

Student Number: 2312455

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I acknowledge the use of Chatgpt ([ChatGPT | OpenAI](#)) on 23rd September 2024 to give me ideas my work using the prompt:

‘What is sustained shared thinking in the early years linking to theory?’

I confirm that I have not presented any AI generated text as my own work. I confirm I have copies of my drafts, notes, and other resources I used before, and after the use of AI tools which I may be asked to provide in evidence.

Part 1



Image showing Forest Area at Cross Ash Primary School
Source: (Williams 2024)

Part 2

This learning environment has many holistic advantages that enables children who use it to develop all areas of the curriculum. It is used by reception class who are aged four to five years and there are a mixed class of 25 children.

This forest area is a great way for the children to explore the world around them, giving them a sense of belonging and knowing what living and natural resources they have in their area. This is an important part of cynefin, the what matter statement of the Humanities strand mention that children should have experiences and opportunities to explore their own locality (Welsh Government, 2022).

White (2011), say that when children play outside, they need to have first-hand experiences to improve their holistic development.



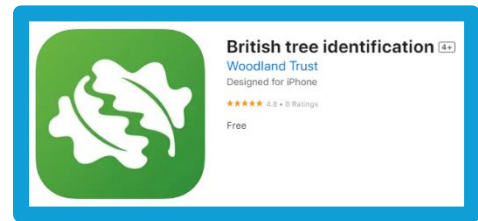
In this learning environment there is a tyre swing. This is a very popular play choice. Pupils enjoy helping each other, sharing and taking turns, which in turn develops their social skills, learning to problem solve and resolve conflicts. Part of the mathematical What Matter Statements for Progression Step 1(Welsh Government, 2022b) state that children need to begin to understand and apply time. In this learning environment, adults can give the children an egg timer for them to know when time is up. Emotional skills are also being developed – the children learn to control their emotions by playing cooperatively with their peers.

The tyre swing enables the children to develop their balance and coordination skills, developing strength from getting on to the tyre and holding on.

They learn to develop their understanding of momentum and the early physics of forces pushing and pulling the swing to make it move. This is part of Progression Step 2 for the Science and Technology strand What Matters Statement 5 (Welsh Government, 2022c) where children need to have experience of the effect of forces. From this they will also begin to understand movement and speed and how to use force to stop the swing from moving when someone needs to get off. Children will develop their understanding of spatial awareness whilst participating in this activity, knowing that the tyre swing could hit someone if they are too close.

Question?
How do we make the tyre swing move/stop?

In this learning environment there are a variety of trees and plants. There are many ways that these can be used for learning experiences. An iPad can be provided so that the children can use an application to identify the trees around them. Using applications is part of the Digital Competence Framework (DCF) (Welsh Government, 2019) where in Progression Step one the children need to use familiar software.



This is a picture of the tree identification application

Source: Woodland Trust, n.d

Looking at these trees and plants in detail, provides the children with the opportunity to explore the leaves, feel the bark and observe the different textures. This links to children being able to identify and describe properties of materials (Welsh Government, 2022c) as well as having a beneficial wellbeing effect of being present in nature. Staff can provide resources such as paper and crayons for the children to make markings; this is an ideal opportunity for them to experience the different varieties of leaves.

Baskets can be provided for the children to collect leaves; this can be used to develop mathematical skills

- Sorting - colours, order of sizes
- counting – forwards/backwards, groups of
- addition/subtraction
- patterns
- measuring different sticks – finding bigger / smaller / longer / shorter / lighter / heavier.



This is an example of a way to use the outdoors to help number skills.

Source: Thimble and Twig, 2020

The use of mathematical language will develop the children's deeper understanding of these Progression Steps whilst exploring leaves in a natural way, embedding the skills which will further learning.

To develop mathematical concepts, practitioners can provide resources that will encourage the children to be independent of their own learning. The practitioner can use:

Question?

If I have 3 leaves and I add 2 more, how many do I have now?

Question?

Which colour leaf is the most/least popular?

Incidental Welsh can also be developed here. Welsh Government (2019 b) say that for children to be able to learn Welsh they need to hear it all around them. Whilst submerged in play the children begin to use the Welsh language naturally.

Question?

What do think happens in Autumn?

Visiting this area and observing the different seasons are a beneficial way of educating children on the changes that occur during each season.

This links to the STEM What

Matters statement

(Welsh Government,

2022c) where children need to

make observations of the environment around them.

Question?

Why do you think that has happened?

Children need to understand the plants and animals that are in their own environment, this links to the STEM What Matters statement. (Welsh Government, 2022c). Trees provide homes for various animals; going on a minibeast hunt and counting the animals which have been found is a purposeful way to collect data. The children can use sticks or natural resources to represent and record their data (Welsh Government, 2022b). Doing this practically allows the children to understand the method in a much more holistic and natural way.



This is an example of a way to record data.
Source: Robertson, 2024

Trees and leaves provide the children with an experience to look at the habitats of animals and consider their lifecycles, both of which are part of the STEM curriculum. Children can see firsthand where animals live and they can make dens for the animals themselves. Adults can provide materials which will encourage the children to design shelters, discussing what material is best suited, they will be using scientific language such as waterproof. This knowledge of the materials will enable them to design, predict and make improvements which are skills they need for lifelong learning.



(Welsh Government, 2019)



Providing children with an iPad allows the children to explore their surroundings. These pictures were taken by 4 year olds and their task was to use the zoom to take pictures of living things. This is a skill from the DCF curriculum to use familiar software

Personal photos
Source: Williams, 2024



From this activity the children furthered their learning and asked to look at the parts of a flower and the life cycle of bees. This links to Progression Steps 2 and 3 of the STEM strand and even though the children are at Progression Step 1, having this knowledge and the vocabulary will enhance their learning and allow them to learn at a deeper level further along in their journey.

This learning area provides an opportunity to explore the ground beneath them. White (2016) explains that when children are exploring different gradients they are experiencing the world around them, by living in their bodies they are feeling parts of their bodies and muscles and this develops proprioception. Children use their proprioception system which makes them aware of themselves (Humber Sensory Processing Hub, n.d a), of their movements and helps to regulate emotions.

Climbing and manoeuvring over different terrain allows the children to be physical which develops their vestibular sense (Humber Sensory Processing Hub, n.d b) which controls the muscles in body. Children's balance, coordination and their gravitational movement can all be improved from the freedom of these grounds. This links to science skills of understanding how the body works, living things and what is needed for the body to grow.

Healthy lifestyles can be incorporated when the children are experiencing physical development outside, the way their bodies change when they have been running or when they are calm listening to the sounds that the leaves make.

Question?
What happens to our
bodies when we run?

Children are learning about forces when they are stretching and bending, they problem solve to figure out how to jump over branches and twigs. They are using trial and error to make judgements and understand their actions.

Providing resources for the children such as toy cars, can encourage them to experiment with force, they can see how much force it takes for them to push the object down the slope.

Mathematical skills are developed through the terrain

- Directional language – up/down, stop/start, over/under
- Counting how long it takes to run down the slope
- Digging in the mud to explore the concepts of depth/volume. Water can be provided for the children to mix with the mud. They will learn about the consistency and begin to use instructional language.
- Distance and measuring

RISK BENEFIT ASSESSMENT

Location / Activity:	Forest Area	Date:	September 24 th 2024
Assessor:	Gemma Williams	Review date:	March 4 th 2024
Before <u>EVERY</u> session - a member of staff needs to visit the area to ensure that no new hazards or changes to the area. Update when/if necessary.			

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 pre cautions Rating: L/M/H
Independent free play under the supervision of adults, children not always in sight.	Communication and social skills. Learning to share and talk to each other and how to resolve disagreements and arguments. Fresh air which improves well-being from independent play. Explore new surroundings and learning how things work with the chance to make mistakes and learn from them. Taking measured risks in a safe space.	Lost Children wandering off. Falls and minor accidents.	Adults and Children	Head counts and child to adult ratio adhered to. Rules of boundaries and expectations of behaviours. This is to be discussed with the children in the first session. Provide children with red triangles for them to place around the area that they think could identify as a risk then discuss. Ensure all gates leading out of school are closed, and check perimeter fencing is secure. First Aid kit available.	L
Uneven Grounds	Develops gross motor skills by climbing over stumps and roots.	Trips and falls that could cause injury.	Adults and Children	First Aid kit is to be taken in every session.	L

	Observation of the world around them. Watching where they are walking and taking precautions. Rolling items down the slopes and discovering early forces of push/pull. Slopes and gradients which develops gross motor skills and physical development. Taking measured risks to develop understanding of safe behaviours.			Teaching the children of the risks in the area and ways that the children can develop self-awareness.	
Rope Swing	Children can explore the foundation of early physics of forces through experimentation – push and pull. Builds strength in their legs and arms from holding on. Helps to develop balance and coordination. Awareness of their surroundings and people close to them.	Hit by swing Falls Rope burn Strangulation	Adults and Children	Discuss rules of the rope swing allowing the children to think of their own rules on how to make this safe but fun. For example: 1 child only on the swing Stay behind the swing and do not walk in front of it. Equal time on the swing – someone could oversee a stopwatch to know when to change. Check rope and knot conditions. Adult to supervise this activity to ensure safe use.	L

	Social development – playing together and helping to push their friends. Sharing and turn taking. Emotional development through fun and supporting each other.				
Trees and plants	Recognising the variety of different trees and plants. Comparing plants and flowers that grow in their environment and area. Sensory Experience – feeling different textures of the mud/leaves/barks/stones. Climbing the trees and other obstacles develops balance, coordination and builds confidence in child's abilities and to manage their own risks. Mushrooms and fungi – promote identifying different species	Poisonous plants. Falling trees Injuries from brambles, nettles and thorns. Eye pocks from sticks. Allergies from plants/insect bites. Poisoning	Adults and Children	In case of high winds area is not permitted to be used. First Aid kit to be available for every session. Teach children to be aware of own surroundings. Rules for climbing trees. Staff to visit area before session. Educate children not to touch mushrooms and fungi. Children to be made aware not to put anything in their mouths.	L

Weather Conditions	To explore and explore the range of weather conditions. Fresh air improves mental health and wellbeing. Seasons	Slips and falls from wet ground. High winds Sun burn / Heat stroke Hypothermia	Adults and Children	In case of high winds area is not permitted to be used. Monitor weather. Dress for the weather conditions. Layers, waterproofs, suitable footwear, trousers.	
Hazardous materials/ Litter	Children to identify what should or should not be in this area such as litter. Identify the animal faeces – what animals live on this area.	Injury from materials found e.g. glass Animal faeces	Adults and Children	Children know the rules not to pick up items. Wash hands after session. Staff to visit area before session.	L
Animals / Wildlife	What animals live in the area – looking at different habitats. Explore senses – listening and looking for animals or signs of animals e.g. footprints.	Animal faeces	Adults and Children	Children to be made aware not to touch faeces. Wash hands after session.	L

Part 4

The use of the outdoors for children to learn and develop holistically has become common practice in the early years. Ofsted want the outdoors to be an extension of the classroom and therefore the learning should be as important in the outdoors as it is in the indoors (Sparks, 2023).

In the past certain subjects such as maths and science were always based in a classroom environment sitting at a desk with a textbook (Waite, 2011). It is now seen as good practice for children to be independent and practical, allowing the children to discover and be in control of their own learning. Ryder Richardson (2013) say that learning outside of the classroom environment nurtures children's holistic development and improves well-being. Children need to have the freedom to move about in bigger spaces, being allowed to be noisy and explore the natural resources around them. Waite (2011) believe that children need authentic learning challenges that provide them with a chance to explore direct experiences, enabling the child to learn whilst using skills that become real to them, and not being seen as a stand-alone lesson. Through hands on learning and experience children learn to problem solve and develop critical skills which develops a greater understanding of science, technology, engineering and maths (STEM) (Edwads, 2024).

There have been many theorists who have seen the outdoors to be beneficial to a child's holistic learning. Bruner thought that when children were involved in learning independently through play they were able to retain the concepts more than when they were being taught by a teacher (Harvard University, 2016). Bruner and Piaget share the same views on learning in the outdoors, they both saw discovery play as essential to develop active learning and higher levels of retention.

Froebel believed that the outdoors was a place where children can grow, learn and develop at their own pace. His approach to the outdoors is relevant to the current curriculum, Froebel wanted children to explore their natural surroundings using adults to facilitate the area with resources, questioning and observing (Tovey, 2017).

To support children in their learning, practitioners need to be aware of the benefits that outdoor learning has, to develop mathematical and scientific skills. Training practitioners to support children in the outdoors is now more common than in past, practitioners are now aware of the activities that will develop these skills. However,

many practitioners do not understand why children should have the opportunities for free play outdoors and the benefits that enable a child to develop holistically (Biton, 2019). Welsh Government (2023) have placed emphasis on outdoor learning but say that for teachers to successfully engage children's learning they need to have sufficient training in the pedagogies associated with outdoor learning. Practitioners can use this knowledge to understand what they can do to ensure development and progress. White (2011) agrees saying that practitioners need to be able to see potential and the learning opportunities that the outdoors give to the children.

The Forest School ethos arose from Danish and other European countries ensuring a rise in outdoor provisions in early years settings (Johnson and Watts, 2018).

Although this is a positive note, many practitioners saw this is a way not to teach outdoors as they were not 'Forest School trained'. Forest school is a programme over several weeks where children are taught skills and have experience of the outdoors through child led activities, therefore planning is kept to a minimum. It is the role of the practitioner to facilitate the learning by adding resources and giving the children time. Bento and Dias (2017) agree saying that for children to reach full holistic development the practitioner needs to allow the children time and space for them to explore their environment in the form of free play.

Listening and observing children whilst in play is a great opportunity for staff to understand what the children need to facilitate their learning. From listening and observing the children in their play, staff understand the children's views and likes and where they may need support to develop a certain skill. Malaguzzi, who followed the Reggio Emilia approach, believed that listening to the children's views and interests encouraged them to learn independently (Reggio Emilia Approach, 2019).

Having conversations with the children will help to develop vocabulary skills which provides the children with ideas to further their learning. Jackson (2023) suggests that metacognitive talk allows children to listen to a conversation and begin to think of ideas that they can use in their learning, thus allowing problem solving and reflection to evolve and develop. Practitioners can work with the children in sustained shared thinking where they interact with each other to explore ideas, this is linked to Vygotsky's zone of proximal development theory (Kurt, 2020) where adults

scaffold ideas and guide the children to use what they can already do and stretch them. However Piaget theory disagrees with Vygotsky, Piaget thought that children developed at different stages in their lives and that the adult needs to give the children the experiences for them to learn before they can develop (PACEY, 2016).

Providing natural materials and loose parts aid all areas of learning, these are easy to source, do not cost anything and can easily be resourced/reused. Montessori (Montessori Apprentice Academy, 2022) saw the use of loose parts as a way for children to explore their imagination choose what they want the object to be.

Edwards (2024) also believes that for children to understand the world around them they need to have real life items for them to achieve this.

Providing resources will enable the children to become curious and encourage them to explore their surroundings with them (White, 2020). Natural materials enable a child with schemas to interact with the natural world. Practitioners need to understand and develop knowledge of their children so they can recognise what resources they can provide for the needs of their children. Piaget believed in the process of children investigating and exploring the outdoors (PACEY, 2016). White (2011) advises that practitioners need to take into consideration certain children who do not like being in the outdoors and participating in risky play. Providing children with tools and objects that they can fill and empty, move, dig, allows children to develop mathematical and scientific skills (Watts, 2020). Ashbrook (2017) furthers this saying that providing these objects develops mathematical and scientific concepts, an example of this is collecting leaves and sorting them, this encourages counting and classifying, a recipe card encourages them to mix and follow instructions. It is the role of the practitioners to facilitate and provide these objects by asking open ended questions that extend children's learning.

Practitioners need to be aware of the risks that one may face when using the outdoors. Educating the children on risky play builds confidence and resilience (Merrick, 2021). Waters and Rekers (2019) say that adults need to give children credit of their abilities in what they can achieve and to let them take risks, the adult is there to monitor risk. Froebel saw the value of adventurous risky play, saying that children need to have challenges where they risk assess. This play encourages them to value danger and achievement through success, adults can help children to

achieve risky play by educating them in the skills to observe risk for themselves (Tovey, 2017). However, many practitioners have a fear that there may be repercussions if a child hurts themselves, risk benefit assessments are there for the protection of the children as well as the staff (Creative Star Learning LTD, 2014).

Piaget's theory saw that through learning in the outdoors and being submerged in their learning gave them a deeper understanding of the world around them (PACEY, 2016). Community Playthings (n.d) say that the way for children to learn is through their senses. An example of this is if a child has not seen the sky, then how can they paint or write about it? Adults need to give children time in the outdoor environment to experience the world around them, feeling the mud, smelling the cut grass, hearing the birds sing, using their senses develops mathematical and scientific skills developing them to be curious about how things work.

Practitioners need to return to activities, as this is a way to embed and assess previous learning (Bento and Dias, 2017). The outdoors is always changing and observing these changes leads to deeper understanding and offers new learning opportunities. Bruner's spiral of development theory (Johnson, 2023) suggests that when children are introduced to early mathematical or scientific concepts they need the opportunity to revisit the learning to ensure the concept is grasped.

White (2011) believes that practitioners should be good role models and be enthusiastic about the outdoors, this can be in the form of wearing the appropriate clothing and using positive language such as 'I know it is cold but if we wear layers we will not feel the cold', this teaches the children to understand what they need to regulate their bodies and dress appropriately. Watts (2020) backs up White by saying that the adults around the children can promote enthusiastic learning through shared thinking and working alongside each other.

There can be obstacles and barriers when participating in outdoor learning. As discussed previously, staff attitudes and no training can hinder the children's learning as well as the worry from injury (Kelly, S. K., Sharpe, R. M. and Fotou, N. 2022). This means that they are less likely to take the learning outdoors. Staff may not feel confident in their ability to teach in a practical way.

The weather can also be seen as a negative instead of it being a learning opportunity to feel weather conditions such as snow. Froebel saw the weather as 'an

exciting learning experience' (Tove, 2017, p.10). Settings need to ensure that children and parents are educated in the benefits of outdoor learning and provide the children with appropriate clothing information (Edwards, 2022). This can lead to financial issues on the setting as well as the parents not having sufficient funds to source this equipment. Parent attitudes can also hinder the children's learning due to insufficient knowledge of the way children learn. Practitioners can share information to work alongside parents to educate them that learning does happen in the outdoors as well as in the classroom (White, 2020). Bento and Dias (2017) share the same views on educating parents on the importance of outdoor play saying that parents fear their children being injured if they are involved in risky play, so practitioners need to build a trusting relationship with the parents to build that confidence and put their minds at ease.

A study by Sjöblom, P., Eklund, G. and Fagerlund, P. (2021) has shown that planning for the outdoors can be time consuming as practitioners need to teach the children boundaries, rules and behaviours, also noted in the study was that due to class sizes, the abilities of the children and having to differentiate activities took up time on an already full timetable within the curriculum. However, Grigg and Lewis (2016) disagree with this study saying that the outdoors does not need any more extra planning than indoor activities do.

In conclusion the outdoor environment provides children with experiences where they are free to play and where learning is enhanced through this (Johnson and Watts, 2018). By playing in the mud children are experiencing scientific skills such as exploring properties, collecting leaves and twigs, all of which are great ways to understand mathematical concepts. The outdoors is a wonderful way for children to learn about the world around them through hands on experiences, they need to be given time and space for unstructured play where they can learn naturally (Bento and Dias, 2017).

With the new curriculum implemented, Welsh Government want settings to prioritise outdoor learning pedagogy into professional learning. This will ensure that children are given these opportunities to learn, grow and develop at their own pace (Tovey, 2017). Teaching in the outdoors has benefits for practitioners as well as children (Griggs and Lewis, 2016), they get to see their children in a more relaxed way and

are encouraged to join in the learning process and they can renew their way of teaching creating new opportunities in a different environment.

The United Nations Convention on the Rights of a Child, Article 31 (UNICEF, 2022) states that children need to have the opportunity to play, especially in the outdoor environment as this benefits their holistic learning.

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