

Mathematics and Forest School

Activity	Forest School learning
Construction - den/shelter building Restaurant/café building	- Children count and sort materials by length whilst collecting a specific number of items to meet their design criteria. - In order to build a stable den, children learn how shapes like triangles form a stronger structure. (2d design idea) to 3d (actual construction). - Children estimate the length of materials needed for the frame and cover, comparing sizes to see what fits best for the construction they are making. - Children estimate the Length of rope/string they need to secure items. - Children will use tools to cut particular lengths of wood, selecting the thickness of the wood they need. - Problem-solving is a key element of construction. Children must work out how to make a roof watertight, how to build a strong wall, or how to create a bridge that can support their weight. - Positional language – place the log/wood etc behind/in front/under etc.
Fire wood collection	- Children sort the collected wood into piles based on size, such as twigs, finger-thickness, thumb-thickness, and wrist-thickness wood. They use this natural sorting process to compare lengths and thicknesses. - Children count the sticks and logs they collect. - Estimation – How much wood do you think we will need?
Animal tracking	- Children Compare the footprints they see by size, shape, pattern etc. - Children will recognise if it is a footprint from a bird or an animal and count how many toes the animal has. - Children will count how many footprints they see and if there are a pair for two-footed birds they will count in 2's. - Children will use Positional language to describe where they found the footprints - behind the log, in front of a tree, under a bush etc.
Arts and crafts Journey sticks Patterns and pictures made of natural resources ETC.	- Children share what different materials they have found and used on their projects. They will talk about the positioning of the objects they have used to create their piece i.e. its behind, in front, above, below, on, under etc. - Children talk about the size of the materials they are using for example the length of the sticks and compare them to others. - Children spot shapes in nature and can group them by shape, size, colour etc. - Children can create symmetrical patterns and designs with natural items like leaves and petals, for example, by making a symmetrical butterfly. - Children enjoy making 3d mud sculptures and decorating them with natural materials.
Mud kitchen	- Children talk about portion sizes when making food - Whole, half and quarter servings. Big and small etc, but also whether portion sizes are of equal size. - Children are aware of volume and capacity when playing in the mud kitchen. They talk about having a little, a lot- little and lots of, half full, full, empty etc. They also compare quantities or ingredients and the different sized pots/pans when selecting their chosen sizes. - Children weigh their food by estimating and deciding whether their food is heavy/light and also heavier than or lighter than other dishes they have made.

	• Children create patterns to decorate their cakes using natural resources. They also use sticks as candles for o top of a birthday cake. • Children are constantly problem solving when playing in the mud kitchen. They have many decisions they need to make including the best way to make a mud pie/potion, how to make the consistency thicker/runnier etc. what they are going to use to stir, dish up, and cut their food with. • Children engage in role-play throughout their time in Forest School i.e. restaurants/café and shops. and using mathematical language for example talking about money – how much something costs/how much change. Children will also talk about quantities and weight etc.
Observations in nature	• Children will notice shapes in nature - shapes of Leaves. They will also try to match shapes that are find. • Children enjoy cloud gazing. They look at the shapes/size/position of them and will talk to each other about what they see. • Children like to observe the trees in Forest School and estimate the height and circumference of the tree. Children can calculate the height and the circumference of the tree as well using different methods. • Children notice the different types of sticks in nature. They compare length, thickness, shape and can order them. • Children observe and share the Positioning of objects – On top, above, under, below, behind, in front etc. • Children like to explore and play with shadows. They observe the length of them in comparison to the size of the person/object itself. • Children like to talk about animals, Birds and insects. They compare how big? /how small? How many legs? How many spots? How many stripes? Etc.
Games	• 1,2,3 where are you? • Hide and seek • Go find it card game – bigger than, smaller than, shape – curvy, round, straight, huge, small, tiny etc. • What's the time Mr Wolf • Scavenger hunts • Obstacle course – how many tyres, what size plank of wood you need, how long does it take to compete it? etc. Whether are travelling clockwise or anticlockwise. Children may time each other by counting to see how long it takes them. • See – saw – weight comparison - Heavy and Light, Heavier and lighter, how the distance of a weight from the fulcrum affects the effort needed to move a load. They learn that a smaller item can sometimes be heavier than a larger one, and they can measure how many objects it takes to balance another.
Discussions in group time or between each other	• Children enjoy sharing familiar events in their life using the correct sequence/chronology of events. Children use language relating to dates, days or the week, weeks, months and years. • Children talk about time in regard to morning, afternoon, how long till lunch, how long till home time as well as dark earlier and light later etc. during the different seasons.