

## Maths Trails Overview

A Maths Trail is an organised walk through an area close to school where pupils can experience maths in the real world. A trail will help to highlight for them the huge use we make of number in our everyday life and how Maths surrounds us in even the most unusual areas.

Maths trails also provide an excellent opportunity for group work while retaining a very strong fun element even though the work involved is of a serious nature. They can also be very useful for differentiation purposes within a class. All pupils can be doing the same activities but the questions can be suited to suit individual needs as teacher sets up the apparently 'random' groups.

Recording is not necessary as part of a maths trail but can be very useful, especially for the older classes. All elements of the Maths Curriculum can be included as can the methodologies – problem solving, talk and discussion, group work, estimation, trial and error, etc.

At the Junior end of the school, oral maths trails can be easily linked in with nature walks or just little journeys around the school grounds.

### Setting up a Maths Trail

The first time a class embarks upon a Maths Trail, teacher will undoubtedly have to set it up. This does take a certain amount of time (about 30 mins) but the benefits are huge. Once a class has done a trail, they will be more than ready and willing to create their own maths trails. This could be done again on a group basis and then the trailsheets are passed from group to group (with a certain amount of tailoring by teacher to suit individual needs).

Trails, however, need not necessarily take an outdoor arena. They can be quite easily done within a classroom using the furniture, etc. or can be solely based on number and use a book that all the children would have. (History books provide a good source of numbers.)

### Finding Inspiration!

Most schools will have access to the following which can be used as part of a Maths Trail.

Shape and Space	Windows and doors
	Brick patterns/paving stones
	Roofing tiles
	Climbing frames
	Right angles

## Symmetry

Number	Steps and stairs (counting) Measuring and estimating distances Plant growth Repeating patterns
Measures	Distances Estimating length etc Timing activities Co-ordinates on a map (treasure hunt)
Data	Graph making Weather recording Tallying – recording birds that visit bird table

## *Around the School*

On the road	Traffic and pedestrian surveys Shapes on road signs Distances on signposts House numbers Number plates
Shops/Post Office	Opening times Price of a stamp Posting overseas Basic food items Money handling - change Measuring a post box – letter opening Weight of parcels

## **Some other points:**

- Language needs to be clear and easily understood
- Answers need to be obvious/not ambiguous
- A variety of tasks should be included
- Pre- and post-trail work is invaluable
- The amount of tasks should not be excessive
- Places on the trail may be marked with numbers, etc.
- Each group should have a different starting point to avoid crowds around one area at any one time
- Children should be encouraged to observe maths in the environment and then to formulate their own trails
- Some trails may focus on one strand while others could address a range of content

- Enjoyment is essential – a trail is not a trial!

### **Some ideas for a measurement trail:**

- Name three things that are longer/shorter/heavier than \_\_\_\_\_  
Put the following items in order starting with the shortest:
- How many pencils long is the bench?
- Which do you think is longer: the bench or you lying down?
- If you want to use the \_\_\_\_\_, what do you have to do?
- How much is the \_\_\_\_\_? If you have \_\_\_\_\_, how much more do you need?
- Estimate how many, how long, etc.
- On what date was \_\_\_\_\_ opened? How long ago was that in days, years, months?
- What is the exchange rate for \_\_\_\_\_?
- How many \_\_\_\_\_ could you buy with \_\_\_\_\_?
- How long is the \_\_\_\_\_? Use decimals, fractions if suitable.
- If the train leaves the station at \_\_\_\_\_, what time will it be in \_\_\_\_\_?

### **Some sources for finding information:**

- Train timetables
- Catalogues
- Parking discs
- Travel brochures – timetables and price guides
- Banking booklets
- Plaques on walls in the town
- Road signs
- Information signs in the environment
- TV guides

*The examples on measurement above were developed by Seán Delaney of Coláiste Mhuire,, Marino Institute of Education, Griffith Avenue, Dublin 9, who has done a lot of work in this area.*