



(Morton-Parker G 2024)

A curious session exploring Woodland.

This session was with eight children between four to five years with two early years practitioners, making the ratio one practitioner to four children. At the start of the session a clear boundary was set for the children to know how far they could investigate and explore. This was due to a clearing used for parking.

The children wanted to explore, and a small group of children went off and noticed the leaves on the floor and started collecting them which led to the discussion the practitioner led saying 'I wonder what other interesting things you can find'? handing the children a basket to put their natural objects in. The small group of children went off with their basket and started to investigate. Child M found a different coloured leaf to what she had found before and asked the question 'why is the leaf green not yellow'? As another child N replied, 'look I've got a brown leaf here'. The children are meeting progression step 1 in the Curriculum for Wales 'I can identify-follow and begin to create sequence and patterns in everyday activities (WG ,2020)

The practitioner replied to them both, "I am not sure, let us have a look together to find out why they suggested let us put all the leaves that you all have found on the floor, and we will look at the differences between them. As they got placed on the floor the practitioner pointed out all the leaves on the trees are green the same colour as this leaf. She then compared this to another leaf that was both green and yellow which was interesting saying I wonder why this has happened? N replied it is because it is not on the tree anymore. The practitioner replied "I think you might be right N.

The practitioner went on to explain that the leaves start off green then when the seasons change. In summer when there is more sunlight, and the weather is warm, trees have the nutrients they need to grow and need light to keep green leaves. This is called photosynthesis. In Autumn, the weather is much cooler and there is less sunlight the leaves start to lose their colour green and turn into orange, red or yellow like the leaf child M found. The children were asked what other colours were there. 'Child M answered Brown the practitioner replied 'yes, you are right there are brown leaves. The tree drops the leaves when they get brown and have died without the nutrients they need, and some trees are without leaves in the winter till the Spring when it is lighter and warmer for the new leaves to grow. Which is why in the Autumn we have loads of brown leaves on the ground.

The practitioner comments but it is summer now i wonder why these leaves have fallen on the ground? and asks 'What would make the leaves fall off the tree I wonder? Child N replied that someone was picking them off the trees. Yes, that might cause some of the leaves to be on the floor. Can we think of anything else? Shall we lay on the ground, look up at the tree and see what causes the leaves to fall. As the children and the practitioner look at the tree leaves the wind starts to blow some of the leaves off the tree. Child M said look the wind is moving the tree I think it is the wind that makes them fall down. The Practitioner replies 'well done good investigating I think you might be right.' When the leaves have fallen and not been on the tree for some time, they turn brown because they are not getting nutrients and water from the tree and are drying out. Although the children have met one Scientific progression step, they also are meeting another progression step in mathematics, step 1 which is 'I can investigate, collect and record data found in my environment'(WG,2020)



Life cycle of leaves (st adobe stock , no date)

When looked up again child N noticed the shadows of the trees and pointed to the shadow 'look at that shadow its very big' the practitioner said 'wow it is a very big shadow can you see the different pattern on the trees' Child N said 'I am going to make my own tree shadow' the practitioner said ' I wonder what we need to make a shadow? Child M replied we need a light to make shadow, but we haven't got any Torches.' No, we do not have any torches i wonder what else we can use let's look at what is in the box's there are some white rolls of paper do you think we can use this for making a shadow?' Child N said maybe if we put it on the ground and see what happens. We

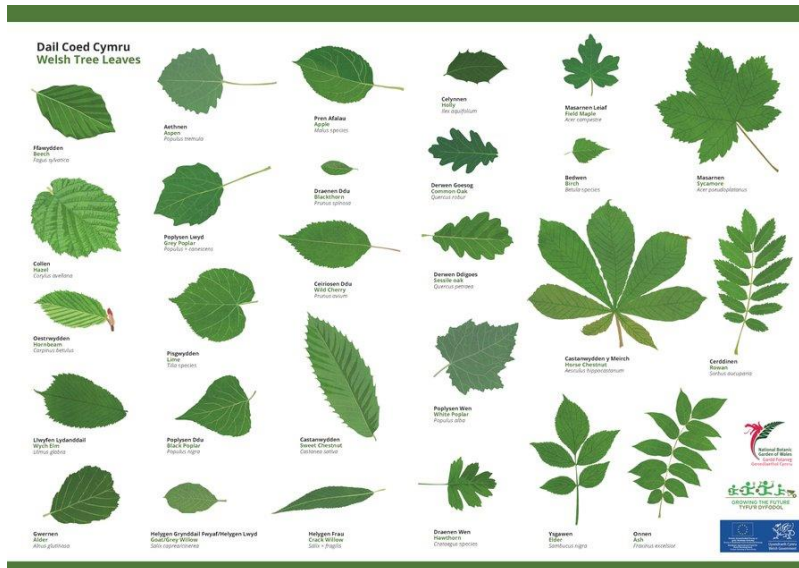
place the paper on the ground the sun went behind the clouds making no shadow appear on the paper. 'That's funny I wonder why we cannot see our shadows we must be missing something.' The sun came back out and three shadows appeared on the paper. Both children said look we needed the sun to make it work. A few more children joined the activity at this point and started creating their own shadow of themselves child B stood on his tiptoes and put his arm out making his shadow in a shape of the tree saying 'tall' then he crouched down making his shadow small saying 'short' child B kept doing this changing his position a few more times watching his shadow as he made this movement repeating the words tall and short. Child N and M stood up tall moving their arms around acted out the leaves falling off the trees in their shadows. The practitioner put some pens out and the children drew around each other's shadows on the paper. Making a template tree for each child then the children place all the leaves that they have found on the top of their tree. Child N said, 'I am making a tree that is in summer, so I need all the green leaves on mine' Child M made a tree in winter putting less leaves on her pictures. These children have met progression step 1 in science and technology' i can explore the environment, make observation, and communicate my ideas'. (WG,2020)



shadow of tree (flickr,2002)

Child C noticed that there were different types of leaves as he started to match the leaves by placing them on the shadow of the leaves from the trees as he picked up one, he said this one has pointed edges. The practitioner said 'can you see the different shape and pattern in the leaves I have a chart so let us see if we can identify what type of tree it is by matching the leaves. Child C pointed to the leaf that matched on the chart saying 'it is this one, look its matches' the practitioner said 'yes that is a birch tree. It is

small leaf I wonder if there are any larger leaves around the woodland.’ Child C was working at progression step 1 in mathematics and numeracy in the Curriculum for Wales (WG,2020). ‘I have explored, compared, and used general language of shapes through investigative play’.



Gradd cymre garden of Wales (WG ,no date)

Location / Activity:	Woodland session	Date:	18/09/24
Assessor:	Early year teacher	Review date:	18/09/25

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
Children exploring the woodland and collecting natural objects.	Children will gain experience through exploring and become confident in different learning experiences in the woodland environment focusing more on mathematical development and scientific learning and benefits their holistic development	Uneven ground, trip hazards and low hanging branches. Public space with no fence that anyone can access. Children may become lost	children and practitioners	Early years teacher risk assessing the woodland before the activity starts and removing where possible high-risk objects. Making the children and adults aware of the trip hazards. Ensure that both staff and children have the suitable footwear. Having a first aid kit in case of any injuries Having children in small groups with a designated member of staff/staff aware of the children they are responsible for Children to wear hi vis jackets	L

	and supports children's wellbeing.	Foreign bodies such as broken glass, nails, and rubbish Animal excrement, fungi Plants with high pollen and stinging nettles Stings by bees and wasps		Clear boundaries to be set with the children before starting any activities. Lead practitioner to have a mobile phone with all children's contact details. Practitioner to visit before the activity starts to remove animal excrement and make children aware of the dangerous hazards discussing with the children that there are somethings that are not safe to collect and touch. Have clean water for children to wash their hands. All staff made aware of the hazards and know children that have allergies making sure that inhalers, EpiPens and Piriton are carried by the group leader. Lead practitioner to make sure the children are aware that bees and wasps may sting.	
Being outdoors in all types of weather conditions	Children experiencing and become aware of different weather conditions starting to use	Children may get too hot and may get sun stroke or sunburn or may get too cold and wet	Children And Practitioners	Both practitioners and children to wear appropriate clothing and footwear for the weather conditions that day and have spare clothes for children if they get wet. Suncream to be applied before going outside in the hot weather.	L

	scientific language such as cold, wet, windy, and sunny, warm. Children to learn how to care for themselves and others at different temperatures and conditions.	that may lead to children getting chilled or even ill. Branches from trees falling in high winds causing injuries		Practitioner to discuss and encourage children to play in shed area on hot days, if not shady areas. Children and practitioner to always have water available and discuss the importance of staying hydrated Practitioner to check weather beforehand and not to go outdoors if weather is stormy, windy or if we have a yellow weather warning in that area.	
--	--	---	--	---	--

Children climbing trees or stumps	Building physical strength and coordination, problem solving and self-confidence. Children being able to take risks	Children losing their footing, falling from height, and injuring themselves. Tree branches snapping and children falling and injuring themselves or others. Branches are slippery		Practitioners to climb trees first to assess the risk and to always supervise and support children. Have clear boundaries on how high children can climb. Make children aware of weak and dead branches. Setting a rule of not climbing trees if raining or branches are wet.	H
-----------------------------------	--	---	--	---	---

		when wet may cause children to fall and injure themselve s and other. Children getting poked in the eye with some twigs or branches			
--	--	---	--	--	--

The outdoor environment gives children opportunities to explore, be curious and inquisitive and supports children's holistic development. When children can experience the natural world around them there are many health benefits and skills developed when playing in the outdoor environment (WG ,2022) This section of the portfolio will be discussing relevant theories and research relating to outdoor learning and play and evaluating how the practitioners support and encourage children to engage with mathematical and scientific concepts in the outdoor environment.

The early year practitioners' role is to provide an outdoor environment that nurtures and cares for children's welfare and supporting children's learning experiences where the children can take risks, and problem solve through play based learning that meet their holistic development needs. Practitioners need to value that the outdoors is more important than the indoor environment where the children can have a deeper depth of play based learning. Because the children have the space and freedom to do so and can experience and play on a bigger scale (Richard ,2014). Early years practitioners should be guides for the children they work with and lead them to a greater

understanding and develop their existing interests. Following their line of direction or schema encourages self-motivation in young children and will enable them to make good progress educationally. Children need to be supported to make mistakes and encouraged to try things and learn what works and what does not (pacey, no date).

These experiences of play link in with Gibson 's Affordance theory that children encounter space or objects in a unique way when playing, with the purpose of the object or space having different values and meanings to each child. The object or space has no limit of what it can do. Which has strong links to children's schemas where they choose an object or materials to play out their schema which supports them learning more deeply (Baulton and Thomas ,2022). Children using their senses through exploring with their hands when playing outside helps them to make connections which contributes to their holistic development. Having a range of feelings and sensations supports children in processing and understanding experiences and forms useful memories to build upon. Children may repeat this type of play over and over again which is known as their schema. Piaget believed that children arrange their knowledge and understanding of the world into cognitive structures or schemas. There are many schemas that children go through in their life. From transporting objects and themselves to rotational objects that go round (Froebel Trust,2023) As is it stated by Education for Wales that schema plays an import role in providing the foundations for understanding mathematical and scientific knowledge and skills in the early years. Using a variety of Loose parts provides an opportunity for children to explore, promoting understanding and the concept of language, engage in problem –solving and creative thinking. This supports children's holistic learning and their pedagogy (WG,2022).

When children engage with the play, the practitioner acts as a role model, guide and facilitator of the outdoor environment. This is child-led learning where the practitioner is supporting the learning with open-ended questions such as 'what else could you do' or 'how is that happening'. By using these prompting questions, the children further their learning, encouraging them to think about what they are doing and what materials are being used (Hunter et al, 2019). Also, having an engaging rich environment that utilises natural materials such as leaves, stones, pinecones and sticks and where children can notice and experience patterns in natural objects and their seasonal changes. In

addition, finding out the life cycle of wildlife holds a greater possibility for learning and provides opportunities for maths and science skills that they cannot experience in the indoor environment (Naeyc,2017). To enhance the children's learning experiences the practitioner needs to add loose parts to the environment and children have access to a wide range of them. Loose parts give children opportunities where they can create and use their imaginations, experiment and explore learning from the experience and be able to problem-solve (learning through landscapes ,2023). In Nicholson's loose parts theory he claimed that there was no proof to show that some of us are born creative and inventive and some of us not. Instead, he identified that children need opportunities to make, build, play with natural resources and the elements. These parts will encourage children to be curious and to be able to discover and invent. He regarded loose parts as 'Variables' that are all materials shapes, smells, and other scientific phenomena such as gravity and electricity. By children playing with natural materials that impact on their senses children can experience these 'variables' and can experiment, discover and invent whilst playing and having fun. (Play Scotland, no date). Nicholson's theory has been used to develop the environment of education which is a valued part of the Curriculum for Wales today. The research shows that children will choose to play with loose parts as a vital part of their play when the opportunity is given in the outdoor environment. Which fulfils children's holistic development, encouraging their cognitive, creative and physical development. (Boulton and thomas,2022).

When exposed to outdoor play, children learn about the impact that they can have on their environment and how we need to take care of it. They can gain many mathematical and Scientific. concepts from activities outdoors from sorting into sets and counting objects, playing with sticks, and sequencing materials to build dens. Language and communication, problem solving and working collaboratively are all skills that can be developed outdoors. (Swift, No date). Like Froebel's theory his approach to the outdoors he stated that all areas of learning can be offered in a rich outdoor environment and children experiencing the day-to-day natural world is vital to help them learn and value its wonder and begin to understand the links to living things. He also stated that children need to be aware of their own learning, so they learn more deeply

and can reflect on and evaluate their learning. The adult's role is to help the children do so (Tovey 2013). Furthermore, Jan White (2016) stated that we experience the world and connect to it through our bodies and using our senses. Cognition and creativity come from a sensory experience that we have and how we use our body to feed the brain with the material it needs for learning about our surroundings. We can only think about what we have experienced, therefore physical development links with health, wellbeing, and physic. It also shows that a positive frame of mind/ attitude links to curiosity, finding out, exploring and interacting which is at the heart of learning effectively (community playthings ,2016) Furthermore, the Welsh Government states that in outdoor environments Maths, Science, Reading and social studies educational standards have been raised and improved children's performance in these subjects (W,G 2023). In Wales, the outdoor environments are a key part of the curriculum for funded non-maintained nursery settings in the early years that supports children's development pathways. It states the outdoors gives children opportunities which 'Inspire awe and wonder.' Like Frobel's theory of the outdoors the Welsh curriculum points out that being outdoors gives children a greater opportunity which stimulates engagement with the natural world helping to build their knowledge and understanding and empathy for the environment. By exploring the outdoors children will gain a sense of the places around them the wider world and belonging in Welsh 'Cynefin.' Been outside provides a space for children to improve balance and co-ordination and can also develop their ability to assess and experience risk which develops children resilience and confidence. The role of the adult in the early years setting should be as an advocate for play based learning, being enthusiastic, joyful and supporting children's natural curiosity. Intervening to extend children's learning naturally through following their schemas and interests. (WG,2022). Furthermore, Vygotsky believed like Piaget that children learn through hands on experience that develops their knowledge and thinking skills, stating that learning is an ongoing process in children's development. He believed when children have a more knowledgeable other the learning that takes place can be quicker and more complex. Which he referred to as the zone of proximal development. This can be explained as the difference between what children can learn and gain when the have support and guidance from the more knowledgeable other (practitioner or peer) this is

also known as scaffolding. Which provides opportunities for children to further their knowledge and holistic development. (McArdle,2024).

Similarly to this theory, forest schools is an outdoor classroom in a woodland which develops confidence and self-esteem through learning in a woodland environment. The principles of forest schools are to have regular sessions that are child led and need to be in a natural environment or woodland providing children with opportunities to develop a relationship between learning about the natural world through having access to a range of experiences where children are collaborating in a group. Forest schools offer children an opportunity to take greater risk that is supported by the leader(Learning through landscapes ,2023) In Wales and England many schools and early years settings have developed their own forest school areas and use this in their curriculum with weekly sessions (Welsh Assembly government 2009) Research has shown that forest schools have a great impact on children holistic development, confidence and knowledge and understanding (Plymouth Marjon University,2024).

Playing in an outdoor environment provides fundamental opportunities for open ended play and learning. In some case playing outdoors has it barriers. Some early years settings may lack space, have safety concerns that cannot be addressed in carrying out their risk assessments. Weather conditions may limit the time spent outside. Parents need to provide appropriate outdoor clothing and footwear. Some staff may be lacking in motivation and need training on the importance of outdoors learning. It is crucial that wherever possible the barriers are removed to ensure children are regularly getting out and learning in the outdoor environment (Early Years Alliance 2019).

To conclude, the outdoors offers so many learning experiences which young children need to develop and learn. Through playing outdoors children experience many opportunities that promote their well-being and holistic development. The outdoors is a great learning environment for children which encourages their natural curiosity and can develop their knowledge and understanding of mathematical and scientific concepts often spontaneous and child led. This portfolio emphasises the importance of the role of the early years practitioners in providing an outdoor environment that is rich and engaging with open ended resources such as loose parts that encourage independent learning and creativity. Playing in a natural environment provides children with both awe

and wonder. It is important for practitioners to support children in the outdoor environment by extending their learning, being a good role model, recognising children's schemas to help to develop and extend their learning experiences. In addition, providing a safe but challenging environment that can encourage children to take risks and problem solve. Practitioners need to aim to overcome any barriers that present in the use of outdoor environments so children can have regular outdoor opportunities.

Reference list

Adobe stock. (no date) *life cycle of leaves on the wooden background*. Available at: [Life cycle of leaves on the wooden background. Color of leaves in autumn from green and yellow to brown Stock Photo | Adobe Stock](#) (Accessed: 2nd October 2024).

Boulton, P. and Thomas, A. (2022) 'How does play in the outdoors afford opportunities for schema development in young children?', *International Journal of Play*, 11(2), pp. 184–201. doi: 10.1080/21594937.2022.2069348.

Community playthings (2016) *every child a mover –supporting children’s physical development*. Available at: Every child a mover | Movement and physical development | Community Playthings (Accessed 27th September 2024).

Early years alliance (2019) *Removing the barriers to outdoor play*. Available at: <https://www.eyalliance.org.uk/removing-the-barriers-to-outdoor-play> (Accessed 2nd October 2024).

Flickr. (2002) *Shadow* Available at:[shadow | Shadow of Tree Reflected on Ground ca. 2002 | Zest-pk | Flickr](#) (Accessed: 2nd October 2024).

Froebel Trust (2023)*Schemas,outdoor play and Froebel*. Available at :[Froebel Trust | Schemas, outdoor play and Froebel](#) (Accessed 2nd October 2024).

Hunter, J.et al. (2019) 'the international journal of early childhood environment education', *Balancing outdoor learning and play: adult perspective of teacher role and practice in an outdoor classroom*, 7(2), pp.5-17

Learning through Landscape(2023) *Lose yourselfer in loose parts play*. Available at [Lose yourself in loose parts play - Learning through Landscapes \(ltl.org.uk\)](#) (Accessed 1st October 2024).

Learning through landscapes (2023)*forest scholl-an approach to outdoor learning in school and nurseries*.Available at: [https://ltl.org.uk/forest-school/#:~:text=Forest%20school%20\(FS\)%20is%20an,of%20time%20across%20the%20UK](https://ltl.org.uk/forest-school/#:~:text=Forest%20school%20(FS)%20is%20an,of%20time%20across%20the%20UK). (Accessed 2nd October 2024).

McArdle, J. (2024) *Understanding play theories: A guide for play based teachers, My Teaching Cupboard*. Available at: [https://www.myteachingcupboard.com/blog/play-theories#:~:text=Lev%20Vygotsky%20\(1896%2D1934\)%20was%20a%20Russian%20psychologist,the%20people%20and%20culture%20surrounding%20a%20child](https://www.myteachingcupboard.com/blog/play-theories#:~:text=Lev%20Vygotsky%20(1896%2D1934)%20was%20a%20Russian%20psychologist,the%20people%20and%20culture%20surrounding%20a%20child). (Accessed 27 September 2024).

Naeyc(2017)*Math Learning –and a touch of science –in the outdoor world*.Available at:[Math Learning—and a Touch of Science—in the Outdoor World | NAEYC](#) (Accessed 1st October 2024).

Pacey(no date)*Schemas*. Available at:[Schemas | PACEY](#) (Accessed 2nd October 2024).
Playscotland(no date) *Losse part play*. Available at: [1-Loose-Parts-Play.pdf \(playscotland.org\)](#) (Accessed 2nd October 2024).

Plymouth Marjon university (2024) *the benefits of forest school*. Available at: [The benefits of Forest School | Plymouth Marjon University](#) (Accessed 2nd October 2024).

Richardson, G . (2014) *Creating a space to grow: developing your enabling environment outdoors* . 2nd . New York: Routledge.

Swift, T. (no date) *Enabling environment – creating spaces that Boost Learning: Enabling Environments, Teach Early Years*. Available at: <https://www.teachearlyyears.com/enabling-environments/view/spaces-that-boost-learning> (Accessed 27th September 2024).

Tovey, H. (2013)*Bringing the Froebel Approach to your Early Years Practice*. New York: Routledge.

Wales Government (2022) *a curriculum for funded non-maintained nursery settings*. Available at: [ttps://hwb.gov.wales/api/storage/b1801d78-38c3-4320-9818-d9996c21aef8/220914-a-curriculum-for-funded-non-maintained-nursery-settings.pdf](https://hwb.gov.wales/api/storage/b1801d78-38c3-4320-9818-d9996c21aef8/220914-a-curriculum-for-funded-non-maintained-nursery-settings.pdf) (Accessed 1st October 2024).

Welsh assembly government(2009)*Outdoor learning handbook*.Available at :[foundation-phase-outdoor-learning-handbook.pdf \(gov.wales\)](#) (accessed 2nd October 2024).

Welsh Government (2020)*Mathematics and Numeracy*. Available at :[Mathematics and Numeracy: Introduction - Hwb \(gov.wales\)](#) (Accessed 2nd October 2024).

Welsh Government (2020)*Science and technology*. Available at :[Science and Technology: Introduction - Hwb \(gov.wales\)](#): (Accessed 2nd October 2024).

Welsh Government(2023)*Teaching and learning in the outdoor: the current state of outdoor learning in schools in Wales*. Available at:[Teaching and learning in the outdoors: the current state of outdoor learning in schools in Wales \(gov.wales\)](#) (Accessed 1st October 2024).

WG.(no date) *Gardd cymru Garden of Wales* Available at:
<https://x.com/GTFCymru/status/1452958676025757703>(Accessed: 2nd October 2024).

