

Mini Maths Explorers – measuring the world around us

A change in season is a great opportunity to further develop children’s knowledge of the world around them as they go out and experience these changes for themselves.

Whilst you are out and about, whether this is in the setting’s outdoor area, the local community or the nearby park, wood or gardens you can introduce lots of maths at the same time.

Resources

- Clipboards, paper and pens
- Collecting buckets/tubs
- Tape measures/measuring sticks/rulers/string/rope
- Weighing scales
- Sorting bowls
- Cameras (optional)
- Outdoor clothing/wellies
- The outdoor environment



Activity outline

- Collecting autumnal materials and sorting and classifying these into different groups. You can then tally the numbers and introduce simple graphs to the children
- Map where you find the different materials (e.g. where in the park did you find the conkers/pine cones/red leaves/yellow leaves)
- Weigh the different materials and compare the different items, e.g. how many leaves weigh the same as a conker?
- Place the pinecones and conkers in a row and measure how long the line is using different methods including measuring tape/string, footsteps (children and adults and compare), handprints (children and adults and compare). Can the children think of any other ways to measure them?
- Measure the length and width of the different types of leaves they have found. What other identifying factors do these leaves have? (e.g. how many points on the leaves / what shape). The children can then do a leaf identification book for other children to match the leaves with
- How many conkers fill a box/jug/cup? What about acorns? Do they think it will be more or less? Why do they think this?
- Linking the materials, they find to the trees around them – where do conkers come from? Acorns? Pinecones? The different leaves? Seed pods?
- Consider large scale measuring – e.g. measuring the circumference of the trees they find... which is the biggest? Which is the smallest?

Working with babies

When working with babies and toddlers you can still go out and collect different materials with the younger children – the mobile can collect them supervised. You can use these with the children in sensory tubs indoors and outdoors to allow children to feel, see and smell the different textures/colours/smells. For the older toddlers, you can introduce matching games with these natural resources to support their early maths skills.