2312708
ECEY5005

(Source: Butterfield, 2024)

Feature 1: The Lake

- The biodiverse nature of the lake makes this an excellent opportunity for the learners to look at the lifecycles of various animals and the habitats they live in. Visiting the lake at various times of the year will allow the learners to see how the wildlife grow, develop and change over time. For example, noticing frog spawn within the lake and seeing that develop into tadpoles and finally into frogs will give the learners a real insight into how that lifecycle works compared to other animals whose habitat is also the lake, such as ducks, geese and swans. Comparing the sizes of the animals as they grow, noticing

changes in colour or stages in their development, such as swimming or flying, will give the learners the experience of seeing how animals change over a period of time.

- Pond dipping for mini beasts within the water is another enjoyable activity that the learners can carry out. By the adult supplying materials such as nets, buckets and mini beasts' identification sheets, the learners can immerse themselves in discovering which mini beasts are below the surface of the water, considering what they look like, which class of animals they are and what their habitat is like. The learners can keep a tally or a pictogram of how many of each mini beast they discover. This in turn can link back to lifecycles, as if the learners are particularly interested in a specific mini beast, they may further their knowledge by finding out more about their lifecycle.

- Throughout the year, visiting the lake at various times will allow the learners to experience the effects that seasons, and weather conditions have on the lake and look at states of matter. Visiting in the cold winter months when the lake is frozen will allow the learners to understand what is required for a liquid to turn to a solid. They can then look at this in more detail to see how it affects the wildlife and various ecosystems that surround the lake. Measuring the depth of the lake and then comparing it after rainy spells or hot spells will give the learners access to discovering the water cycle. They can also record the various temperatures of the lake throughout the year, before then ordering them from smallest to biggest, looking at the link between the temperature of the lake and the time of the year the measurement was taken.

- Whilst observing the lake the children can be encouraged by the adults to look at items or animals that float on the lake and other items that sink to the bottom. By encouraging this initial observation and discussion with the learners, the adults can then take this back to their settings, tasking the learners with creating their own body of water and then testing things that they think will either float or sink. The mathematical element can be implemented via timing how long certain items take to sink or by looking at how the weight of the item affects its buoyancy.

- The learners can utilise the path around the perimeter of the lake whilst timing how long it takes them to get around its entirety. The learners can compare results from someone walking, jogging, sprinting or even skipping around the lake to see how the different ways of travelling affect the time it takes. They can also use trundle wheels to measure the perimeter of the lake, comparing their results with those of their peers and considering what makes it a fair test.

Feature 2: The Trees

- There are vast amounts of trees of many different varieties surrounding the lake. The learners can be provided with leaf identification sheets which show pictures of the various leaves that are on the trees with the name of the tree next to them. They can then explore the trees looking at not only the leaves but all the components of it, before completing the identification sheet alongside a tally chart, which is used to record the number of species of trees that are in the area.

- Visiting the environment multiple times throughout the year will enable the learners to note how the changing of the seasons has an impact on the trees. Visiting in the springtime will allow them to experience blossom and the trees looking vibrant, which in turn could lead to them completing some artwork using the bright colours on the trees as inspiration. In autumn they can see the leaves changing colour, with the learners noting what colours they see, before eventually in winter the leaves fall off the trees. During this time the adults can encourage the learners to think about gravity and cause and effect, whilst the learners can collect the fallen leaves to create pieces of art or to complete leaf rubbing tasks looking at the difference in patterns from one leaf to another.

- The learners can collect branches, twigs or leaves that may have fallen off the trees before ordering them from biggest to smallest or heaviest to lightest. They can compare the different species of trees and what size leaves they produce, or the weight of the branches certain trees have. They may also discover and collect other materials that can potentially fall off

trees such pinecones or conkers. These can be used for building things, for artwork or for even measuring. The children can also use the conkers to play a game or for throwing and catching skills.

- The birds, animals and insects that use the tree as their habitat can be explored by the learners. They can record the animals they find within the tree and then group them into animal classifications or order them from smallest to biggest. The lifecycles of these creatures can also be explored by learners, looking at what is needed within the habitat for the animals, insects and birds to thrive. The learners may then want to create their own habitats using loose parts they have found around the environment. Creating things such as bug hotels or bird boxes will allow the children to access the creatures they are interested in within their setting, which will only increase their awe and wonder.

Feature 3: The Slope

- There is a steep slope situated in front of the castle that the learners can use for several different activities. They can look at gravity and momentum by rolling themselves down the slope in different positions. They can use a stopwatch provided by the adults to time how long it takes each time to roll to the bottom of the hill. They can also look at the difference between times when running down the slope and when running up the slope. This will also encourage discussion about how their bodies feel whilst running either up or down the slope, for example how fast their heart feels or how their legs feel.

- The learners can also investigate friction and shape using the slope. Rolling different resources supplied by the adult down the slope will allow them to understand how the materials an object is made from, or the shape of the object can influence how it travels down the slope. The learners can then be tasked with making their own objects to roll down the slope to see how fast they roll. This will encourage them to use their creativity and problem-solving skills.

Feature 4: The Castle

- Situated within this environment is Cyfarthfa Castle, a key piece of history within this local community. Whilst using the various resources within this environment, learners may be curious to learn more about the castle. This will help shape the learners holistically as it will teach them key history about where they are from and give them a greater sense of belonging.

RISK BENEFIT ASSESSMENT

Location / Activity:	Cyfarthfa Park and lake	**Date:**	14/09/24
Assessor:	Rory Butterfield	**Review date:**	

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
Pond dipping in the lake, exploring the biodiversity.	They will benefit by getting closer to nature within the lake. They can look at their lifecycles and habitats in more depth.	. Potential of drowning if the children are unsupervised. . Children could attempt to drink the water which could be filled with harmful bacteria. . The grass verge surrounding the lake could become slippery during poor weather, children and adults could slip and injure themselves or fall in the lake.	. Both the children and the adults taking part in the activity are at risk.	. To reduce the risk of injury, supervising adults must ensure that safety around the lake is discussed before the visit. . While at the lake, the adults must always be vigilant, particularly when the children are accessing it.	H

		. Some animals whose habitat is either in or around the lake could possibly bite or sting, causing injury to the children or adults.		. Adults must make themselves aware of any allergies the children may have so they can be prepared with the suitable medication if necessary.	
Exploring the trees that surround the lake and completing leaf identification.	Looking at the trees and leaves in closer detail will benefit the children as it will give them greater insight into what trees are around their local area.	. If branches are low hanging, there is potential for the children to be injured by them. . Some trees can have poisonous berries or leaves on them which could be harmful to the children. . Some birds or other animals that live within the trees could be potentially dangerous. . If there has been poor weather the trees may be in a bad condition and potentially in danger of falling.	. Both the children and the adults taking part in the activity are at risk.	. Ensuring the children are supervised when exploring the trees will help reduce the risk of injury. . Adults must make themselves aware of any allergies the children may have so they can be prepared with the suitable medication if necessary. . Adults can visit prior to the children arriving to assess which trees are safe to be around.	L
Rolling down the slope to test momentum, gravity and friction.	Letting the children use the slope to roll down will allow them to gain a greater understanding of momentum, speed, gravity and friction, whilst having fun.	. If there is dog or other animal faeces on the slope, it could be hazardous for the children if they roll through it. . If unsupervised the children could come down the slope too fast or in an awkward position, causing possible injury.	. The children are at risk in this situation as they are the ones using the slope.	. Doing a thorough inspection of the slope will ensure that no hazardous faeces are on the slope. . Adults demonstrating how to roll safely will allow the children to better understand how to prevent injury.	M
Walking around the lake measuring it.	Exercise has been proven to improve mental health, such as walking. Measuring the lake will allow the children to understand units of measurements.	. If there is dog or other animal faeces on the path surrounding the lake, then the children could step in it. . The children will be in close proximity to the lake when walking around. There could be a risk of them slipping and falling in.	. Both the children and the adults taking part in the activity are at risk.	. The adults walking with the children will help alleviate the risk of them falling in. . An adult walking the route before the children will let them assess if there are any dangers on the walk.	L

Part 4

As stated by Edwards (2022), the new Curriculum for Wales recognises the key role that outdoor learning must play in the child's learning. They include outdoor learning as a feature of effective, learner centered pedagogy which increases the child's well-being, engagement and confidence. The Early Years Alliance (2022) believes that outdoor learning is quickly becoming more important to children in a holistic way. It plays a vital role in a child's learning opportunities and has huge benefits to their mental and physical health and well-being. They suggest that creating games and activities that are inclusive for all will aid development in muscle development, stability and bone density.

Kinsner (2019) looks at how science can be taught when outdoors. He begins by stating that adults do not need to plan science lessons when taking children outdoors. Children are naturally designed to be inquisitive and want to explore and find out more about the world around them. If they discover a specific topic that sparks their interest, then they can be encouraged to bring these things back to their settings to explore further. For example, if they are interested in plants and their lifecycles then they can begin to plant and grow their own seeds in their settings detailing the changes they notice over time. Stem.org.uk (2023) state that teaching science outdoors does not have to be restricted to things such as collecting mini beasts or tree identification sheets, they believe that the possibilities are endless. Topics such as minerals, chemical reactions, electricity, light and sound can all be explored in further detail when outdoors. Edwards (2024) builds on this by saying that teaching science outdoors is beneficial in terms of critical thinking, creativity and problem solving, as well as providing a hands-on learning experience in a real-life context. She continues by stating that making connections with science and the world around them allows children to think about how to utilise natural resources and interact more effectively with the real world, eventually leading to a more holistic approach to their learning. DREME Family Math (2024) are of the opinion that math is both meaningful and everywhere. By involving natural resources into the teaching of math, such as leaves, twigs, hills and trees, it allows the children to gain a greater understanding of how math is embedded into nature. This in turn allows the children to see how they can use math's to solve problems in their daily lives.

2312708
ECEY5005

Waters and Rekers (2019) study the role the adult takes when it comes to outdoor learning. They begin by saying that a child learning outdoors should be supported by adults who respond to their interests and who can support their development, whilst still allowing the activity to be child led. By being responsive to queries the learners may have and being interested in what they are interested in will aid them in building self-efficacy and having more confidence and self-belief in what they are doing. Moreover, adults should support the learners in managing their own risks when it is safe to do so as well as encouraging them to master physical challenges, they may be finding difficult. The role of adults in children's play (n.d.) is of the opinion that opportunities for children to play outdoors have been reduced significantly over recent times and that adults are a main cause of this. As adults we determine whether the child has permission to go outside or not, the time they get to spend outside, the space they must play in and the materials they either can or cannot use. To counteract this, they suggest that adults simply need to listen to children. Listening to where they want to play, what they want to do and how long they want to play for whilst trying to restrict them as little as possible will encourage them to want to get outside more and experience the outdoor world around them. Whilst trying not to restrict them is important, there are some potential barriers and hazards that surround outdoor learning. IOL (2024) state that leaders of outdoor learning have a duty of care when it comes to those partaking in the activities. Hazards must be identified and assessed prior to the start of an activity and throughout it. The unpredictable nature of the outdoors means that it is essential for practitioners to be constantly aware of what is going on around them before reacting accordingly. There are other barriers to outdoor learning that need to be considered. Hwb.gov.wales (n.d.) note that both financial barriers and the engrained beliefs of practitioners can play a negative role in outdoor learning. In terms of the financial barrier that many practitioners would say impacts their ability to provide an outdoor education, The Department for Education (2023) has sought about combating this. They pledged £15 million to help those most in need access to nature and learning outdoors, with the funding also going towards increasing biodiversity within their settings. When it comes to engrained beliefs being a barrier, hwb.gov.wales. (n.d.a) note that some practitioners are concerned that 'real work' can only happen in the classroom and when completed in books. Many practitioners do not see the outdoors as a suitable place for assessments to be carried out as they see the outdoors as a place for play and informal learning as opposed to a place where important development can take place. The Scandinavian approach of Udeskole fundamentally disagrees with this as explained by Bentsen (2023). He states that Udeskole sessions are characterised by making use of the local environment when focusing on specific parts of the curriculum. He uses the example of using trees to measure volume or using what you can see in the natural environment to write poetry. The Udeskole approach is often cross disciplinary, where more than one part

of the curriculum can be taught at the same time. This links into the Welsh curriculum. Education Wales (2020) looks at how all six areas of learning across the curriculum should not be seen as separate entities, instead taught together wherever possible linking back to the four core purposes. Udeskole shows that teaching outdoors can encourage this alongside getting children outside more, increasing their physical and mental health and wellbeing.

Another technique that can be used by adults to enhance an outdoor learning environment is loose parts. As defined by Play Scotland (2022), loose parts are materials that are given to children that they can then use in any way they like. They should be used freely to explore and create whilst developing curiosity and imagination. They should have no input from an adult in terms of direction or instructions. PACEY (2019) corroborates this opinion by stating that by them not having any real direction of how they should be used, loose parts can be used entirely at the discretion of the individual using them. They can explore, create and use all their senses to allow their imagination to run wild whilst using loose parts. They continue by saying that it is impossible to use loose parts in the 'wrong way' which means children cannot fail when using them. In the environment I have chosen to use, loose parts can be utilised in a wide variety of ways. For example, loose parts could be provided for building a bug hotel either within the environment or back in the child's setting. Allowing them the opportunity to build something creative and of their own design and then watching bugs and other wildlife use it will give them a great sense of accomplishment. Play.Wales (2023) would support this by saying that it is not the job of the adult to police loose parts play, in fact they believe it is the opposite. They need to provide an environment with lots of play opportunities where the child feels empowered and confident to express themselves using the loose parts provided. Ensuring the children take responsibility for managing the materials as well as tidying them after they have finished will also promote the feeling of responsibility.

Play. Wales (2023a) also recommends observation as an important technique for facilitating outdoor play and education. They go on to say that by observing closely, adults can gain a deeper understanding of not what only the children are physically doing, but what is going on in their minds whilst they play and build relationships. Neaum (2016) agrees with this. They state that when children are watched carefully and sensitively you get the full picture of their learning. Through observation, the adult can see where the child is academically and socially. Furthermore, this information can be used then to make sure that what is then provided for those children is suitable for their abilities. For example, if the adult observes that the child finds it challenging to engage with a math task whilst in an outdoor environment, they can then differentiate the task when they next go to do a similar task to make it more

meaningful to them. Birthto5matters (2024) believes that formative assessment and observation play a key role in understanding a child's development and then aiding their learning by then matching experiences and interactions to meet the child's needs. For example, whilst playing in and using the environment in the picture the adult could observe that when counting sticks or leaves off a tree that some children can count confidentially, whilst others may struggle. If this is the case, then the adult can differentiate to suit each child's needs. They can encourage the children who counted confidently to perhaps skip count whilst encouraging the children who find it tough to either work in a pair or with extra support from an adult. West Sussex County Council (n.d.) agrees with this opinion. They state that observation is one of the most important parts of day-to-day practice when working with children. By listening, looking, and noting the activities the children partake in, then the adult can tailor sessions to suit the individual needs of all children in the setting.

InstructionalDesign (2018) explores Bruner's constructivist theory which looks at how learning is an active process where the learners involved construct their ideas on the knowledge they currently have. Bruner believes that learners can select and transform information, make decisions and construct hypotheses by utilising things they have already learned. Bruner goes on to say that as far as direction and instruction by the adults is concerned, it should be limited, and the learners should be encouraged to discover new concepts and ideas by themselves. Active dialog between the adult and the learner is key and should take place so that new information can be translated in a way that suits the level of understanding each child has. Kurt (2020), looks at Vygotsky's theory which differs to Bruner's in how they see the role of the adult. Vygotsky was of the opinion that learning occurs through interaction with others, such as peers, adults and teachers. He believed that teachers have the power to control many factors within educational settings, such as behaviors, tasks and the responses given following a task. As a result of this, he encouraged children to partake in more interactive activities as they tend to result in more discussions, feedback and working with others. Working outdoors and engaging in tasks outside the traditional setting encourages this as Harvey (2022) explains. They explain that stepping away from the classroom and into the outdoors doesn't only give the learners a greater sense of freedom and independence but also boosts social skills and communication. This links to Vygotsky's theory that more interactive tasks result in more discussions and working with others, crucial skills to learn and develop from an early age.

In conclusion, the role of adults in supporting outdoor learning is important. Allowing children the opportunity to access the outdoors and use it in a meaningful way is priceless. Theorists have studied the role of adults within this for many years as shown by

Bruner's and Vygotsky's work, respectively. Understanding that working outside can have huge benefits in terms of academic skills as well as well-being is something that many practitioners are still coming to terms with. However, taking inspiration from ideas such as Udeskole as well as utilising techniques such as loose parts and observations will allow practitioners to gain a greater understanding and reap the benefits of outdoor education for years to come.

Reference List

Bentsen, P. (2023). UDESKOLE IN SCANDINAVIA: Teaching and Learning in Natural Places | Children & Nature Network. [online] Children & Nature Network. (Accessed 27/09/24)

Birthto5matters.org.uk. (2024). Observation, assessment and planning – Birth To 5 Matters. (Accessed 27/09/24)

Butterfield, R. (2024) [Personal Image]

DREME Family Math. (2024). Taking Math Learning Outdoors into Nature ⋆ DREME Family Math. (Accessed 23/09/24)

Department for Education (2023). Funding boost to improve outside learning facilities. (Accessed 27/09/24)

Early Years Alliance (2022). The benefits of outdoor play in the early years. (Accessed 23/09/24)

Education Wales. (2020). 'Areas of Learning and Experience' as a central element of the new curriculum. (Accessed 27/09/24)

Edwards, M. (2022). How outdoor learning can help you fulfil the four purposes of the new Curriculum for Wales. Learning through Landscapes. (Accessed 23/09/24)

Edwards, M. (2024). How to teach STEM outdoors. [online] Learning through Landscapes. (Accessed 23/09/24)

Harvey, D. (2022). 5 key benefits of outdoor learning. [online] Learning through Landscapes. (Accessed 27/09/24)

hwb.gov.wales. (n.d.). Hwb. [online] Available at: https://hwb.gov.wales. (Accessed 27/09/24)

hwb.gov.wales. (n.d.a). Hwb. [online] Available at: https://hwb.gov.wales. (Accessed 27/09/24)

IOL (2024). Risk and Benefit in Outdoor Learning. (Accessed 27/09/24)

InstructionalDesign.org. (2018). Constructivist Theory (Jerome Bruner) - InstructionalDesign.org. (Accessed 27/09/24)

Kinsner, K. (2019). Rocking and Rolling. Fresh Air, Fun, and Exploration: Why Outdoor Play Is Essential for Healthy Development | NAEYC. (Accessed 23/09/24)

Kurt, S. (2020). Lev Vygotsky - Sociocultural Theory of Cognitive Development - Educational Technology. (Accessed 27/09/24)

Neaum, S. (2016) Observing and assessing children's learning and development

Pacey.org.uk. (2019). Getting to grips with loose parts (Accessed 23/09/24)

Play Scotland. (2022). Loose Parts Play - Play Scotland. (Accessed 23/09/24)

Play.wales. (2023). Resources for playing – providing loose parts to support children's play - Play Wales. (Accessed 23/09/24)

Play.wales. (2023a). Resources for playing – providing loose parts to support children's play - Play Wales. (Accessed 23/09/24)

Stem.org.uk. (2023). Available at: https://www.stem.org.uk/all-news/teaching-primary-science-outdoors (Accessed 23/09/24)

The role of adults in children's play. (n.d.). Available at: https://www.npt.gov.uk/media/6600/fis_role20of20adults20in20childrens20play.pdf#:~:text=The%20opportunities%20for%20children%20to%20play%20freely%20%E2%80%93%20particularly%20outdoor

Waters, J. and Rekers, A. (2019). Outdoor Play Young Children's Outdoor Play-Based Learning. (Accessed 23/09/24)

West Sussex County Council. (n.d.). West Sussex County Council. (Accessed 27/09/24)

2312708
ECEY5005

2312708
ECEY5005