Garden Maths

If you have a garden and are lucky enough to be able to make the most of the beautiful weather at the moment then here are some ideas for mathematical activities that can be done with things from your garden or by using the location of your garden.

Investigating symmetry – what things in your garden can you find that have symmetrical features (leaves, flowers, butterflies, insects)

Try cutting some of the leaves/flowers that you have found in half and drawing the other half using reflective symmetry.

Counting – Ask your child to go and collect a certain number of objects. Use these collections of objects to investigate concepts such as more or less, total and difference.

Data Handling – throw a hula hoop on the ground or mark out an area with ribbon or string. Ask your child to look at what they can see within the circle. Encourage them to think about an efficient way to gather data about this range of objects. Could they create a tally chart? Can this information be used to create a bar chart or pie chart?

Roman Numerals – Make a range of Roman Numerals using twigs, sticks or blades of grass. Can you make your age? Can you make todays date?

How many twigs/blades of grass did you use to make your age?

Investigate numbers up to 100. Which Roman Numeral took the most sticks to make?

Shapes – what 2D and 3D shapes can be made with garden materials?

Fibonacci – This spiral pattern occurs often in nature and it is called the Fibonacci sequence or the Golden Ratio. It follows a mathematical rule, yet many things grow in this pattern naturally. Can you find any plants in your garden that follow the Fibonacci sequence?

Hopscotch Number Sequence – draw a hopscotch grid and encourage you child to try to throw the stone on an odd number, an even number, a number lower than 5, a number greater than 8.

For older children ask them about the actual hopscotch grid. What number patterns can they see? How many different patterns can they find? Can they spot any times tables in the sequences? Would 14 be a in a single square? Would 17 be in a double square? Will the 10th number in the single square be odd or even?
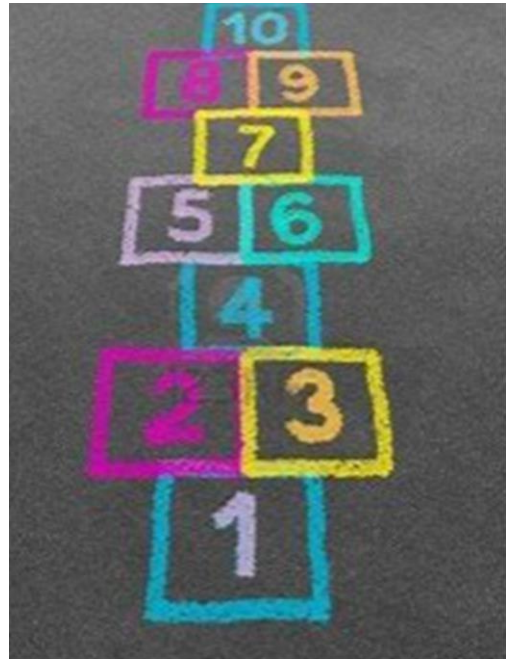
Investigating capacity- using a range of containers and bottles investigate how many smaller containers in takes to fill a larger container. How could a larger container be filled exactly using a range or smaller containers?

KS1 – non-standard measures (cups, buckets, plant pots, watering cans)

KS2- Standard measures (bottles or containers with metric measures marked on the labels) Encourage these children to look at the numerical values or each container and try to calculate mathematically first then test their calculation practically – 1 litre will be filled using one 500ml bottle, 2 200ml yoghurt pots and one 100ml carton.

Skittles/Water pistol targets – Save a number of plastic bottles to make skittles or water pistol targets. How many skittles/targets can your child knock over with one throw or one squirt?

For older children assign each bottle a different numerical value. Encourage them to work out a system for keeping a running total to keep track of their scores over a number of goes. What is the most efficient way to add the new score on to the running total? Can they work out the difference between the winning score and the other scores?