

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

- make a calculation:
 - from a pack of cards (without the tens, the Jacks, the Queens and the Kings) play a game where each player is dealt four cards and everyone has 1 minute to make up a calculation using cards they have in their hand so the answer is the value of the next card turned over
 - a scoring system can be used such as 1 point for using two cards, 2 points for using three cards and 3 points for using all four cards
- dice bingo:
 - throw 2 dice and multiply the numbers together
 - cross off the numbers on a 'Bingo' card, such as:
- talk about numbers that you see on packets or tins of food. This could include talking about how healthy different foods are
- identify symmetrical objects, for example, look for symmetrical wheel trims on cars
- find out how many millilitres different containers hold, such as a cup, perhaps estimating answers first then using a measuring jug to check the estimates
- use a real clock to talk about the times certain events happen at home, for example, getting up in the morning, meal times, when the post arrives. Also, you could talk about times when certain television or radio programmes begin and end, and how long they last for
- help when cooking by measuring ingredients and using the timer.

10	5	9
6	15	20
8	12	4