



## Our Guiding Stars Curriculum

### Maths: The Leading Light Subject for ‘Problem Solving’



- We know that there is sometimes one answer or multiple answers to a problem.
- We use a wide variety of skills to investigate and bring our skills and knowledge together to find solutions.
- We explore all angles.
- We identify where we need to start and where we need to finish.
- We use the information we already have and look for what else we have to find out.
- We check to see if things look right and re-calculate if need be.
- We make comparisons and use these to help find answers.
- We select the right operational procedure and if we're not sure we use a trial and error approach.

<b>EYFS</b>	<p>We use practical apparatus to solve problems and try hard to explain what we have done.</p> <p>We can sort objects in to different groups to help solve problems.</p> <p>We use objects and our own drawings to help solve problems and show how we did it.</p>
<b>Year 1</b>	<p>We recognise that there can sometimes be more than one solution to a problem.</p> <p>We can try and convince a friend that a solution is correct by using our words and giving examples.</p> <p>We can make predictions about the next part of a pattern and explain why.</p>
<b>Year 2</b>	<p>We can create a systematic list to find all possibilities when solving some problems.</p> <p>We can explain why an answer is correct using known facts and inverse operations to solve problems.</p> <p>We look for patterns and relationships involving numbers or shapes, and use these to solve problems.</p>
<b>Year 3</b>	<p>We can prove that we have found all combinations when solving problems by using a systematic approach.</p> <p>We can solve a puzzle by identifying the facts and prioritising them when solving mathematical problems.</p> <p>We can explain and prove whether statement are true or false. We explain our thinking, showing why a general statement may be true or not with the use of particular examples.</p>
<b>Year 4</b>	<p>We can find all possible answers in a systematic and efficient way. We can justify how our approach is being systematic and how it helps to find a solution.</p> <p>We report solutions to puzzles and problems, giving explanations and reasoning orally and in writing, using diagrams and symbols.</p> <p>We can identify and prioritise given facts and information, checking possible solutions against given criteria.</p>

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<b>Year 5</b>	<p>We can make a general statement and provide a convincing argument and apply this to other situations with similar or more combinations.</p> <p>We can convince a peer whether a given statement is true, false or sometimes true. We explain our thinking, with the use of particular examples and mathematical patterns and properties.</p> <p>We can draw conclusions from investigations and explain our reasoning using words, symbols or diagrams as appropriate</p>
<b>Year 6</b>	<p>We can explain why an answer is correct, using a concise argument, involving symbols, mathematical language, graphs or diagrams.</p> <p>We can express the general statement from an investigation using mathematical language, symbols and sometimes with algebra.</p> <p>We can provide the general statement from an investigation using mathematical language, symbols and sometimes with algebra.</p>