

<b>Topic: 8.3 Problem Solving</b>		<b>Duration: 4 weeks</b>		<b>Composite: Problem Solving Challenge</b>		
<b>Key vocabulary:</b>	<b>Core knowledge questions</b>			<b>Powerful knowledge crucial to commit to long term memory</b>	<b>Links to previous and future topics</b>	
Design Write Test Refine Iteratively Problem	<ol style="list-style-type: none"> <li>1. What is problem solving? Problem solving is the act of thinking logically in order to solve a problem.</li> <li>2. How can I solve problems by working and collaborating with others? By designing, writing, testing and refining solutions.</li> <li>3. What is meant by working 'iteratively'? Refining a potential solution until it is successful and problem is solved.</li> <li>4. What are the four steps in the problem solving process? Design, Write, Test, Refine</li> <li>5. When solving a problem, what actions would fall into each step of the problem solving process?</li> </ol>			<ul style="list-style-type: none"> <li>• Analyse problems in computational terms through practical experience of solving such problems, including designing, writing, testing and refining</li> <li>• During the Design phase students need to be able to Produce a plan, simulation or model.</li> <li>• During the Writing phase students need to be able to implement a plan, simulation or model that they have created</li> <li>• During the Test phase students need to be able to critically evaluate the success of the plan they have implemented</li> <li>• During the Refine phase students need to be able to use test evidence to improve and refine the design of their plan, simulation or model</li> </ul>	<ul style="list-style-type: none"> <li>• Builds on foundations of how the computer system works and operates.</li> <li>• Links to programming units</li> <li>• Revisited from Year 7.</li> </ul>	
<b>We will develop these skills:</b>						
<b>Impressive reading</b>	<b>Impressive speaking</b>	<b>Impressive writing</b>	<b>Resilience</b>	<b>Numeracy via:</b>	<b>Digital Literacy via:</b>	<b>Employability via:</b>
Read and analyse specified problems	Explain and present proposed plans for solving specified problems	Explain and analyse proposed plans as well as outcomes	Developing ability to consistently amend and refine work.	Counting coins, calculating optimum sizes of boats in relation to capacity	Developing awareness of the technology through use of computers.	Working collaboratively and presentation skills