

Maths outside

A little while ago, Independent Childminders Facebook group members contributed to an 'Outside Literacy' thread and I turned it into a useful download to support CPD -

https://www.facebook.com/groups/independentchildminders/701241076563969/?stream_ref=2

Some members have asked me to do the same with recent questions about outside maths.

We are seeing a few Ofsted inspection reports which comment that childminders do not plan enough maths activities outside. While Ofsted refuse to clarify what 'enough' means we will always be fighting an uphill battle, but I thought it might be worthwhile pulling together a few ideas.

Maths includes – number, shape, space, measure, time, capacity, speed, counting, money, weight, pattern, reasoning, symmetry, length, estimating, perspective, angles, pairs, fractions, direction, opposites, problem solving, making comparisons, direction...

Let's think about some of our planned activities and think about some of the ways they support children to develop an awareness of maths through play...

- Active play – counting footsteps, distance language, sharing space;
- Art and artists – Kandinsky paintings = shape; distance and perspective;
- Balls / bean bags – counting and number, distance, speed, direction;
- Bikes – speed, direction, angles, problem solving;
- Blocks – shape, weight, measure, estimating, space, counting;
- Butterfly painting – symmetry;
- Calendar – time;
- Cars – make big numbers and draw roads on them – shape, distance, speed, direction;
- Chalk to draw round things – shape, size, measure, pattern, symmetry;
- Clock on the wall – time;

- Collections of natural materials eg twigs, leaves, fir cones, coconut shells, stones, acorns and conkers – shape, size, counting, lining up by size, opposites;
- Dinosaurs in the messy tray – sorting, size, shape, lining up;
- Den building – shape, size, angle, length, problem solving;
- Fishing game with magnets and water – counting, sorting, shape, size, weight;
- Floating experiments in the water tray – weight, capacity, shape, size; good book 'who sank the boat?' by Pamela Allen;
- Flowers / herbs – shape, size, time;
- Foot / wellie / shoe / leaf prints – size, shape, counting, symmetry;
- Growing flowers – measure, time;
- Guessing games – estimating, problem solving;
- Hopscotch – counting;
- Numbers on the fence eg house or bin numbers – numbers, counting, shape;
- Leaves – symmetry, shape, size, pairs, opposites, capacity; threading leaves – shape, size, counting;
- Making puddles – size, shape, capacity, shapes;
- Maps – distance, speed, measure, perspective;
- Mazes (cars, children) – direction, speed, time;
- Minibeasts – size, shape, number, counting;
- Musical instruments – counting beats;
- Notebook and pencil / clipboard – counting, writing numbers;
- Number line – counting, sorting;
- Pebbles with numbers / shapes – varnish for longer life – number, sorting;
- Oats and water – predicting, capacity, size;
- Obstacle course – distance, direction, number, counting;
- Photographs – distance, angle, problem solving;
- Potion making – capacity, measure, counting;
- Pots, spoons and measuring jugs in water and sand play – weight, capacity, size, fractions, estimating, pairs;

- Questions – keep your questions open so children are encouraged to think, try, guess, estimate, suggest, solving problems etc. Ask 'how' and 'why' questions and take an interest in what children are doing rather than turning fun activities into an inquisition. Children are more likely to share what they know if they are relaxed and playing;
- Rain water – capacity, weight, measure;
- Ride on toys and numbered parking bays – number, direction, speed;
- Shopping role play – money, size, estimating, capacity (putting shopping in bags);
- Rubbings – pattern, shape, size, symmetry;
- Sand – writing numbers, shape moulds, pattern;
- Scales – weigh natural materials – weight, measure, making comparisons;
- Shells – grading, sorting, shape, size;
- Skipping – counting, speed, use of space;
- Skittles – direction, speed, counting, weight;
- Songs and rhymes – shape, counting, number;
- Stepping stones – counting, distance;
- Sticks – shape, size, length, angles, number shapes, measure;
- Stones – weight, size, shape, counting; numbered stones can be used for sorting;
- Sunshine and shadows – shape, symmetry, time;
- Tea parties – fractions, shape, number, counting;
- Treasure hunt – counting, distance, opposites, problem solving;
- Tubes for rolling cars down – distance, speed, angle, distance;
- Water play – capacity, weight, problem solving, opposites, estimating;
- Wet and dry sand – weight, problem solving, making comparisons, pattern;
- Windmills / kites – direction, speed.

Ofsted are making a lot of comments in inspections about using natural resources. Go for a walk with the children and collect natural resources to use for experiments – use magnifying glasses to explore them carefully. Think about how you can use the resources for maths activities.