

AI Guidance

I acknowledge the use of Google images (<https://www.google.com/images>) on 8th September 2025 to support my research using the prompt(s):

1. Image of forest school including a log circle

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.

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Section 1: The learning wood



Source: [Urban Outdoor Learning](#) (2025)

Introduction

Within this module I will discuss some of the affordances of the environment from the image above in relation to scientific and mathematical concepts within the Early Years. In section 2 there will be an explanation of how the environment in section 1 was used by children and early years practitioners.

Section 3, the risk benefit assessment will show an analysis of the environment within the image in part 1 and will demonstrate an understanding of possible benefits, risks and next steps for the environment to be a safe place for children to explore and learn within. Section 4 will be a reflection on theory linked to the outdoor learning, possible barriers and challenges and how practitioners enable communication and interaction to inspire and enhance a sense of awe and wonder within the early years.

Section 2: The scenario

The image used in section 1 from Urban Outdoor Learning (2025) provides a safe area within a woodland close to an Early Years provision. According to Wisbey, (2018) and Montessori, (1946) philosophy is the connection with the natural world of the outdoors. From these connections children can develop their curiosity and by using their hands to play within an outdoor environment, it enables them to be close to nature.

On the day we accessed the outdoor area in section 1, there were a group of eight 4year-old children with three adult practitioners. Before leaving the practitioners gathered the group of children together and explained the 'rules' again about always being 'ready, respectful and safe'. The children were advised to stay close to an adult



practitioner whilst walking to the woodland and always listen first time when in the

Source: [Skitterphoto](#)

woodland area. To get to the area we walked in pairs with an adult

practitioner at the front, behind two groups of two children and at the back of the line. On arrival to the woodland area, some resources had been carefully placed to enhance the children's learning experience. As we had visited the woodland previously, the children 'checked in' with the practitioners to ensure they were able to climb the tree and balance on the logs.

Some of the children decided to use the crayons and paper (provided) to create rubbings of the bark and compare each other's. Other children were playing and singing to the song of 'five little speckled frogs' and jumping off the chopped logs. According to Curriculum for Wales: Early Years Area of Learning and experience (AOLE) with the children bark rubbing this encourages their development of art whilst also collaboratively working together to value and complement each other's creative contributions. Singing and acting out the song 'five little speckled frogs' provides a more holistic approach to learning. It can be covered in the AOLE of expressive arts – music, dance and drama; Health and wellbeing – to develop physical health by jumping on and off the logs; Languages, literacy and communication – speaking, listening and communicating effectively; and Mathematics and numeracy – counting, addition and subtraction. (Munson 2025).

Before finishing the session in the woodland area, the practitioners asked the children to choose a log and use that as their 'page'. They were challenged to create a face using natural materials they could find within the woodland area. Each child created their individual picture using a variety of resources including leaves, sticks/twigs, seeds, grass and small stones that were found under the pile of logs. To end the session the practitioners and children sat on a log and retold the story of Jasper's Beanstalk. The children afforded a variety of opportunities from the image in section 1. Although as previously mentioned during the song the children used addition and subtraction, there



are other math affordances including shape; what is a circle? Comparing the shape, size including height and width, the use of propositioning, for example, inside, outside of the log circle and developing the language for next to or opposite and measuring using non-standard measure for example, how many children can fit between the logs?

Source: [Fall Crafts for Kids \(2015\)](#)

Whilst observing the children, they begin to develop their scientific affordances by looking at the logs and nearby sticks closely, this can show that logs and sticks can be warm, dry, hot or cold in different season and become habitats for insects, fungi and plants. These observations afford the children the opportunity to observe living things closely. When jumping off the logs the children are developing forces and movement understanding – balancing develops the understanding of stability and gravity. Bark rubbing has a scientific affordance it involves the exploration of a variety of textures in the tree bark. After exploration of the area in different weather conditions, there could be discussions about ecosystems and environmental science. For example, where do logs come from? What happens to the insects and plants in differing weather conditions? Why have the tree been cut to leave the logs? The opportunity to visit the woodland area across from the Early Years setting provides valuable experiential learning. It offers the opportunity for the children to be curious, sensory rich and hands on learners. They must negotiate and collaborative through problem-solving and can develop their language development.

Leading on from these experiences within the woodland the children could develop their learning further. They may want to explore the possibilities within their local community, their own gardens at home or create a natural area within their learning environment. Within the indoor learning environment, the children have access to digital means for research and development purposes. This could develop their digital literacy skills and enhance their sense of wonder by researching ideas or using HWB JIT2, to create a woodland environment which provides a variety of mathematical, scientific and holistic affordances. ([HWB cross-curricular frameworks \(2019\)](#)). As explained by Haughey and Hill (2017), a child often experiences a cycle of provocations within an early year setting. Provocations provoke thinking. As explained by many theorists, Piaget, Vygotsky and Stanley Hall, to mention a few. (Pacey, 2016). Children are researchers, enquirers and lead their own learning. The provocation cycle by Haughey and Hill (2017) starts with an interest. This could be observed by practitioners which could lead to other opportunities. They move on to develop ideas and theories for their learning by choosing the area of the classroom in which they will use for provocation. The practitioner aids the cycle by listening and observing and offering ideas and theories to extend or expand the child's provocation. This could be by providing a provoking question. There are a variety of ways this could be displayed for example, printed out and set on a table, written on a whiteboard or chalkboard and placed next to an area. It must be placed within the area of provocation. The practitioner then listens and observes again. With the use of the provoking question this will enhance a child's thoughts and ideas and will remind practitioners of the purpose to deepen the child's explorations.

Section 3: Risk benefit assessment						
Risk benefit assessment						
Review date: 20/09/2025			Reviewed by: Mary Sharp			
For outdoor activities first aid kits and qualified first aiders are always on site with participants. Risk assessment: scale of 1 low to 3 high. Severity x likelihood = risk factor (1-3=low, 4-6=med, 7-9=high)						
Activity: The activities being undertaken will work in conjunction with the woodland area Risk Benefit Assessment. Today's activities focus on the use of the woodland area in image 1 to support mathematics and science activities. Although the children will have the opportunity to participate in other activities listed below. Typical activities include: Free play, allowing children to play around the woodland, under supervision of adults, although not always within site. Training and learning opportunities, with children and adults undertaking field study, science, numeracy and literacy activities, creating artwork and general studying. Travelling (walking, running, cycling, scootering) through an area. Planting trees, hedges or plants, simple maintenance of trees, hedges and plants, paths and surfaces.						
Risk Benefit: Fresh air, relaxation, physical, mental and social health and wellbeing improvements. Enhanced knowledge of subject which forms the focus of the session; the location the group is in and a stimulus for creativity and problem solving. Communication and social interaction between adults and children. Exposure to environmental print: street names, buildings and signage. Connection with nature / the natural world. Using local or different environments to support learning, including safe behaviours when walking outside of the school environment. Enjoyment and fun. Enhances social skills of being out and about; moving to let people pass, greeting others appropriately and reinforcing the learning of following instruction. Shelter from weather and learning how to deal with environmental hazards such as dog fouling and litter.						
Risk	Control measures in place (prior to event)		Likelihood	Risk factor	Further action required (on the day)	Revised risk factor

Traffic- Contact with vehicles when walking beside and crossing roads.	Child/adult Ratio max 1:4 When additional support is required the ratio of adult to child will increase to meet the needs of the group. Hi visibility vests to be worn Adults to walk at kerbside Staff	1	Low	Continuous supervision by staff to ensure procedures are upheld. Discuss risks with children and continuously remind them of safe practice including good listening	
	to use best judgement in keeping children safe (holding of two children's hands may be necessary) Group to pull into the side farthest from the road and stop walking if a member of the public needs to pass. Adults are constantly aware of surroundings. Before each trip, staff discuss safety procedures and issues with parent helpers and children.			and looking. ALN children to be supported by their 1:1 or Parent/ Carer and individuals IDP to be adhered to.	
Strangers – threatening behaviour or harassment	Unknown persons are not to be encouraged to approach the group. Any unauthorised persons approaching the group acting in a manner which raises concerns should only be challenged if the leader is satisfied that this will not put the group at risk. Children to be supervised at all times. Ensure photographs of the group are only taken by staff and with work ipads. Be vigilant and report any concerns to Senior School Staff on return If concerned about immediate safety, contact the school immediately using a fully charged mobile phone.	2	Low	Check children's Personal Plans to ensure individual children are not at risk due to family circumstances. Senior leader to advise staff if a child's personal situations at home or in the community change.	

Challenging pupil behaviour including running away, oppositional behaviour and undesirable physical behaviour.	Very small group to attend with 1:2 ratio. Person Centred Risk Assessment (PCRA) in place and regularly reviewed. Staff to contact SLT if/when an incident occurs. Especially if staff are unable to resolve whilst ensuring the safety of all in attendance. Necessary action then to be taken by SLT. To attend site to support and contact parent/carer or the police if necessary.			Conversation to be held with parent/ carer at drop off time to establish wellbeing of the child with an PCRA on the day and a decision made jointly about attendance to the woodland area. Parent/ carer to be invited to join the sessions with their child if necessary.	
General land use hazards	Outdoor locations used with permission sought from landowners.	3	High	All contacts and emergency numbers are kept in a pack	Low

	Communication with landowners to be aware of any schedules works, events or biosecurity issues which could affect the group and to maintain good relations. The site must be suitable for planned activities to be run safely. On-site checks must be carried out by staff prior to activities taking place considering; weather, wind, hanging branches, dangerous leaning dead wood, animal activity, human and animal waste, tripping hazards, water hazards, access and any other potential causes of human injury.			which is always kept with the group. On-site check carried out. On-site risk assessment details are noted in activity log. Site specific brief given to staff and children, highlighting any potential risks and setting boundaries where appropriate.	
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Minor first aid incidents (cuts, scrapes & bumps)	First aid kits are fully always stocked and available. An outdoor first aid certificate held by staff Vehicle access nearby in case of evacuation due to injury. Nearest open A&E stated on emergency contact numbers.	3	Low	Medical information, emergency numbers and first aid kit always carried with the group. First aid incidents dealt with by first aider, according to first aid training. Evacuation if required. Incidents recorded in activity log/accident book and reviewed by Head Teacher. Further forms to be completed should it be required.	Low
Slippery ground, tripping hazards, falling on bumpy & uneven terrain (especially when playing games)	Participants to wear suitable outdoor clothing & footwear Staff to provide spare/suitable clothing and equipment. Appropriate activities planned according to location.	3	Med	Staff to monitor behaviour and ask participants not to run on rough terrain, jump off heights, balance on slippery logs or climb trees. Accidents & incidents recorded in activity log and accident book and reviewed by staff Participants to receive a briefing prior to engaging in any activity especially games and are advised about obvious site hazards.	Medium

Stick injuries	Choice of suitable activities for age group and surrounding area working in. Being aware that stick injuries occur through protruding low-level branches, swinging and throwing of sticks.	3	Med	Staff to remove any obvious hazards Staff to monitor and manage group to avoid stick injuries. Eye protection provided if activity makes eye injury more likely (e.g. cutting)	Low
Wet & cold injuries (hypothermia including chronic hypothermia, frost bite, frost nip, chilblains)	Staff to advise and provide spare/suitable clothing and equipment. Weather conditions/seasonal changes should be considered for outdoor activities. Little Shelter area available, equipment for keeping warm and dry.	2	Med	Staff to stay vigilant of changing conditions (including very wet participants) and alter plans as necessary. Staff to monitor group and look for signs of cold e.g. shivering, loss of motor skills (stumbling and mumbling). Staff to put up tarp/ tipi/ shelter, light a fire, give out	Medium

				spare clothing and/or keep group moving as appropriate. Getting in water is only permitted with permission from staff if conditions are appropriate (e.g. paddling in shallow streams at the end of a session). If accidental immersion occurs, get the person out of the water (using throw line if necessary) and warm up/ evacuate as necessary.	
Heat illness (heat exhaustion, dehydration, heat stroke, sunburn)	Weather conditions/seasonal changes should be considered when preparing for outdoor activities. Sheltered site chosen where appropriate. Staff to advise and provide spare/suitable clothing and equipment (including spare water and sun-protection).	2	Med	In sunny conditions, use shade and sun protection when outdoors. Encourage water breaks and provide spare water. Monitor group and manage as appropriate (e.g. change activity). Monitor group for heat illness concerns and seek medical help if heat stroke is suspected or sunburn or dehydration is serious.	Low
Wind damage (falling trees, branches etc.)	Staff to stay vigilant of changing conditions and alter plans as necessary. Sessions postponed or moved indoors if wind speeds predicted to exceed 40mph.	2	Med	On-site checks carried out, looking for hanging deadwood. Staff to stay vigilant of changing conditions and alter plans as necessary.	Low

Electrical storms	Staff to monitor and have information on weather forecasts.	1	Low	In the event of a lightening, the participants will be evacuated from the site. If thunder is heard, look for lighting. If there is a second thunderclap with 30 seconds or lightening is seen, evacuate.	Low
Tick bites (Lyme's disease)	First aid kits are supplied with tweezers and/or specialist tick removers. Leaflets with information packed.	2	Med	Staff to inform groups to check for ticks, how to remove them, Lyme's disease symptoms and medical advice (hand-out given out to the parents all participants who are at risk). Ticks should be removed as soon as possible using tick removers/ tweezers.	Low

Other bites and stings causing of a painful reaction or anaphylactic shock.	Medical information collected from parents. Saff made aware of allergies and check that relevant participants carry an epi-pen. Staff aware of potential local hazards.	2	Med	Any adverse reactions should be carefully monitored and referred to medical professionals if reaction persists or individual is known to have allergies. Epipen should be administered for those that have been prescribed it. First aider to act in accordance with training. All participants' medical details, emergency numbers and next-of kin contacts are in the pack,	.Low
				which is always with the group. Participants and staff are not to approach /handle animals which can bite/ sting humans.	

Human contact with animal excrement	Staff to choose site carefully and be aware of the risks of working in popular dog-walking areas.	3	Med	Staff to clear site of dog faeces as best possible prior to group arrival. Staff to explain to the group on waste hazard and the need for careful selection when picking natural materials, especially when sampling wild foods. Staff to advise group to wash hands thoroughly after activity session.	Low
Consumption of poisonous wild foods	Staff to obtain consent from parents and participants prior to courses commencing for tasting wild foods and known allergies and medical information. Staff aware of identifying safe wild foods and only offer participants wild foods approved by staff through session planning. Staff competency insured through recruitment process and monitored through observations.	2	Med	Staff must ensure all wild foods are vetted before consumption. Staff to inform participants via a wild food's safety brief.	Low
Missing persons/ getting lost	All staff to have read and signed off 'Missing Person' policy document. Activity locations are familiar or previously reced by Staff Ratios appropriate for group.	2	Med	Staff to carry participants' details, emergency contact information including a grid reference of the site. Staff to adopt group management techniques to	Low

	Staff competent at group management- as demonstrated by recruitment, qualifications and monitoring. Emergency contact numbers collected for each group and location. Put into pack.			ensure a group stay together including clear boundaries. Torches and whistles carried if light is likely to be poor.	
Animal bites/ attacks	Be aware of local hazards.	1	low	Do not handle/ trap or corner mammals or snakes unless training and equipped to do so. Staff to monitor situations and direct participants as necessary.	low
Drowning	Staff to always supervise activities near water. Carry and be trained in the use of a throw bag and water safety. Staff to be aware any potential hazards and plan activities appropriate for current water levels. Staff should carry a knife if working with rope/cord near water to prevent trapping.	1	low	Staff to monitor group and As there is no water (i.e. a river or stream) this risk is low. However, there could be a risk of puddled water from falling rain. maintain safe boundaries.	low

KEY:

likelihood; 1=**low** (unlikely to happen); 2=**medium** (could well happen); 3=**high** (certain or near certain to happen)

Note: risk ratings of **medium to high** are significant and require further action to control risk.

Section 4: The role of the practitioner and theory

Outdoor learning, including activities within woodland areas and the promotion of Forest School pedagogy, provides rich opportunities for children to engage with mathematics and science in authentic, meaningful contexts. (HWB.Gov). The role of the practitioner is central in these experiences by acting as a facilitator, guide, and co-learner. Through observation and planning, practitioners can scaffold children's curiosity, mathematical reasoning, and develop their scientific thinking. Within this portfolio, it will explore the role of the practitioner during activities within the woodland in image 1, with an emphasis on mathematics and science. It will include relevant theories of learning including constructivism, socio-cultural theory, experiential learning, and ecological psychology. These will be considered to demonstrate how theory informs practice. However, learning within a woodland requires practitioners to work flexibly to meet the needs of the children and theory is not always critically applied during these activities. (Leather 2018). The portfolio will conclude by reflecting on the importance of practitioner-led woodland learning in fostering holistic development and deepening children's engagement with the natural world.

Playing and learning within a woodland environment provides a sensory-rich and dynamic context in which children encounter patterns, structures, and processes that connect directly to mathematics and science. For example: Mathematics: children can count sticks, measure leaf sizes, compare lengths of logs or twigs, estimate distances, begin to recognise symmetry in leaves, explore shapes and patterns in bark, or sequence events in a lifecycle. For science they could include investigating habitats of different insects and animals, observe seasonal changes, experiment with forces (rolling logs, balancing sticks, jumping on and off or rolling themselves down a banking, if one is available), explore states of matter (ice, mud, water), and learn about ecosystems. The woodland is not just a classroom setting but an authentic environment where concepts can include the children developing the sense of a lived experience. Dewey's (1938) theory of experiential learning underpins this approach, emphasising the importance of learning through doing in real-world contexts. However, practitioners often need to balance activities and free play to

ensure learning is not by chance. Glassman (2001) suggests that Dewey's theory underestimates the need for structured teaching.

Practitioners must first adopt an observational role, identifying moments where mathematical thinking naturally arises. For example, when a child collects sticks for den building, the practitioner might scaffold mathematical dialogue by asking: How many sticks do you need? Which stick is the longest? Can we sort them by size? Vygotsky's (1978) concept of the zone of proximal development (ZPD) explains how children's learning can be extended through adult support and scaffolding. However, too much scaffolding is a risk of limiting a child's 'self-discovery and autonomy' (Wood, 2010). In activities within the woodland, practitioners can promote learning by asking open-ended questions, prompting and modelling to move children along from what they can do independently to what they can achieve collaboratively.

Mathematics in the woodland area is not taught through worksheets but through play and exploration. For example, to build a den involves concepts of geometry, symmetry, and measurement. Practitioners can introduce non-standard measuring tools by using string, sticks, handprints or footprints. This will introduce and to understanding of length and height. Bruner's (1966) notion of enactive representation of learning through action explains how children begin to learn mathematical concepts by physically engaging before progressing to symbolic or abstract understanding. Activities within a woodland are often problem-based: balancing a log to create a bridge, constructing a shelter that will not collapse, or finding the most stable way to stack stones. Practitioners facilitate and guide children's learning by breaking down problems, testing and trying, and reflecting on solutions the children find. This is similar with Piaget's (1952) theory of cognitive development, where children construct knowledge through active experimentation and assimilation of new experiences into existing schemas.

The woodland environment provokes many questions and encourages children to develop a sense of wonder through questions: Why are some leaves bigger than others? What happens if? for example, what happens if we roll this pinecone in water?

Practitioners encourage children to notice, wonder, and investigate. This in turn enhances their sense of awe and wonder when learning. According to Egan's (1997) theory of imaginative education, curiosity drives deep learning when children engage emotionally and imaginatively with ideas and suggestions.

Practitioners have a critical role in structuring inquiry for children. For example, if children observe worms in damp soil, the practitioner may guide them to compare soil samples from different areas of the woodland and predict where worms are most likely to be found. This is similar to the scientific method of posing questions, estimating, testing, and evaluating. Kolb's (1984) experiential learning cycle suggests that concrete experience, reflective observation, abstract conceptualisation, and active experimentation can be directly applied here. The practitioner's role is to facilitate progression through each of Kolb's stages. (Kolb, 1984).

While child-led exploration is important, practitioners enhance learning by introducing appropriate scientific language and concepts. For example, when children notice frost on leaves, the practitioner may explain freezing and melting. In doing this, the adult supports everyday observations with scientific knowledge, promoting conceptual development. Vygotsky's (1978) view of 'language as a cultural tool for mediating thought' is an example of how practice and theory triangulate with observation. However, using formal language too much could cause children to become overwhelmed and introduce rote learning instead of exploration learning. (Mercer & Littleton, 2007).

In woodland areas, practitioners can provide experiences that allow children to manipulate materials, explore, and reflect. Constructivist theory views learning as an active process and emphasises construction through active knowledge. However, it has been viewed as underestimating the need for direct instruction sometimes. (Mayer, 2004). Bruner's spiral curriculum suggests that key concepts (for example, measurement, forces, ecosystems) can be revisited and improved upon through repeated woodland experiences. Learning is socially mediated. Practitioners act as more knowledgeable others, scaffolding children's participation in mathematical and scientific practices. Group woodland activities, for example, children collaboratively

den building, highlights the role of conversation and shared problemsolving in co-constructing knowledge.

Activities within a woodland setting provide experiential learning in an authentic and real-life context. Practitioners ensure experiences are meaningful, connected to real-life contexts, and followed by opportunities for reflection. For instance, after experimenting with fire lighting, practitioners might prompt reflection: What made the fire burn brighter? What might happen if we used damp sticks?

Bronfenbrenner's ecological systems theory situates learning within layered environmental influences. Activities within the woodland setting expand the microsystem beyond the classroom, embedding children in direct interaction with nature. However, it has been critiqued for presenting children as passive recipients of environmental influence rather than active learners. (Tudge et al., 2009) Gibson's ecological psychology emphasises affordances the opportunities an environment provides for action. Practitioners help children perceive and utilise these affordances, such as recognising that a log affords balancing or a stick affords measuring.

Forest School pedagogy values child-led learning. Children's interests and intervene sensitively are followed by practitioners. For example, if a child begins lining up pinecones, the practitioner may extend the activity into pattern recognition or sequencing. However, some researchers argue that the Forest School model risks being idealised and overlooks practical challenge such as safety, curriculum pressures and inclusivity (Leather, 2018). Mathematics and science often emerge through managing risk: measuring whether a log will hold weight, experimenting with leverage, or judging distances when jumping. Practitioners support children in risk assessment, balancing safety with challenge. This develops resilience and critical thinking. Introducing tools such as magnifying glasses, measuring tapes, or compasses then enhances children's mathematical and scientific exploration. Practitioners model safe use, gradually transferring responsibility to children. Montessori's principle of prepared environments where tools are carefully chosen to support independence can be used inside the classroom or within the woodland area to enhance the children's learning and develop their knowledge and skills.

The role of the practitioner is to document children's mathematical and scientific explorations through photographs, notes, and shared discussions. This can be revisited, and the records encourages reflection and deeper understanding. This process resonates with Reggio Emilia's emphasis on pedagogical documentation as a tool for learning. Practitioners should balance child-led exploration with structured opportunities for mathematical and scientific learning. As previously mentioned, too much direction risks stopping a child's curiosity, while under-guidance may miss opportunities to extend thinking. Children bring diverse abilities and interests. Practitioners differentiate support for example, using concrete, tactile resources for children who struggle with abstract concepts, or providing extension challenges for advanced learners. Assessing mathematics and science in a woodland area requires observational and formative approaches rather than formal testing. Practitioners assess through dialogue, evidence of problem-solving, and children's ability to apply concepts in new contexts. Practitioners also model respect for nature, integrating ecological ethics into mathematics and science learning. Counting leaves should not involve stripping trees; experiments must be sustainable. This encourages environmental responsibility alongside academic learning.

In conclusion the role of the practitioner during woodland activities is multifaceted, particularly in relation to mathematics and science. They act as a facilitator, guide and co-learner by observing, scaffolding, questioning and introducing concepts during activities. The theories of constructivism, socio-cultural learning, experimenting in education and ecological psychology emphasises the practitioner's role to create opportunities where children can explore mathematics and science in authentic and meaningful ways. However, theories cannot be used mechanically. Each theory offers strengths and limitations and requires practitioners to adapt and be flexible to children's needs and the unpredictability of nature. The reflective and balanced approach transforms the woodland area into an extension of the indoor classroom to provide opportunities for mathematical reasoning and scientific inquiry.

Conclusion

The woodland-based activities across section 2 and section demonstrates that the role of the practitioner is central in shaping children's learning experiences, particularly in relation to mathematics and science. Through observation, scaffolding, and thoughtful intervention, practitioners provide a variety of opportunities for children to engage with abstract concepts in ways that are authentic and sensory-rich contexts. Woodland learning is not just an experience that should be provided to the children but rather an extension of the classroom that brings learning to life, making ideas such as measurement, forces, ecosystems, and pattern recognition accessible and meaningful to young children.

From the scenario in Section 2, it shows that a woodland environment naturally present children with opportunities to explore mathematical and scientific concepts through play. Activities such as bark rubbing, singing number rhymes, balancing on logs, and creating faces with natural resources all enabled learning that was not only enjoyable but embedded in real experience. These affordances support the view of Dewey (1938), who argued that learning through doing is the most effective in meaningful understanding. The children can actively construct their knowledge as they investigate, experiment, and collaborate with their peers. However, as Glassman (2001) noted in his critique of Dewey, free play and experience alone may not be sufficient; without careful practitioner intervention and support, as their learning could be seen as perceived and not authentic. The scenario demonstrates that practitioners should intervene sensitively by providing resources, posing questions, and framing provocations to ensure that learning outcomes are deepened and extended.

In Section 4 the theoretical analysis reinforces the point by situating practice within established models of learning. The socio-cultural theory highlights the importance of scaffolding and the zone of proximal development (ZPD), where children are able to extend their learning through the support of a more knowledgeable other. Practitioners act as that support by guiding inquiry and introducing the language of mathematics and science. Although, as previously stated they should act with caution, as excessive scaffolding risks constraining a child's autonomy, and

selfdiscovery. Having structure and freedom reflects a wider challenge in early years pedagogy: ensuring that practitioners do not dominate learning or withdraw so much that opportunities for extension are lost.

The scenario shows how risk-taking and physical exploration such as balancing on logs or jumping are integral to woodland learning. These activities are not just physical but are mathematical and scientific in nature, involving estimation, force, stability, and measurement. Practitioners play a critical role in managing risk, modelling safe practices, and enabling children to make judgments. The Forest School pedagogy, emphasises resilience, independence, and child-led exploration. However, as explained in section 5 there are critics of the Forest School models. They suggest it can sometimes be idealised, ignoring practical barriers such as safety concerns, curriculum pressures, and inclusivity. This shows that practitioners must navigate any tensions, balance ideals with realities, and ensure that woodland activities are both safe and pedagogically effective.

Overall, the conclusion that emerges is that practitioners are not just supervisors but active facilitators of inquiry. They must wear multiple hats: observer, guide, colearner, risk assessor, resource provider, and documenter. Their role is underpinned by a range of theoretical frameworks—constructivist, socio-cultural, experiential, ecological—but none of these can be applied mechanically. Each offers insights and limitations, and the practitioner's skill lies in knowing when and how to draw on these ideas in the unpredictable and dynamic context of the woodland. In conclusion, the practitioner's role in woodland learning activities is complex and varied. By using their knowledge of theory with practice, they create spaces where children's natural curiosity flourishes into structured understanding of mathematics and science. They ensure that learning is not incidental but intentional, not constrained but scaffolded, and not detached but deeply connected to the natural world. The balance of freedom and guidance, risk and safety, play and pedagogy are delicate. It allows woodland environments to become part of holistic learning. Through this reflective and responsive practice, practitioners help children to develop not only cognitive skills but also resilience, creativity, and a lifelong sense of wonder about the world around them.

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