

# Problem Solving

The National Curriculum for mathematics aims to ensure that all pupils:

*“can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.”*

The importance of problem-solving in learning mathematics comes from the belief that mathematics is primarily about reasoning, not memorization. Problem-solving allows students to develop understanding and explain the processes used to arrive at solutions, rather than remembering and applying a set of procedures. It is through problem-solving that students develop a deeper understanding of mathematical concepts, become more engaged, and appreciate the relevance and usefulness of mathematics (Wu and Zhang 2006). Problem-solving in mathematics supports the development of:

- The ability to think creatively, critically, and logically
- The ability to structure and organize
- The ability to process information
- Enjoyment of an intellectual challenge
- The skills to solve problems that help them to investigate and understand the world

Problem-solving should underlie all aspects of mathematics teaching in order to give students the experience of the power of mathematics in the world around them.



Puzzles and problems for  
Year 1 and 2



Puzzles and problems for  
Year 3 and 4



Puzzles and problems for  
Year 5 and 6

Links to maths games for you to play at home.

