

**CURRICULUM MAP (Long term plan)**

**SUBJECT : Computing**

**YEAR GROUP: 6**

	<b>Cycle 1 Autumn</b>	<b>Cycle 2 Spring</b>	<b>Cycle 3 Summer</b>
<b>Substantive knowledge –</b> Essential knowledge & conceptual understanding of the National Curriculum	<p><b>Internet communication</b></p> <p>Digital literacy skills Effective use of tools Information technology Computer systems Communication and networks</p> <p><b>Variables in games</b></p> <p>Algorithms Programming</p>	<p><b>Introduction to spreadsheets</b></p> <p>Data and information Effective use of digital tools Programming</p> <p><b>Sensing movement</b></p> <p>Algorithms Programming</p>	<p><b>Video production</b></p> <p>Creating media Design and development Effective use of tools Information technology Safety and security</p>
<b>Disciplinary knowledge - what skills are practiced?</b>	<p><b>Internet communication</b></p> <p>Use search technologies effectively</p> <p>Appreciate how results are selected and ranked</p> <p>Be discerning in evaluating digital content</p> <p>Use technology safely, respectfully and responsibly</p> <p>Understand computer networks including the internet</p> <p><b>Variables in games</b></p>	<p><b>Introduction to spreadsheets</b></p> <p>Identify columns, rows, cells, and cell references in spreadsheet software</p> <p>Use formatting techniques in a spreadsheet</p> <p>Use basic formulas with cell references to perform calculations in a spreadsheet (+, -, *, /)</p> <p>Use the autofill tool to replicate cell data</p> <p>Explain the difference between data and information</p>	<p><b>Video production</b></p> <p>Use technology safely, respectfully and responsibly</p> <p>Recognise acceptable/unacceptable behaviour</p> <p>Select and use software on an iPad to create content</p> <p>Use editing software to improve a video</p>

	<p>Make a sequence that includes a variable</p> <p>Define a condition as an expression that will be evaluated as either true or</p> <p>Identify that selection uses conditions to control the flow of a sequence</p> <p>Identify where selection statements can be used in a program</p> <p>Modify a program to include selection</p> <p>Detect and correct errors in a program (debugging)</p> <p>Independently design and apply programming constructs to create a game</p>	<p>Use the SUM and AVERAGE function to analyse data</p> <p><b>Sensing movement</b></p> <p>Apply skills used in <b>Variables in games</b> unit to a physical computing device.</p>	
<p><b>Key questions</b> (What is the learning about?)</p>	<p>Can I identify how to use a search engine?</p> <p>Can I define how search engines are used and how they rank results?</p> <p>Can I recognise and evaluate different methods of communication through technology?</p> <p>Can I define the word variable and explain how they are used in programming?</p>	<p>Can I recognise different spreadsheet software?</p> <p>Can I explain different formulae that can be used in spreadsheets?</p> <p>Can I create my own spreadsheet to meet a given purpose?</p> <p>Can I apply a program to a controllable device (micro:bit)?</p> <p>Can I include variables and selection in my programs?</p>	<p>Can I explain what makes an effective video and identify how to record one on a digital device?</p> <p>Can I apply different filming techniques to capture a video?</p> <p>Can I create a storyboard?</p> <p>Can I consider reshooting and editing to improve my video?</p>

	Can I design a project that uses variables?	Can I develop a program that uses inputs and outputs on a controllable device?	
<b>Assessment</b>  Verbal feedback used in place of live marking approach.	End of unit online tests. Teacher assessment of project (creating a game on Scratch).	End of unit online tests. Teacher assessment of project (creating step counter on the micro:bit).	Teacher assessment of video using rubric.
<b>Literacy (L), Numeracy (N), Oracy (O) opportunities</b>	Use of technological vocabulary. Problem solving and algorithmic thinking.	Using Microsoft Excel for mathematical calculations. Problem solving and algorithmic thinking.	Writing and presenting storyboards. Understanding video related terminologies.
<b>Cross Curricular Opportunities</b>			Science/Geography - videos can be linked to animals and their habitats.
<b>SMSC / Character/Careers/Cultural Capital</b> (personal development)	Peer support and experimentation. Confidence. Resilience. Initiative. Video Game responsibility	Resilience, initiative, aspiration.	Integrity. Aspiration, Creativity. Resilience, Initiative, Confidence.
<b>Equality and Diversity</b>	Names and characters used in presentations represent people with disabilities and different ethnicities.	Names and characters used in presentations represent people with disabilities and different ethnicities.	Names and characters used in presentations represent people with disabilities and different ethnicities.
<b>Super Curriculum</b> (personal development)	Code club	Code club	Code club