

## Links between The National Curriculum, *Framework for Teaching Mathematics* and problem solving strategies?

<b>KS1 Link to strategies</b>		
<p><b>Problem solving</b></p> <p>a) approach problems involving number, and data presented in a variety of forms, in order to identify what they need to do</p> <p>b) develop flexible approaches to problem solving and look for ways to overcome difficulties</p> <p>c) make decisions about which operations and problem solving strategies to use</p> <p>d) organise and check their work</p>	<p><b>Communicating</b></p> <p>e) use the correct language, symbols and vocabulary associated with number and data</p> <p>links to other subjects &gt; <a href="#">En1 Speaking and listening 1) b</a>  <a href="#">En1 Speaking and listening 1) c</a>  <a href="#">En3 Writing 1) c</a></p> <p>f) communicate in spoken, pictorial and written form, at first using informal language and recording, then mathematical language and symbols</p>	<p><b>Reasoning</b></p> <p>g) present results in an organised way</p> <p>h) understand a general statement and investigate whether particular cases match it</p> <p>i) explain their methods and reasoning when solving problems involving number and data.</p>
<p>Take a risk            Trial and improvement            Work backwards            Use equipment</p>	<p>Act it out            Draw it out</p>	<p>Make a list            Draw a table            Draw a diagram</p>

## KS 2 Link to Strategies

<p><b>Problem Solving</b></p> <p>a) make connections in mathematics and appreciate the need to use numerical skills and knowledge when solving problems in other parts of the mathematics curriculum</p> <p>b) break down a more complex problem or calculation into simpler steps before attempting a solution; identify the information needed to carry out the tasks</p> <p>c) select and use appropriate mathematical equipment, including ICT</p> <p>d) find different ways of approaching a problem in order to overcome any difficulties</p> <p>e) make mental estimates of the answers to calculations; check results</p>	<p><b>Communicating</b></p> <p>links to other subjects &gt; <a href="#">En1 Speaking and listening 1) a</a> <a href="#">En1 Speaking and listening 1) d</a></p> <p>f) organise work and refine ways of recording</p> <p>links to other subjects &gt; <a href="#">En3 Writing 1) a</a> <a href="#">En3 Writing 1) e</a></p> <p>g) use notation diagrams and symbols correctly within a given problem</p> <p>h) present and interpret solutions in the context of the problem</p> <p>i) communicate mathematically, including the use of precise mathematical language</p>	<p><b>Reasoning</b></p> <p>j) understand and investigate general statements [ for example, 'there are four prime numbers less than 10', 'wrist size is half neck size' ]</p> <p>k) search for pattern in their results; develop logical thinking and explain their reasoning.</p>
<p><b>Working Backwards</b>  <b>Take a risk</b>  <b>Trial improvement</b>  <b>Use equipment</b></p>	<p><b>Trial and improvement</b>  <b>Draw a table</b>  <b>Draw it out</b>  <b>Draw a diagram</b>  <b>Make a list</b></p>	<p><b>Take a risk</b>  <b>Make list</b>  <b>Trial improvement</b></p>

## NNS links to Strategies 1-4

Reference to page numbers in Framework	Reception	Key Stage 1			Key Stage 2		
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Risk taking</b>	P19 P18	P60 , P64 P62	P63 P65 P61	P61 P63 P65	P74 P78 P80	P75 P79 P81	P75 P79 P81
<b>Act it out</b>	P20	P68 P64	P65 P69	P67 P69 P71			
<b>Draw it out</b>	P20	P62	P63,p	P91 P93	P76 P78 P80	P77 P79 P81 P113 P115 P117	P77 P79 P81 P113 P115 P117
<b>Use equipment</b>	P19	P68 P64	P69 P65	P69 P91- 93	P114 P116 P76 P78 P80	P77 P79 P81 P113 P115 P117	P77 P79 P81 P113 P115 P117

## NNS links to Strategies 5-9

Reference to page numbers in Framework	Reception	Key Stage 1			Key Stage 2		
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Draw a diagram		P90 P92	P91 P93	P91- 93	P114 P116 P76 P78 P80	P77 P79 P81 P113 P115 P117	P77 P79 P81 P113 P115 P117
Make a list		P90,92	P91 P93 P65	P91- 93 P65	P114 P116 P76 P78 P80	P113 P115 P117	P113 P115 P117 P77 P79 P81
Trial and improvement		P60 P60 P64	P61 P63 P65	P61 P63 P65	P76 P78 P80	P77 P79 P81	P77 P79 P81
Draw a table		P90 P92	P91 P93 P65	P91 P93 P65	P114 P116 P76 P78 P80	P77 P79 P81 P113 P115 P117	P77 P79 P81 P113 P115 P117
Work backwards				P82 P89	P77 P79 P81	P77 P79 P81 P113 P115 P117	P77 P79 P81 P113 P115 P117
Think	P18- 21	P60-71 P90-93	P60- 71 P90- 93	P78 P80 P60- 71 P90- 93	P114 P116	P77 P79 P81 P113 P115 P117	P77 P79 P81 P113 P115 P117