

Using the Outdoors

It is important that children experience mathematical activities outdoors as well as in. Here are some activities we use at school to support our learning.

❖ TREASURE HUNT

Hide a set of interesting objects (e.g. pretend jewels) around your garden then take the children on a hunt to find them. After a set amount of time, meet back together to talk about the 'treasure'.

Questions could include:

- How might you count your jewels?
- How many jewels have you found?
- How can you be sure you have counted all of the jewels? Could you check in a different way?
- Who has collected the most / least? How do you know?
- How could we sort the jewels?

❖ NUMBER HUNT

Hide a set of number cards that your children are confident with. (e.g.: post it notes). The children have to find numbers, bring them back and put them in the correct order. As a variation, they could place the numbers along a number line (either chalk the line or use a skipping rope)

Questions could include:

- Which number will go before 7 / after 3?
- Hold up your number if it is less than 5.
- Show on your fingers a number between 4 and 8.
- Which is the largest number on the line? How do you know?
- I'm thinking of a number. My number has a straight line at the top. Which numbers on the line might I be thinking of?

❖ WRITING NUMERALS

Provide children with different resources to practise writing numerals. These could include large paintbrushes and buckets of water, chalk, paint (to use on large rolls of wallpaper). Numerals could also be traced in sand/talc or made out of playdoh/pieces of string. Children should work on a large as well as a small scale. Also providing children with access to clipboards and paper outside will encourage them to record any mathematical work they are doing.



❖ **SHAPE HUNT**

❖ Go around the house to look for shapes. Windows, door, food package shapes

Questions could include:

- What can you tell me about this shape?
- How do you know this is a square?
- How do you know this shape is not a square?
- I'm thinking of a shape. It has 3 corners. Can you see the shape I might be thinking of?
- What is the same / different about these two shapes?
- How could we sort these shapes?
- Why does this shape belong in that group?
- Is it flat or solid, 2D or 3D?
- Draw your shape. Or make pictures with the shapes
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❖ **PATTERNS**

Provide a range of materials for children to use to make repeating patterns.

These could include objects for printing or objects to be arranged e.g.

- Collect natural materials - sticks, pebbles, leaves etc- and make a repeating pattern around the edge of the garden/room.
- Use your construction toys - ie Lego/Duplo to make repeated colour patterns

❖ **DOMINOES**

- Play dominoes together.
- Swap places if your domino has 7 spots.
- Stand on one leg if your domino has more than 6 spots.
- Sit down if your domino has less than 4 spots.
- Turn around if your domino doesn't have 5 spots.
- Hop across the room if your domino has between 4 and 7 spots. ETC

❖ **FIND THE NUMBER**

Questions you might ask:

- Which number is one more than 6?
Show me by a number that is smaller than 4.
- Find a number that comes between 5 and 8.
- This is the number of toes you have.
- What is double 3?
- Why did you choose that number?

❖ Sand / Water/ washing up dish

Put the sand and water trays outside for the children to use (less mess to worry about too!). Activities could include:

- digging for plastic numerals in the sand (place in order)
- using a sieve to 'fish' for milk bottle tops floating in the water (Who has caught the most / least?)
- using different shaped moulds in wet sand to make 'pies'.
- experimenting with emptying and filling different sized and shaped containers (order them according to how much they hold)
- using a squeeze bottle to make jets of water in the garden (How far can you make a jet travel?)
- making a 'cake' in the sand using different sized spoons, cups and jugs to 'measure' out the sand.
- hunting / fishing for shapes and sorting them into sets

❖ BALL GAMES

Use a variety of balls, beanbags and quoits to practise counting skills.

Tasks could include:

- Count how many times your partner can catch a ball without dropping it.
- Predict how many times you can bounce and catch a ball in a minute.
- Can you and a partner roll a ball 10/20 times between you in a minute?
- Who can throw and catch a ball in the air the most times without dropping it?

- Mark out a number track or line but don't write on the numbers. Children choose a wooden numeral and place it correctly.

❖ SCORING GAMES

Games could include:

- Hoopla - throw 5 beanbags/ball/scrunched up paper ball towards a bowl/ bucket/ string circle/washing basket and score one point for every beanbag that lands in it (extend the game by placing a bucket inside the circle - score two points for a beanbag in the bucket and one point for a beanbag in the hoop).
- Skittles (recycled bottle filled with water- throw 2 balls to try to knock down 6 skittles - score a point for every skittle knocked down (make the scoring more difficult by numbering each skittle).
- Target - draw a number of shapes on a wall - throw a ball against the wall and score a point each time a shape is hit (change the scoring system by writing a number in each shape).

Encourage the children to record their scores in some way e.g. by using numerals or tally marks or by drawing pictures.

❖ BUILDING

Provide opportunities for the children to build a range of structures using boxes/bricks (different shapes and sizes) and other available materials. The children could choose what to construct or be given a set task e.g. a den that we can share stories in, a bridge that stretches from the door to the sofa. Use the structures to discuss the properties of different shapes.

Questions could include:

- What are you planning?
- Do you think you have all the shapes you need?
- Which shapes are the best for building? Why?
- Why do you think your tower fell down?
- How could you make the bridge longer?
- Describe how you made your 'den'. Draw a picture.

❖ SOUNDS

Have an object that makes a clear sound e.g. a drum, a puppet that squeaks, coins dropped into a cup

The children count the sounds (making the sounds in an irregular rhythm makes the counting more difficult).

Some ways of response are suggested below:

- the children jump or hop the same number of times

