and cognitive abilities. Sand dancing and beach art are two activities that promote creativity and can result in beautiful beach art. All these elements work together to create an integrated outdoor learning program that supports the growth of children in a safe and natural setting.

Not every child has the opportunity to go to the beach with their family. The sea may have never been seen by them. They might not have had the opportunity to interact with children their own age by being exposed to a seaside experience. They are able to learn about nature.

Outdoor learning at the beach offers children the opportunity to be active outside in the fresh air, which is beneficial for children who would struggle in a classroom setting. It is possible to improve a child's health and well-being.

It is unique in that it encourages education beyond the classroom while granting children the freedom to take chances and pay attention to the always shifting surroundings. Learn how to assess danger for themselves by using adults' open-ended questions.

Children's minds are impacted by the setting and its intimidating immensity, and perhaps strangely, the spaciousness draws them closer together. Through exploration, inquiry, and narrative that encourages group thought, all subject areas can be taught outside.

It is often acknowledged that playing outside and engaging in play-based learning are beneficial and enriching experiences. There is much evidence that children benefit much from playing and learning outside.

Increased muscular strength and aerobic fitness, improved agility, range of motion, flexibility, coordination, and balance, reduced fatigue, stress, and depression,

improved blood pressure in children with hypertension particularly for aerobic activity, improvements in cholesterol and bone density, increased blood flow and oxygen intake, enhanced mental health, enhanced self-esteem and cognitive functioning are just a few of the health and wellbeing benefits that come from playing outside.

According to Daynurseries.co.uk (2024) most of the activities at the beach are led by children, and the natural setting can also aid staff in helping the children learn with mathematical.

Children should be able to count with confidence and gain a thorough awareness of the numbers one through ten, their relationships, and the patterns found within them, according to the early year's foundation stage. It suggests that early childhood educators provide regular and varied opportunities to enhance children's mathematical comprehension.

Even hearing sounds while watching the natural world can help one learn mathematics, like comparing and counting wave beats. Children learn about spatial relationships through the structure of sound patterns and the recording of sounds. Volume (higher, lower) and tempo (faster, slower) of sounds help to build measurement skills.



(Monaghan, C. (2025) own pictures)

Build and construct with sand and stones, classify and arrange by size, shape, colour, and characteristics. Recognise dimensions exploring for shapes in two and three dimensions. Use objects to represent personal preferences.

Activities in Science coastal biology, examine tidal pools to locate and identify underwater life such as small fish, seaweed, and crabs while observing how they have adapted to the coastal environment.

Geology and erosion, explore the various kinds of rocks and shells and discover how wind and water sculpt the coastline. Ecology, talk about the many areas of the beach, including the sand, the area between the waves, and the dunes, as well as the plant and animal life that live there. Weather and tides, talk about how the weather impacts the beach environment, see how the wave patterns change, and discover the forces that drive tides. Sorting and patterns, to encourage mathematical and scientific thinking, gather and arrange natural objects such as stones, shells, and seaweed according to their size, shape, colour.

To experience outdoor learning, we took a group of children in reception, ages four to five, to the beach. The children were excited and ready to explore all that was nearby. To start the morning's activities, we divided the children into four or five groups, each with a supporting adult.

The children experimented with different shapes, counted with sticks and small pebbles, and made numerals out of natural objects found on the beach. After gathering various shells, children organize them according to size. Additionally, using paint pens and a variety of colours, the children decorated the pebbles.

Also, with the pebbles the children did rock balancing, a fun and challenging activity that can help children develop patience, focus and problem solving skills. The children also did mark making in the sand with sticks and sand moulds of numbers. Using sand moulds also helps to develop fine motor skills. The children also enjoyed building sandcastles to recognise big and small.



(Monaghan, C. (2025) own pictures)

Although at the beach might have a similar format to other outdoor programs like Forest Schools, the constantly shifting beach environment can inspire children's imagination and curiosity through a variety of beach activities. Activities for beach can combine the early years foundation stage, seven areas of learning and development.

Spending time in a seaside environment can enhance children's experiences of the natural world and aid in their understanding of their physical surroundings. They can engage with natural items like driftwood and learn to love the beach and waves.

The children sat together in a circle and was asked questions by early years staff. this then encouraged the child to use their senses, for example what can you hear, see, smell? The children were asked to listen out for a particular natural sound such as the sound of the waves or look for an object such as a seashell. This was lots of fun with sensory experiences incorporated such as feeling the wet sand between toes. The children can learn about the world through their senses, with activities such as, looking for shells, driftwood, pebbles, seaweed and wildlife such as crabs in rock pools. The children enjoyed reaching out and touching natural materials to learn new skills such as building things with driftwood, digging in the sand, using rope to tie knots. They listen to the sound of the waves against the shore, the wind blowing. Smelling the fresh, salty sea air, which can widen a young child's understanding of a marine environment. The overwhelming atmosphere of the day was of freedom and fun.

3.)

Risk benefit assessment

Name of activity:	Early Years Outdoor Education at the Beach
Description of activity	Outdoor learning of promoting maths and scientific at the beach
Appropriate for which ages and abilities	Ages from four to five with supporting adults
Benefits	Benefits children's development learns and grows in their verbal, motor, social, and cognitive abilities. Enhancing mathematical and scientific thinking. Beneficial for children who would struggle in a classroom setting. It is possible to improve a child's health and well-being. Increased muscular strength and aerobic fitness, improved agility, range of motion, flexibility, coordination, and balance, reduced fatigue, stress, and depression, improved blood pressure in children with hypertension particularly for aerobic activity, improvements in cholesterol and bone density, increased blood flow and oxygen intake. Spending time in a seaside environment can enhance children's experiences of the natural world and aid in their understanding of their physical surroundings. They can engage with natural items like driftwood and learn to love the beach and waves.
Overall risk	• Slippery or sharp rocks. • Are there strong rip tides. • Water, high tides and drowning. • Is there a lot of rubbish on the beach. • Is sewage flushed in or out of beach. • Are there dogs running free. • Is there easy access to a road in case of emergency. • Toxic/hazardous. • waste/hazardous objects for example, broken glass, needles, animal waste, BBQ waste. • Stranger danger/abduction. • Adverse weather conditions
Who at risk	Staff and pupils
Current control measures (What is already in place/done)	• Pupils to stay within a zoned area on beach, and given clear advice on safety/behaviour. • Supervising staff to station themselves between pupils and water's edge. • Pre visit to assess and address risks, with advice from lifeguards, coast guards, seafront office. if necessary. • Take seafront office, coastguard contact numbers in case of emergency/advice. • Weather forecasts obtained and staff to make (ongoing) decision as to whether or not to proceed or adapt activity, and have a risk assessed plan B if needed. • Time arranged to suit tides and visit to be completed well before any risk of being cut off.

	• Paddling not allowed unless organised in advanced and parental consent obtained. • Provision of rescue equipment example throw rope. • If possible, choose section of beach with or near lifeguard. • Pupils briefed not to touch any unnatural items and to alert adults to them. • Visual check of designated beach area by staff before allowing pupils onto the beach. Significant hazards to be reported to Seafront Office (number to be retained), and alternative area of beach sought if necessary. • Brief pupils to avoid approaching and engaging with non-group members, and to inform staff immediately if they feel uncomfortable or at risk. • Staff to remain vigilant to inappropriate behaviour (example taking photos, attempted conversations.) or attention from non-group members. • Group to be appropriately supervised at all times. • Dynamically assess situation and be prepared to move group to alternative area/report if necessary. • Avoid local trouble spots e.g. remote underpasses, areas frequented by users of drugs/alcohol. • Brief pupils to avoid approaching any dogs. • Remove pupils from area if necessary • Access to first aid kit, details of pre-existing medical conditions/allergies, individual care plans etc held for pupils and supervising adults, and prescribed emergency medication (with staff trained to administer example Epi-pens). • Emergency contact numbers on hand. • Regular headcounts, with pupils split into small groups. • Appropriate clothing and provision for weather conditions example, sun hat, sun cream, drinking water, shade and shelter, waterproof clothing, appropriate footwear.
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According to Welsh Government (2023) outdoor learning is emphasized in the Curriculum for Wales as an important element of successful, learner-centred pedagogy. It draws attention to how outdoor learning can foster habits, knowledge, and abilities that align with the four goals intended objectives. The curriculum incorporates outdoor learning to help children develop into healthy, self-assured individuals who are prepared to live happy, satisfying lives as contributing members of society. By incorporating outdoor learning experiences more into their preparation, the curriculum encourages schools to incorporate outdoor learning into the new curriculum. However, according to [Naturalresourceswales.gov.uk](https://naturalresourceswales.gov.uk). (2025) the use of outdoor learning spaces for teaching science and math is emphasized in the curriculum for Wales. It draws attention to the following features, useful and Insightful activities, building towers or making symmetrical drawings out of natural materials are two examples of useful and meaningful outdoor learning activities that immerse learners with the outdoors. These exercises foster the growth of a variety of mathematical abilities and offer a natural learning environment. Together, these components create a well-rounded outdoor learning environment that aids learners with developing their scientific and mathematical abilities.

According to Maher, et al (2003) a balance between practitioner-led and child-initiated activities conducted in stimulating indoor and outdoor locations is necessary for children's personal/social development and well-being. Given this, teachers in the foundation phase should schedule time for and look for methods to encourage child-initiated outdoor learning. Sand, water, and other natural materials are examples of open-ended, non-prescribed materials in an outdoor setting that are flexible, receptive to the child's desires, and versatile as suggested by Maynard, and Waters (2014).

According to Lubchenco (1998) defining play-based science education numerous articles have been written about how children learn through play, and many educators agree that open-ended play promotes children's exploration of a new concept. When children explore and make sense of their surroundings, they can relate their science learning to skills or early observations of science phenomena. The fact that all children enjoy interacting with things like materials, shapes, smells, and other physical phenomena like electricity, magnetism, and gravity, as well as with media like gases and fluids, sounds, music, and motion, as well as with other people, animals, plants, words, concepts, and ideas. All children like playing, experimenting, discovering, inventing, and having fun with all these things. Loose bits or variations are the commonality among all these items. Simply put, the idea of loose parts states that the quantity and type of variables in an environment strongly correlate with the level of inventiveness and creativity as well as the potential for discovery as suggested by Nicholson (1971).

As suggested by Maynard, and Waters (2014) according to Montessori, children need nature to develop their ability to observe natural life, their sense of responsibility, their patience, their attitude of confident expectation, and their appreciation of the wonders of nature around them. The novelty resides possibly in my notion for the usage of this space, which is to be in direct communication with the schoolroom so that children may be free to go and come as they desire, during the entire day, she said, arguing that the concept of a children's garden was not new. Therefore, Montessori was the first to provide free choice and self-direction as well as unrestricted access from indoors to outside. However, Maynard, and Waters (2014) claims that Montessori promoted the idea that teachers should have faith in children's developing abilities and allow them time, freedom of movement, and choice in a prepared setting. She underlined that when adults interrupt or intervene with children, they must exercise discretion.

According to Wilson (2007) children are naturally curious and have a great desire to learn about the world, but in order to maintain this curiosity, they want an adult who is interested in them to support, encourage, and guide them. This adult could be a teacher, a naturalist, a parent, a grandparent, or another caregiver for the child. The adult's involvement in encouraging creative play is more about sharing than it is about imparting knowledge. However, Wilson (2007) claims that some individuals might believe that since children are born adventurers, they don't require adult supervision or encouragement to enjoy imaginative outdoor play. They might even believe that children should only be kept secure when they are outside and that this is children's time. Also, Cohen and Waite-Stupiansky (2020) tells as children's scientific education depends heavily on the teacher's role, which is a complicated one that is influenced by pedagogical science knowledge, teaching and learning expertise, and knowledge of children.

According to Robertson (2017) being human means having a natural aptitude for math. We can better understand what is happening and how it impacts us when we use mathematics to frame the world. In addition to helping to explain random events, it can bring order and certainty. For young children, mathematics is more than a cognitive process. It is a physical, emotional, and social experience as well. A difficulty is halved when it is shared. Recall your own school math experiences and your feelings on the subject. Think about how children require a lot of hands-on experiences that represent the essence of mathematics. For instance, lifting, moving, and carrying a variety of heavy and light objects repeatedly is the only way to comprehend the idea of weight. As children grow, develop, and learn, being outside helps them make connections between their hands, heart, and head, setting the groundwork for more complicated activities. Robertson (2017) also claims that a well-rounded education that considers a child's social, emotional, physical, and cognitive development is necessary. Numerous pieces of data suggest that, when paired with attentive, caring adult assistance, outdoor free play in a natural environment offers the best conditions for this to occur. Children can consolidate

their understanding by applying their knowledge and abilities in a variety of real-life scenarios when they are outdoors.

Campbell and Speldewinde (2020) suggested that practical engagement in the environment serves as the foundation for the relationship between the individual and the environment. New affordances emerge as a person moves, acts, or engages with their surroundings. These affordances are associated with an individual's personal attributes, such as body size and form, motor skills, experience, and motivation, and their capacity to leverage these attributes to facilitate learning. These material comforts exist in the surroundings, but an individual may not notice them because a lot depends on their reasons for being there. However, Bruner, (1966) suggest that affordance theory holds how the world appears not only in terms of object forms and spatial connections but also in terms of object options for action affordances, perception motivates action.

According to Teach Early Years (n.d.) It is distinct in that it emphasizes education beyond the classroom while granting children the autonomy to take chances and pay attention to the always shifting surroundings. Learn to evaluate danger on your own by using adults open-ended questions. Children's psyches are impacted by the setting and its intimidating immensity, and perhaps strangely, the spaciousness draws them closer together. Teach Ealy Years (n.d.) also suggest the most obvious developmental changes brought about by learning on the beach include improvements in children's confidence levels, leadership abilities, and capacity to handle failure. Many of the children had overcome their concerns and showed greater confidence in taking risks (such as jumping or climbing rocks), were willing to participate and contribute, and wanted to try new things.

According to Michelle (2023) For young children in their early years, the beach provides a variety of learning possibilities as a natural playground. The following beach activities can be used to enhance early childhood education, such as sorting seashells based on attributes like size, shape, and colour will help children develop their cognitive abilities. Their early math concepts and observational abilities are improved by this exercise. sandcastle building, this uses vibrant form templates with a sandcastle theme to build sandcastles, which will foster creativity and fine motor skills. This exercise improves problem-solving skills and spatial awareness. Beach scavenger hunt, printing a beach combing checklist to turn beach combing into an interesting scavenger hunt. While maximising their time by the sea, this activity promotes exploration and discovery.

As suggested by Have Fun Outdoors (2022) children's fine motor skills have been shown to increase through outdoor play. Children's fine motor abilities can be significantly enhanced by engaging in outdoor activities like tossing and catching, collecting natural treasures like shells, leaves and sticks, building dens and much more. Even though a guardian, teacher, or parent will always be nearby. Children who are allowed to explore and play freely outside of the home or classroom

experience a great sense of freedom and independence. They have time to experiment, create games, direct their own education, think about their limits, and discover their abilities. Children are more resilient and self-assured when they take chances, try, fail, and try again. However, Have Fun Outdoors (2022) claims that It has also been demonstrated that outdoor play helps children by providing them with a way to release stored energy. Children may have a lot of fun and get some exercise by being active outside. Sunlight exposure has also been shown to boost immune systems and elevate emotions. It is excellent for mental and general well-being in addition to physical health. Children feel happier and healthier when they are in natural settings because of the calming effects of these environments. It allows children to get away from the pressures of daily life.

According to Have Fun Outdoors (2022) For some children, the smaller, more competitive indoor environment might be quite daunting. Some children, particularly those in the early years, may get intimidated by this and be reluctant to open up, speak up, or share with peers and teachers. Since they aren't in competition with others, children can be more open with parents and other caregivers when their surroundings are opened up, space is provided, and time is spent outside. A key component of outdoor play is teamwork, which inherently fosters constructive interactions between children. But they're children! There will undoubtedly be disagreements occasionally, but in general, children who play outside are more likely to cooperate and form close bonds with their classmates. However, Have Fun Outdoors (2022) also suggest that many children who spend a meaningful amount of time in nature continue to love it as adults. Children will develop positive views of nature as they grow up if they spend a lot of time outdoors making memories like watching sunsets, seeing wildlife, splashing in the water, exploring the beach, gathering treasures. This frequently increases environmental consciousness and empathy. When children play outside, they use all of their senses, including taste, as they sample things like freshly picked blackberries or marshmallows that have been toasted over a fire. For young children, this exposes them to a range of sensory stimuli, making it easier for them to process them as they continue to grow and develop.

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