

What is progress in maths about?

At all levels learning maths is about solving problems using key processes such as:

- looking for patterns and relationships between numbers
- making sense of and checking information
- communicating and presenting maths using words and diagrams, for example, graphs and symbols
- reasoning and developing mathematical arguments.

Progression in maths involves using and applying these processes and skills in mathematics lessons across the whole school curriculum and in everyday life. To do this children need to understand key elements such as number, geometry, measures and statistics.

As a mathematical problem-solver, your child should learn and use skills such as:

- sorting
- ordering
- grouping
- measuring

- calculating
- comparing
- manipulating, organising and interpreting information.

Maths is an imaginative, creative way of thinking which is part of everyday living. Learning maths is also about knowing where it has come from, why it is necessary and how different cultures have contributed to the way it has developed over time.

Children learn maths best through tasks where they have to make choices in order to solve a problem or a puzzle. It helps them to practise skills, ideally in an enjoyable and engaging way, supporting the development of understanding as well as their confidence and their competence.

How can I help my child's mathematical development?

For younger children playing and talking about games together will really encourage their mathematical development and support their learning in school. All activities you do which are seen as a puzzle, a game or as a 'finding out' process will enhance your child's confidence to play with numbers and help them be more competent puzzlers and problem-solvers. Encouraging them to play with numbers and develop a range of mental calculation strategies will also help build their confidence and competence.

As well as playing and discussing games, older children need to practise and consolidate skills such as mental arithmetic, solving equations, working out angles and calculating an average. These skills are necessary for solving the 'bigger' problems they will encounter as their mathematics develops. You can also encourage your child to engage with maths in the media, looking at how numbers and graphs are used to support arguments and encouraging them to question the reasonableness of

what they are presented with. They may want to investigate further by searching on the internet, for example.

Many parents will find that the way maths is taught is different from their own experience. If there are aspects of maths you would like to know more about, talk to your child's teacher.

You can support your child in maths using the suggestions in this guide without a great deal of specialist knowledge.



What you can do at home to help your child make progress

- play simple counting games such as:
 - snakes and ladders
 - counting buttons
 - choose two dominoes and count the total number of spots

- play simple ordering games such as:
 - choose ten buttons and order them by size from smallest to largest
 - from a pack of cards take out the Jacks, the Queens and the Kings and shuffle up the numbered cards. Choose any ten of them and put them in order

- play simple pattern-making games such as:
 - with a collection of tiddlywinks make patterns such as 2 red, 1 blue, 2 red 1 blue...
 - make patterns out of ten tiddlywinks such as:



- play simple sorting games such as sorting a collection of buttons, shells or leaves by colour or by size
- lay the table for a meal – selecting the correct number of items and matching them.



What you can do at home to help your child make progress

- play with wooden blocks building towers and other structures. Is it possible to build two towers of the same height, whatever number of blocks you start with?
- from a pack of cards (without the tens, the Jacks, the Queens and the Kings) play a game of pairs where you try to turn over two cards that add up to 10
- with a pack of dominoes play the game of 'pairs' where you turn over two dominoes so the total number of spots is 12
- talk about shapes that can be found in the house
- play a game of estimating then measuring the lengths of objects in the house
- play a game of ordering everyday objects according to their weight, and then weigh them

- when someone opens a door, talk about the angle the door has turned through
- draw your child's attention to the clock so they learn to match times with events
- talk about what whole numbers mean when they appear in everyday situations such as car number plates, road signs, on a clock face, a flat or a house number. For example, counting out odd and even house numbers on a street
- play a game of 'find the number' somewhere in the house or on the way to school.

