

ECEY5005

Part 1



(Source: Phillips, 2024)

Part 2

Element one – Water

A group of six children between the ages of three and four have discovered a flowing stream (pictured on the left) whilst out exploring the local forestry. The children could begin to explore the texture of water which would help with their sensory development. The practitioner can help develop this by allowing the children to dip their hands and feet in the water to see whether the water is warm or cold, fast or slow flowing and different depths at different parts of the river.

Children could link the river with mathematics and science by experimenting with different materials independently. The group's mathematics tasks could include collecting a range of different size and length sticks and which have fallen to the ground from the trees surrounding the river and measuring the lengths of each one. They could then order the sticks from longest to shortest and thickest to thinnest. Following on from this, the children's science task could involve them splitting into two groups of three children. One group can be set a challenge called 'sink or sail' to make boats to sail down the river out of leaves, sticks and other objects that they can find. We can discuss which boat worked best to sail and why and look at what we can do to improve the boats that sank for next time we do the challenge. Whilst the other group can play a game to see whose stick reaches the bottom of the river first when it is dropped from the top. Once both groups have finished their games and activities, they will then swap over.

At the end of both activities, the six children will group back together to explore the various species that are living in the river. They will be able to use fishing nets and sieves to dip in the water to pull out the species to place in a jar to have a closer look. They will be able to use their magnifying glasses to discover the small details of the creature they have caught.

The practitioner could encourage open ended answers by asking questions such as "what size stick reached the bottom of the river first?", "why did you pick that type of stick to make your boat?", "who collected the most mini creatures and what did you find?" and "which activity did you enjoy the most today and why?".

All of the water activities have wide links to the Statements of What Matter in the Curriculum for Wales in both the mathematics and numeracy section along with the science and technology section. The statement "*Geometry focuses on relationships involving shape, space and position, and measurement focuses on quantifying phenomena in the physical world*" allows geometry to be used to play with, compare, name and identify shapes and structures. It also says that thinking logically about sizes and properties of shape allow them to understand their surroundings, the physical world and the world of shape. The link with the first two activities is that children are using the sticks and leaves to

compare the sizes and learn that sticks and leaves can come in different shapes and colours. Both activities also allow children to gain a sound understanding of the different types of shapes that they can come across in their local area and further afield. It gives them the opportunity to explore the world of shape in depth by discovering new shapes and textures that they wouldn't have discovered whilst in an indoor setting (Welsh Government, 2021).

The second Statement of What Matter is *"The world around us is full of living things which depend on each other for survival"* which looks at how children can recognize the variety of living things and how they interact with the environment. It says that learners can develop and understanding of how the creatures have evolved over time and the conditions and resources they need to survive. The final activity where the children are fishing with the nets for water species allows them to explore the river which will teach them about the life cycles of certain species in the water and about the living conditions of the animals that they have found.

Element two – Slope

The same group of six children are playing on the slope together. The slope is stoney and dirty and in wet weather it can be muddy. As part of their mathematics learning, a challenge was set for them to experiment how quickly a variety of objects can roll down the slope when they are pushed from the top. They will use large objects such as stones and tree branches and some smaller objects such as acorns and conkers. Before the experiment, they will estimate which object will be the fastest and why they chose that object, and which one will be the slowest. They will become familiar with a stopwatch and what it is used for. I will demonstrate how it is used first before allowing them to begin their experiment. Three children will be at the top of the ramp rolling the first two objects whilst the other three children will be at the bottom of the ramp timing the objects as they roll down and recording the results. Once the first two objects have been rolled, the children will rotate their roles.

This activity encourages children to work as a team and uses a holistic approach as the children will need to think about the whole activity and the different stages it has to it as well as what the complications of the activity could be, rather than just rolling the four objects down the hill.

The science activity that the children can do on the hill links up the mathematic activity. Whilst they are rolling their natural objects down the slope, it gives children the opportunity to learn about gravity and how humans need gravity every day. Along with rolling objects down, they can be given the challenge of rolling objects up the slope too. Practitioners can ask questions such as "what happens when you try to roll up a hill?" and "why do you think it does that?".

Both of the activities that are carried out on the slope have strong links to the Curriculum for Wales. In an article by the Welsh Government (2020), it outlines the core purposes in the curriculum and what they entail. Three of the purposes ambitious, capable learners, enterprising, creative contributors and healthy, confident individuals link in different ways. The link with children being ambitious, capable learners is that children can begin to ask questions about why they are rolling objects down the slope and why they are using a stopwatch instead of counting in their head. By doing this, they can learn to enjoy solving problems both independently and in groups. Enterprising, creative contributors links with these mathematics and science activities as the children are taking measured risks such as being at the top of the steep slope and they are also working together as a team both effectively and responsibly in an environment that may contain risks. Finally, being healthy, confident individuals has a link with these activities as they both allow children to build mental and emotional well-being which helps develop confidence and resilience. They give children the chance to face and overcome fears. For example, a child may have a fear of heights can standing at the top of the slope may be daunting for them.

Element three – Tunnel

The final element of the image is the tunnel. Within this area of the environment, a science activity the children can do involves learning about light and dark and use torches to create hand puppets up against the walls of the tunnel. Children can create their own miniature video to show what can happen when a light is shined up against a black background. This science activity also incorporates aspects of the Digital Competence Framework (DCF) in Wales in schools.

Part 3**RISK BENEFIT ASSESSMENT**

Location / Activity:	Forest Schools	Date:	15/9/24
Assessor:	Bethan Phillips	Review date:	15/10/24

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
Exploring the texture of the water by dipping their hands and paddling their feet in the river and ordering any sticks that they have found from largest to smallest/thinnest to thickest.	Children will benefit from feeling the texture of the water as it will help their sensory development and allow them to experience and learn that not all running water feels the same. They will be able to learn that running water in a river feels different to running water out of a tap. The benefit of ordering the sticks from largest to smallest and thinnest to thickest is so that the children learn that not all sticks in the outdoors	Hazards of children paddling their feet in the water is that the depth of the water is unknown and there may be sharp objects under the water which could cut the feet of the children. A hazard of children dipping their hands in the water is that they could become unsteady or slip on the river edge and fall forwards in to the water. A hazard of using sticks for the activity is that	Children	To reduce the risk of a harm happening, practitioners can check the waterbed first before allowing children to enter the water to ensure any potential risks are cleared from the bottom of the river. Similarly, with the sticks that children use, before the activity begins, practitioners can check what sticks the children have chosen to use and discard of any that they feel is a risk to children.	M

	are the same length and size as each other. Similar to the water, it gives them the opportunity to feel the texture of different types of sticks.	some sticks could be large and may have thorns and sharp parts which could dig in to the children's hands when handling them.			
The children playing the game 'sink or sail' with objects that they can find on the floor around the river and species hunting to see what lives inside the river.	The children will benefit from playing the 'sink or sail' game as they will be able to see what objects are light and what objects are heavy and what they can compare them to. Whilst species hunting, the children will be able to identify a variety of creatures that live in water and what species live in their local area.	Hazards that are associated with this activity is that both children and practitioners are unaware of what harm the species may cause if they touch a human's skin. For example, it may sting or bite if it is irritated.	Children and practitioners	Before the activity, practitioners can decide whether the objects the children have chosen are suitable for the task and can then remove them if they are unsuitable. A precaution for the species hunt would be to warn children beforehand that some species can sting and bite. A requirement for this is to take a first aid kit so that any injuries can be treated to at the setting.	M
The children are carrying out two activities on a steep slope which is stoney, dirty and sometimes muddy.	By doing both of these activities, the children will be able to learn different aspects of gravity and how to time objects in various ways. It will also allow children to feel the textures of different types of mud and stones which are found within a forestry.	Hazards linked with this area is that children could potentially slip on the mud and stones whilst on the slope which would result in them slipping.	Children	To reduce the risk, practitioners can check the condition of the ground to make sure it is safe for the children to undertake their activities on. If it is not, practitioners can alter their activities to suit other areas of the forestry. For example, they could carry out activities within the tunnel instead.	M
Interacting with members of the public and seeing dog walkers in the forestry.	Children can benefit from this as they are able to see other members out in the forestry and ask them what activities they are doing. They are also to see and learn about different types of dog breeds that are in the local area.	A hazard to this would be the children communicating with people who they are not familiar with and seeing dogs who may not be human friendly.	Children and practitioners	Warn children of the risks of speaking to people who they are unfamiliar with and ask them to not attempt to stroke the dogs as not all of them are friendly.	L

Children experimenting with different types of light within a dark tunnel.	Children can benefit from this activity as they are learning about how light and dark work together, how to create a puppet show in the light with torches up against a dark background and how to use the Digital Competence Framework to create their short movie.	A hazard of this activity is the tunnel being very dark and children not being able to see what is underfoot. There could be mud and uneven/wobbly stones that children could potentially fall/slip on and injure themselves.	Children	To reduce the risk of injury, practitioners can warn children that the tunnel is very dark and visibility is poor. They can encourage the children to use their torches to check the ground beneath them and to avoid stepping on any stones that they may see.	L
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Part 4

According to the Froebel Trust (n.d.), one of his key ideas was that the role of the adult is to observe, support and extend play and learning. It is also mentioned in the document that adults can offer further experiences to support children's investigations. An example which is used is creating areas like a wormery, to see worm tunnels. During this experience, adults can give children the freedom to investigate with items such as magnifiers. In a book written by Tovey (2013), she looks at the Froebel approach and how positive relationships benefit the child. Tovey says that relationships should be close, trusting, responsive, interactive and engaging. Tovey talks about how adults should build on the positive attributes of the child and furthering what they can already do, rather than what they are not yet able to do. Finally, she discusses how the adult should continually strive to further their understanding through training, observations, research, reflections and discussions.

Loris Malaguzzi, the founder of Reggio Emilia, values the role of practitioners and teachers as they create partnerships with the children to develop knowledge together (The Voice of Early Childhood, n.d.).

An early year's article by the Welsh Government (n.d.) provides guidance on outdoor learning as a whole. It discusses that outdoor learning and play is an important part of the Foundation Phase and should not be an added extra to the curriculum. This meaning that leaders of schools and settings have a key role in ensuring children have meaningful and stimulating experiences by providing planned out and safe environments for children.

When an adult is conducting observations and assessments on children, they should look at both indoor and outdoor play. It is said that learning in an outdoor environment is different to learning in an indoor environment. In some cases, it can identify different behaviours. By practitioners carrying out different observations, it can help them build a realistic picture of the individual.

Theorist Maria Montessori uses the quote *"There must be provision for the child to have contact with nature; to understand and appreciate the order, the harmony and the beauty in nature"*. The meaning behind this quote is that children should access to outdoor areas to understand their surroundings and appreciate all that they have around them. The Montessori Partnership (2021), labels a selection of benefits to children learning in nature such as it helps to drive curiosity and exploration in children while offering a range of sensory experiences, it helps to promote physical, social, emotional, and cognitive development in children and learning outside allows for creativity and problem-solving in different ways. These three benefits all link together to allow for a safe and enjoyable environment which children can explore freely and confidently.

Hargraves (2020), writes an article which backs up the points that were discussed by the Montessori Partnership. It mentions that the approach is aimed to support children by helping to release their potential and freedom to explore an environment which has been set up to develop their individual needs and to lead their own learning.

According to Community Montessori School (2024), a Montessori environment is to help the child become independent of the adult. It should be carefully prepared to allow exploration and encourage active participation. Maria Montessori viewed an outdoor area as an 'extension' to a classroom and any outdoor activities in these types of settings should be both structured and unstructured. The activities in this particular Montessori setting have both mathematical and scientific links such as a garden area for the children to learn about how plants grow and bird feeders and bird baths so that the children are able to look help look after the wildlife.

Cardiff Montessori School (2021), state that they have the freedom to offer unique learning to children such as covering more mathematical areas and exposing children to more geography lessons, those of which can be done within the outdoor areas that the school has to offer. They believe that the Montessori approach excels at offering a combined learning approach that the new Curriculum for Wales asks for.

An article by Play Scotland (n.d.), outlines the Loose Parts Theory by Simon Nicholson which says that loose parts create stronger environments that allow them to do what they need to do, to follow their interests and go wherever the curiosity leads them to. When an environment is full of loose parts it distinguishes the difference between learning and playing which lets children experiment, enjoy and learn things independently. Settings like the Montessori one discussed above use loose parts play as they encourage the need for real experiences to be able to gain life skills. Some examples of loose parts play are using fishing rods near real or imaginary water, using an object to un-lodge a ball that is stuck in a tree and utensils to stir a 'porridge' in a mud kitchen. Loris Malaguzzi quotes *"The wider the range of possibilities we offer children, the more intense will be their motivations and the richer their experiences."* The quote Malaguzzi say links with Nicholson's theory and the meaning behind it is that the more loose parts practitioners give children the opportunities to explore and play with, the more the children will be willing to learn new things and they will gain bigger experiences of everyday life (The Curiosity Approach, n.d.).

The Curiosity Approach (n.d.), names benefits of loose parts play as encouraging curiosity, creativity and imagination along with that type of open-ended play allowing the development of problem-solving skills and critical thinking. These benefits have link to the Four Core Purposes within the new Curriculum for Wales. One of the core purposes is ambitious, capable learners which includes children enjoying problem-solving, being ready to learn throughout their lives and seeking out and enjoying challenges. Another of the core purposes which has a link to the benefits of loose play is enterprising, creative contributors. This includes children taking measured risks, identifying and grasping

opportunities, using their energy and skills to benefit others and having the ability and responsibility to lead and play different roles within a team (Equal Education Partners, 2023).

Linking back to the quote above by Loris Malaguzzi, he was the founder of the Reggio Emilia approach which looks at the importance of child-led learning and social interaction. He believes that children are full of potential, resourceful and intelligent. A recommendation of Malaguzzi's was to learn in an environment that nurtures a child's natural curiosity and interests (The Voice of Early Childhood, n.d.).

Whilst working in an outdoor environment with children in the early years, loose parts in the form of natural resources such as sticks, leaves, stones, pine cones, feathers and flowers can be used for both mathematics and science activities and learning. For example, pine cones can be used for sorting in to different shapes and sizes and used for counting. Leaves can be used for learning about symmetry and looking to see whether the leaf is symmetrical. Finally, rocks can be used to look at weight (Ranheim, 2020).

A second theorist, Jean Piaget, coined a theory based on children constructing their own learning and understanding of the world through their experiences. Piaget saw learning as an ongoing process and that children used a 'schema' to construct their learning. His theory consists of four processes. Firstly, assimilation, which is where the child creates an idea about their world based on their current experiences. Secondly, equilibrium, which is where the idea that they have fits in to their lifestyle and balances it out. Thirdly, disequilibrium, this is where a new experience happens and changes the child's original idea. Finally, accommodation, this is when the child changes their current idea to include their new discovery (PACEY, 2016).

Piaget's theory can have a connection to any outdoor learning for children as it encourages children to become independent in their learning, helps cognitive development and creates ideas and curiosity within their environment which they can look in to in depth. More so when they are undertaking mathematical and scientific activities.

Jerome Bruner's theory looks in to the adult playing an important role in expanding a child's perception and helping to facilitate greater learning. His belief is that children can learn anything at any age as long as it is demonstrated in an appropriate way with suitable guidance and resources. He describes this 'scaffolding' from the adult (O'Donovan, 2021). However, both Piaget and Bruner's theory believe in the importance of children exploring and discovering for themselves.

A similarity between both theories is that they both consider children to have the ability to learn language, be naturally curious and that their cognitive abilities develop over time through active interaction. However, unlike Piaget, Bruner argued that social factors such as language were important for cognitive growth.

Finally, in Wales, a program named 'Learning Through Landscapes' was created to allow children the opportunity to get healthy, create play, make friends and learn through getting involved in the natural world. The program encourages children to have a say in the way their outdoor environments are used. They achieve this by working with settings to help them develop practical projects that transform outdoor spaces, enable settings to use their grounds creatively through training programmes and visits and promoting the importance of the quality of outdoor spaces to children and how they can impact experiences.

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