



The environment in my chosen photo provides opportunity for children to explore and to feed their natural curiosity gaining understanding and knowledge of the world around them.

The beach in the photo is close to my nursery setting however visiting this location would require planning and an increase in staff ratio to guarantee the safety of all children whilst at the beach Aswell as traveling there and back this is limitation as the area could not be re visited on more occasions if there was a need to reflect and adapt activity's.

As is said in the curriculum for non-maintained nursery's outdoor experiences are invaluable and should become a part of daily routine as much as possible although weather can be a limitation every effort should be made to still get them outside playing and exploring.

The curriculum for non-maintained nursery settings state a practitioner should facilitate play enhancing learning opportunities to do this I am planning to take buckets, spades, and starfish shaped pots. I am aware that with children ages 24-36 months play can change course quickly and instructions will not always be followed, this is mentioned in the curriculum for non-maintained nursery's play and education should be led by the individual child facilitated by an adult. My intention for our visit is to focus on the children's natural curiosity whilst offering them things to think about along the way. Does sand when water is added stay the same? Does the way it feels change? Does the way it looks change?

The beach is a vast area providing opportunities for children to play and experience alone if they wish or as part of a group co-operating with each other. However, the space could be a limitation, boundaries would have to be set and explained to the children, given the age of the children and their level of understanding the

boundaries would need to be staffed and carefully watched. Providing the children with the opportunity for some risk taking and independence, in a safe and secure way.

PREPERATIONS PRIOR TO THE ACTIVITY.

Timing would need to be considered; the sea would need to be close to the dry sand as children of this age would find it difficult to carry a bucket of water a long distance however the water would need to be far enough away from the sand to give time to carry out the activity without rushing. Checking a tide table would help with this.

Some discussions explaining the activity would need to be done prior to leaving the setting for several reasons, lack of shelter in the event of rain or heat at the beach. Some children within the group might have never been to a beach before, this could result in extreme excitement. Introducing them to the activity with pictures and explanations could help them prepare and understand what we are doing.

Appropriate clothing would be needed for the children on the day, organising this would require liaising with parents. This can become a limitation within my setting, we have various multicultural family and on occasion this can mean they do not understand the importance of outdoor play and the need to dress appropriately for the weather. Also, we must consider the cost of items not every family are in a financial position to provide the items needed such as wellies and raincoats or sun cream and a hat.

How the first discussion of the topic went

How do we think sand would change when we add water to it?

Due to their young age the children could not answer the question, but when doing the activity, I hope the texture changes will become apparent to them

How will we carry the water from the sea to the sand? One child gets extremely excited and demonstrates to me him carrying the bucket., what is we drop the water one child asks? My reply is there is a lot more water to refill the bucket.

I explain to the children using some sand that we have in the setting, that the water we will add from the sea will connect the grains of sand together. When the air from all around us is added little bridges form to keep the sand together. This is how the magic of sandcastles happen. I am aware that at this age they will have limited understanding, however as it says in (Welsh government 2022) the beach will provide a fantastic opportunity to stimulate their senses through smell, touch, and sound.

Experiment at the beach

On arrival the children's face lit up with excitement and wonder, I knew instinctively this had been a wonderful choice as an environment. A colleague and I explained to the children that any items we had taken onto the beach would either return to

nursery with us or be disposed of in the bin (Welsh government 2022) I hoped a connection with the beautiful environment would instil a sense of obligation in the future to always keep beautiful natural areas clean for all to enjoy.

The children run around within the barriers set, the scale of the environment filled them with excitement, I had never witnessed these children so free (Welsh Government 2022) it enabled the children to have an awareness of themselves within the space they found themselves.

Setting out our apparatus

The children helped to take each bucket and place it on the ground along with the spades and starfish pots. The children were not asked to count, but some did so as they went along naturally as we do usually incorporate counting. I Decided to adapt to the situation and follow their lead adding Welsh numbers, the children even added the colours as we went in the tune of the rainbow song.

Making a sandcastle with dry sand

I began to fill my bucket up with the dry sand the children soon followed my lead. we had some issues whilst doing this of some children throwing the sand in the air however, they soon stopped when we explained it would hurt their friends (Welsh government 2022) learning compassion and care for others surrounding them.

I give the sand a tap with my spade and asked the children to do the same which they did, to everyone's dismay the sand particles crumbled before our eyes leaving heaps of dry sand.



Collecting the water

Boys and girls, it is time to take our buckets down to the water. Up they jumped with intrigue like it was the moment they had all been waiting for.

When we reached the water

I bent down to the children's level and showed them how to tilt the bucket at an angle to enable them to fill the bucket with water. Knowing that a lot of the water would be spilt on the way back, I filled 2 buckets (Welsh Government 2022) Adults facilitate while allowing the children independence and the ability to make mistakes.

We walked back slowly while the children chatted and laughed, some threw their water at each other having fun giggling not really caring about the experiment at all. And not much water reached the dry sand.

Adding water to the dry sand

I got all the children to sit into a circle and repeated the sandcastle with the dry sand, all the children laughed as it failed again. For the second sandcastle I added the water this time the castle became perfectly formed and stuck together, the children gasped with wonder.

A limitation to the children's age being their ability to concentrate for extended periods, so I decided not to carry on and use the starfish pots, instead to leave the children with the magic of the sandcastle (Uk government 2022) It is not the product that is important but the process the children take to get there



RISK BENEFIT ASSESSMENT

Location / Activity:	Beach	Date:	20 th September
Assessor:	Sara davis	Review date:	20 th March 2024

The boxes in the table below will expand as you type into them; pre-entered text is simply for illustration. You should delete irrelevant items and replace with text relevant to your circumstances.

Your overall risk rating – Low, medium or high – is based on your judgement about whether the BENEFITS of the activity or opportunity outweigh the RISKS.

Experience exploring outdoor space in photograph	How will young people BENEFIT from this activity?	Hazards and associated risks	Who is at risk?	PRECAUTIONS in place to reduce the risk of injury	Overall risk after precautions RATING: L/M/H
The feel and texture of the sand when dry	Sensory awareness. The ability to compare the different textures when water is added. Sand play is good for building motor skills and hand eye co orientation. This experience can spark curiosity within a child to want to learn more about the world around them. This type of play can be therapeutic, sometimes used in therapy sessions.	Insects lying beneath the sand. Allergy to the sand. Not liking the texture of the sand.	Everyone children and adults.	Take a first aid box which includes piriton . Gain parents' consent to giving piriton if needed	Low.
Uneven, rocky ground	Strengthen balance skills. And fine motor skills and can strengthen core	Falling over and hurting themselves.	Adults and children	Keep Reminding the children to be careful also close adult supervision	Medium.

	muscles. Creates awareness to watch where they are walking and to take their time not run. Helps with language and listening skills as they must listen to instructions			to step in if needed.	
Salty sea water	Texture of the water between their fingers and feet if without shoes. for a child that has not felt the crashing of the waves before the experience of listening and watching the waves will be bewildering the taste of the salt as this can stay on fingers for a while inevitably	1. reaction to the salt. 2. become Scared of the noise or look of the Waves crashing.	Adults and Children	Comfort the children and change them into dry spare clothes if they do not like the feeling of being wet.	Medium

	being tasted by the child				
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Running free	1.Learn To risk asses. 2.Realise that there is a world beyond a setting. 3. feel the wind in their hair. Feel the rain on their face. Hear the beach with no background noise. 4. Play and run/ laugh together without the restraints of adults asking them to watch they do not fall over something	1. Falling over rocks, uneven ground, or each other. 2. stranger danger, still must stay within boundary's 3. running into the sea, even the smallest amount of water can be dangerous.	Adults and children.	1.High staff to child ratio 2. All children being Always supervised. 3. Explaining to children the dangers of talking to strangers. 4. explaining to children before the visit the need for boundaries and good listening skills	Medium
Varied natural items to count and explore, some the children might never have come across before	Being able to laugh and play loudly with no restraints on levels.	1.There could be sharp items. 2. There could be little	Adults and children.	1.High adult to child ratio 2. try to keep an	Medium

Being able to splash in rock pools	1. They will learn to investigate. 2. Find their interests which could be different to their friends. Enjoy a new way of counting away from the setting. Enjoy the different shapes and textures 1. feeling the depth of the water in relation to their own height 2. climbing from one rock to another will aid with balance and cooperation	creatures living within the items. 3. The children could have an undiagnosed allergy to some items on the beach 1. Falling into the water. 2. pushing another child or falling into another child. 3. slipping as some of the rocks will be wet and slippery.	Adults and Children	adult with a small group of children as much as possible when investigating 3. if a child comes across something an adult is unsure of, the adult should investigate first	Medium
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Finding creatures, crabs, or others within the sand or pools	as they are mindful of their friends doing the same thing alongside them. Discussions can be started, and children can become fascinated with creatures of the beach. Building social	Children will have to wash their hands as creatures can carry germs. Some animals will bite or nip if they feel threatened.	Adults and children	1.Keeping high ratio of adult to the children, it would be best to try and keep small groups with each adult. 2. Making sure the children only enter the rockpools with the appropriate footwear on	Medium
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	awareness to the world around them. Children will learn to preserve sea life. By picking the creatures up or watching them closely they learn not to be scared. Whilst working on their fine motor skills			High adult child ratio to ensure that no child picks up a creature or goes to close without an adult being aware. The adult will need to have wipes on their person even if the child only touches the sand where the creature has been.	
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How does an adult working with early years children engage with mathematics and Scientific concepts in an outdoors environment

A facilitating adult firstly must have confidence within themselves, a lack of this and natural intrigue can affect the child's ability to pursue their awe and wonder at the world around them. Making strong connections with the children enable confidence in each other providing them with emotional stability this will enable them to go off and explore the outdoors knowing there is an adult that cares about them on hand if they are needed as said in the curriculum for (non-maintained nursery's 2018) The adult must learn the ability to stand back when the situation calls for such allowing the children the independence to explore and to lead activities as said in (Maynard 2014 cited in Maynard and Walters). Lack of confidence in knowing when to stand back and when to intervene in either safety issues or play can be a limitation preventing a practitioner fully facilitating children in the setting as said in (Little 2010). There are many ways to facilitate a child's learning in the outdoors one of which being schemas, Knowing the importance of schemas as said in both the (new curriculum 2022) and (the curriculum for funded non-maintained nursery settings 2018) transportation, positioning, orientation, and core radial are schemes the children could explore, not all will explore them all, furthermore if a facilitating adult realises the importance of them and they are left to carry them out without interruption it would benefit the child. Schemas are linked to all areas of learning including problem solving and understanding of situations. As is said in (Constable 2013) understanding could allow planning for a particular child if the need arose, in the instance of Additional learning needs. However, a limitation to a child's learning and exploration could be that not all practitioners know schemes exist as said in (Atherton and Nutbrown 2013) viewing repetitive behaviour as unimportant or insignificant even time consuming.

Furthermore, to schemes the concept of sustained shared thinking, learning together in groups sharing ideas, gaining knowledge from each other, both adults and children within the groups to gain different perspectives as said in (Blatchford 2009). (Dowling 2013 as cited in brodie p2) it can be an adult and a child on a one-to-one basis sharing a conversation, interacting, and listening to each other. However, this is not a new idea Vygotsky and Piaget believed this type of learning to be of benefit when starting in early years to look at mathematics and science. As said in (wood 1998, palmer and Dolya 2004. McBlain 2014 as cited in Aubrey & Riley 2018) Vygotski believed that being able to use tools and our language communicating to each other is what set us aside from animals, he believed that it is with our social environment and how it is facilitated that enables the knowledge of mathematics science and language development. Similarly, as said in (Jarvis and Chandler 2001: 142 cited in Aubrey and Riley 2018) Piaget believed that children should be taught based on their level of understanding, by sustained shared thinking and conversations this level will be gauged. Children develop at different rates so being outside and learning from experiences will allow them to learn at their pace.

To facilitate a child effectively in a classroom or outdoors, understanding the developmental pathways can help to start the journey of education. Each child is unique so concentrating on their developmental pathway will help them learn core subjects' mathematics science and english and pick up languages such as Welsh. As said in the curriculum for (funded non-maintained nursery settings 2022). By focusing on what the child needs to do, what will be learned will be learned from that and how an adult can facilitate them in that area as said in (Pickles & Hill 2015)

Managing risk must be seen as a vital role of a practitioner during any daily activity or daily care especially in an outdoor environment as risk can change daily from animal faeces to weather damage, a risk assessment is carried out before an activity as shown (Ball et al 2008 as cited in Maynard and Walters 2014). However, a consideration must be the benefit of play that has some risk associated with it. Any such play could have more benefits that far outweigh the risk involved when an adult is present to aid the child's safety as said in (Little 2010). And (gill) who says that risk must be balanced and measured appropriately to ensure children do not miss experiences. A limitation can be parents' perspective they will not always see the benefits of being outside in the rain or lifting tyres in the garden as said in (Little 2015) a parent's instinct to provide nature and a safe environment will not fit with the activities to create rich learning environments in the outdoors

Many activities within society would be considered risky, this view often minimises a child's opportunity to learn and reflect on their mistakes changing the outcome in the future. Furthermore, everyday life is not without risk, giving a child a perception, it is would not be accurate. Adults and children often work together to build their ability and confidence to view learning through the outdoors to be a perfect opportunity even if it rains, often the child can be more confident than the adult as is said in (Brunton & Thornton 2010), exploring with the child getting involved in conversations from their perspective and building on their ideas. The truth is also important if the adult does not know the answer to a question, explain such and with interest and enthusiasm a practitioner should help them find an age-appropriate answer and exploring it together. By providing a chance to go outdoors often, the adult is facilitating the child's holistic development and giving them the best start in their education as said in (White 2011) its often the perfect learning environment. However, some childcare settings still consider going outdoors as an opportunity to just aimlessly run around and let off some steam. Children need to know that playing outside is always an option as said in (Earnst & Tornabene L 2012). There is lots of information available to settings if they are not sure how to change the way the setting view learning in the outdoors as said in www.woodlandtrust.org.uk and www.rspb.org.uk/connectionmeasure

It is important for a practitioner to facilitate a child's Environment if they are going to gain concepts of mathematics and science. A way of achieving this would be making loose parts available as is said in (Spencer & Joshi et al 2019) however as is said there are limitations in the way some perceive loose parts, they can be viewed as a

hindrance, hard to keep tidy and store effectively furthermore they can be seen by some as dangerous. loose parts present themselves in many forms, sand and mud being one that is used often within many childcare facilities and schools as is said in (Jensen and Bullard 2002) it is popular due to the lack of cost involved and the ability for a child to learn repetitively over and over. Mathematics science and English language can be promoted using these items, from planting seeds or making mud pies sandcastles or cups of mud water associated with volume. To later explaining in their own words what it is they have done. Furthermore, loose parts are accessible to everyone they can come in the form of a branch which to a child can become a broomstick or a plate which becomes a steering wheel as is said in (Inspiring Scotland 2016)

Froebel believed that children gain more from doing as opposed to verbally being told what would happen if they did something as is said in (early-education.org.uk). Loose parts add affordance to an environment giving the opportunity to learn both science and mathematics using their imagination and experimentation with an adult there to facilitate and not take over as said in (Nicholson 1971).

Froebel believed that looking at a child holistically and facilitating all areas of their development would naturally encourage interest and knowledge in core subjects such as mathematics and science. This knowledge would be gained by interest and wonder in the world which surrounds them leading them to ask questions and consider maths and science in everyday activities as said in (early- education.org.uk 2021). It is believed that a child's relationship with their educators in the first few years is key in a child extending their knowledge and wonder in subjects such as mathematics and science, an adult knowing when to stand back allowing independence or when a child is wanting and needing interaction and conversation. Bruner agreed upon this way of facilitating as is said in (Aubrey & Riley 2018).

The Froebelian approach is used in many childcare settings some use it without realising they are carrying it out daily (Tovey 2016 p1). The Froebelian partnership was developed showing the outdoors to be a relaxing environment to allow children to learn within, science mathematics language and motor skills development can all be strengthened in the outdoors. Global warming and the effects it will have on the future, the need to recycle to the changing seasons and weather.

The partnership is a perfect example of children learning by doing first hand as is said in (Lilly 1967) and (Tovey 2021) as cited in the Frobelpartnership.co.uk. Furthermore, the trust is an example of facilitating adults and what they can achieve by building a good relationship with children, working with their interests and at their developmental pace, and using the natural materials available outside.

Similarly, to Froebel is the Montessori approach as is said in (Aubrey & Riley 2018) it was based on the child being central to their own learning, the adult being led by the child and with the right guidance they would progress in any subject. Furthermore,

these approaches have been an influence in forest schools and such like being introduced as said in (Obrian and Murry 2007). And www.woodlandtrust.org.uk.

Similarly, Louis Malaguzzi and Reggio Emilia all centred their focus on using the natural facility's which are available outdoors and then the practitioner adding the these by taking the inside outdoors, real items such as China and knives and forks allowing the possibility that the children can handle this responsibility and learn from it (moss 2016) and agreed by the Montessori approach (Aubrey & Riley 2018) these real items can be brought into all areas of the curriculum as said in the new curriculum (2022) and the curriculum for (non-maintained nursery's 2018). Reggio Emilia emphasises that children need good facilitating adults to be able to learn from their environment as said in (Hewett 2001). As said in (Edwards 1993) Reggio Emilia have an outdoor approach which runs through the whole of their curriculum, they learn from the resources which are available outside.

So, to evaluate theory often first in with practice without them realising it is happening, a good practitioner will communicate with a child discussing findings, feeling, thoughts and covey their ideas and thoughts to the child in an age-appropriate way However not all setting have practitioners who are willing to facilitate a child's learning or to learn how to do so by reading the theory behind their practice. This is a barrier. When children are engaged in play and exploration outside it is evident that the theory which has been written by theorists is true to life each theorist has pointed out different scenarios which can be applied back to different children at various stages, it is true each child is unique and what works for one child would not for another. However, this does rely on a practitioner knowing what to look for and how to facilitate with sustained shared thinking, without taking over their play and exploration. As said in the new curriculum for (funded non maintained nursery's 2022) guidelines to the developmental pathways are set out for practitioners to look at and implement when gauging a child's level of communication and ability to learn. However not all practitioners are aware reading this would aid them in carrying out their role and not all setting will make them aware of this. The curriculum says that outside play and exploration is an important part of learning however the importance of this is not always carried through into settings furthermore some settings discourage taking the children outside due to staffing requirements, weather, or space and safety of the outdoor area. As said in (Oberle 2021) Barriers can be overcome as is agreed upon in (Burnett & Edgeley 2021) By asking for changes of clothes or for old clothes to be sent in. keeping parents informed on how important outdoor play is to a child's development and early education. using the natural environment which surrounds the setting to save cost of buying extra outdoor facilities. Ensuring practitioners are aware how important outdoor learning is to the children, providing them with literature to help them facilitate to the best of their ability.

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