



**SETTLE COLLEGE**  
Be the best you can be.

## Maths Across the Curriculum (MAC)

How to...

# *Help Your Child at Home*

A guide for KS3 Parents

## Introduction

At Settle College we understand the crucial role that the relationship between parents and college has in supporting students. We want students to feel confident and equipped to learn, with the transition from year 6 being one in which students need the most support. We have therefore written this guidance for parents on supporting your child with their mathematics. It is relevant for all year groups at KS3, with additional information included regarding year 7.

A lack of confidence in basic numeracy skills in particular can really hold students back, and yet this is an area where all staff in school, together with parents, can make a real difference. Students who are the most confident in maths can benefit from support from home too, in being encouraged to pursue their interest in mathematics by learning independently.

Basic numeracy is skills such as understanding place value, directed numbers, times tables, and the basic calculations of addition, subtraction, multiplication and division. It also includes understanding units of time. Mathematics is much broader than numeracy however, and extends to ways of thinking mathematically; organising, categorising, looking for patterns and selecting appropriate methods to solve problems. Parents can also support their child by simply asking them to 'speak aloud' when attempting maths problems and by asking them how they might check that their answers are sensible or correct. Just being positive about maths, even if you don't feel confident about it yourself, is a big help.

Parents who wish to improve their own numeracy might find useful the national numeracy challenge at <https://www.nationalnumeracy.org.uk/challenge/>

## Maths Curriculum At-A-Glance: What Your Child Will Learn

The early curriculum at Settle College has an emphasis on Number.

A summary of the year 7 curriculum is given below

**Number** – place value, directed numbers, calculations, BIDMAS, square numbers and roots, highest common factors, lowest common multiples, decimal calculations, solving problems with money, rounding and estimating, understanding the relationship between fractions, decimals and percentages, fraction calculations and percentage calculations.

**Algebra** – continuing and describing patterns and sequences, writing and substituting into expressions, working with algebra, solving linear equations and understanding graphs and functions.

**Shape and Measure** – calculations with time and converting between metric units, calculation of perimeters and areas of shapes including composite shapes, circles and sectors.

**Data** – interpreting and drawing diagrams, graphs and charts and finding the mean, median, mode and range from data sets and from tables.

**Probability** – understanding the probability scale and calculating the probability of events, including exclusive and independent events, and likely outcomes.

## Supporting Learning Maths At Home

Most of the learning that student experience in mathematics occurs in the classroom. We encourage students not to be afraid to make mistakes and to share their ideas. A crucial aspect of learning in mathematics is that new understanding needs to be connected to our existing knowledge of maths.

Home learning is set in mathematics on an approximately weekly basis, to consolidate the learning from the classroom. Parents can support their child by asking them what home learning has been set, and by establishing a regular time and place for completing home learning in the evening. Even if no home learning needs to be done, just asking your child to tell you what they have learnt that day is helpful to reinforce that learning.

We have listed below some ideas to help with specific areas of numeracy. Some general things to keep in mind are:

- using real life objects to support understanding, such as spoons, coins etc, or thinking of how the maths can be applied to real life situations.
- not telling your child the answer, but instead supporting them to get to the correct answer, and asking them to show their working out.
- playing games that support development of numeracy skills, such as scrabble, chess, draughts and monopoly.

### Shopping & Money

We are surrounded by opportunities in everyday life to develop our numeracy skills through shopping and budgeting.

- Encourage your child to look at the prices of items in the shops.
- Support them to find out which items offer the best value for money.
- Encourage them to work out how much money they will need to pay for shopping and to plan a budget.
- Let them look for errors in receipts and make them check the change they are given.
- Give them a weekly allowance / pocket money and support them to save towards items they would like.
- Help them plan the budget for family trips for example going to the cinema, swimming baths etc.
- Encourage them to look at the labels on the items they buy in order to understand their weight and capacity, and also their nutritional information.



### Time

Developing an understanding of time is one of the most important numeracy skills you can support your child to develop at home.

- Encourage your child to tell you the time on both analogue and digital clocks. Get them to work out how long it is until certain events (dinner time, leaving for school etc.)
- Support your child to use timetables, both online and paper versions, in order to plan journeys.
- Encourage your child to use TV guides and to calculate the length of time different programmes will run for.



## Temperature

Supporting your child to understand temperature will not only support them to make progress in Mathematics and Science, but will also allow them to better understand how to handle everyday situations involving changes in temperature.

- Encourage your child to use the cooker at home and to understand what temperatures are needed to cook different foods.
- Encourage your child to understand the temperatures that everyday devices such as fridges and freezers are set at and where they can find this information.
- Support your child to understand how the heating works in your house, and allow them to help you with setting the thermostat.
- Help your child to understand that negative temperatures (e.g.  $-3^{\circ}\text{C}$ ) are below freezing and can therefore have consequences such as there being ice on the car.



## Distance and speed

There are numerous opportunities to support your child to understand distance and speed. Understanding these areas of Mathematics is extremely useful if your child goes on to own a car when they are older.

- Look at road signs, particularly on the motorway. Encourage your child to think about speed limits and what different speeds feel like physically in the car.
- Help your child to understand that distances can be given in miles or kilometres, and that a mile is further than a kilometre.
- Support your child to understand physically what different distances mean. Find out how far it is from your home to key landmarks such as the supermarket or school.
- Discuss what speed we walk at (typically 4 kilometres an hour) and therefore how long different journeys would take.
- Encourage your child to use the cost of fuel to work out the cost of buying petrol/diesel for your vehicle.



## DIY

Allowing your child to do DIY around the home supports with the development of several numeracy skills.

- Support your child to measure distances around the home in order to plan home improvements. For example they could measure the area of flooring in a room in order to plan how much carpet or floor tiles would be needed to cover it.
- Encourage your child to follow a sequence of instructions by putting together flatpacks.

