

Symmetry

I can illustrate the lines of symmetry for a range of 2D shapes and apply my understanding to create and complete symmetrical pictures and patterns.

MTH 2-19a / MTH 3-19a

How many lines of Symmetry can you see?
On your walk find objects in the environment that have one line of symmetry, two lines of symmetry, 3 lines of symmetry etc.

What symmetrical patterns can you make?
Using two sticks, make a cross on the ground to represent axis of symmetry, create a symmetrical pattern using objects from the environment.

Find examples of rotational symmetry in the environment..

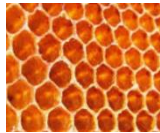
Shape – Tessellation

What patterns can you see in the environment, look on buildings, paths, plants, flowers and insects. Do any of the patterns tessellate?

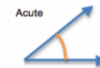
Take a rubbing, photograph or draw a picture of the pattern.

How often does the pattern repeat?

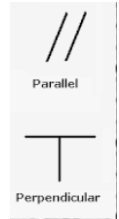
Experiment with making your own pattern, think about tessellation, how often will your pattern repeat?



Angle Hunt



What angles can you see in your local area? Make a right angle template. Identify right angles, acute angles and obtuse angles. Record your findings on a table.



Can you spot horizontal, vertical, perpendicular and parallel lines?

Where are they? Draw the object and label the lines.

Time

I can carry out practical tasks and investigations involving timed events and can explain which unit of time would be most appropriate to use. **MNU 2-10b**

How fast can you run?

Agree a specific track with a parent or friend. Run the track and have your friend time you? Repeat several times?

Work out your average time (mean) by adding up all your times and dividing by the number of times you ran the track.



Ask your friend to do the same, who was fastest?

Repeat on a skate board, bikes etc. Record your findings.

Using simple time periods, I can give a good estimate of how long a journey should take, based on my knowledge of the link between time, speed and distance.

MNU 2-10c

What is your speed?

In the park or your garden, mark out a track about 10m long.

Run for 6 minutes back and forth.

Work out how many times this has been done so you can work out the total distance run.

Eg. If you ran back and forth 40 times it would be 400 metres.

Use the distance ran and the time, 6 minutes, to work your speed in metres per minute and per hour. (Speed = distance divided by time.)

Outdoor Learning Numeracy and Mathematics Second Level

Maths and Outdoor Learning

Maths All Around Us!

Walk around the local area, as you look around make a list of all the places where mathematics can be found. Here are a few to start you off:

Traffic lights – pattern, time
Lamp posts – distance between each lamp post, height, time they switch on, number sequence.

*“Learning outdoors can be enjoyable, creative, challenging and adventurous and helps children and young people learn by experience and grow as confident and responsible citizens who value and appreciate the spectacular landscapes, natural heritage and culture of Scotland.”
(Curriculum for Excellence through Outdoor Learning)*

Estimating

How many?

Look around the area for something there are lots of, e.g. plants. Identify a small area and estimate how many there are in that area.

Increase the size of the area and use what you know about the small area to help you work out the number of plants in the bigger area.

Shape

What shapes can you make?

Use sticks and branches to make 2D shapes and 3D models. How big can you make the shapes? Consider how you are going to join the sticks.



What are the properties of your shape, How many edges, vertices and faces?



Den Building

Can you build a den? Consider what shape it will be, what materials will you need, where will you build it what will you build it from?

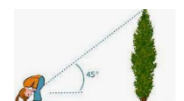
Measuring

I can use my knowledge of the sizes of familiar objects or places to assist me when making an estimate of measure.

MNU 2-11a

I can use the common units of measure, convert between related units of the metric system and carry out calculations when solving problems. **MNU 2-11b**

How tall are the trees? Estimate how tall the trees are in your local area. Research different ways of measuring the height of a tree. Here is one way to get you started. Walk away from a tree until you can just see the top of the tree through your legs. Stand up and look back at the tree. The distance from you to the tree is the same as the height of the tree. How can you measure this?



Developed by SAC Numeracy Team and COACH

East Ayrshire Council

