

CURRICULUM MAP (Long term plan)

SUBJECT : Computing

YEAR GROUP: 6

	Cycle 1 Autumn	Cycle 2 Spring	Cycle 3 Summer
Substantive knowledge – Essential knowledge & conceptual understanding of the National Curriculum	<p>Communication and collaboration</p> <ul style="list-style-type: none"> Digital literacy skills Effective use of tools Information technology Computer systems Communication and networks <p>Programming A - Variables in games</p> <ul style="list-style-type: none"> Algorithms Programming 	<p>Data and information - Introduction to spreadsheets</p> <ul style="list-style-type: none"> Data and information Effective use of digital tools Programming <p>Programming B - Sensing movement</p> <ul style="list-style-type: none"> Algorithms Programming 	<p>Creating media – we page creation</p> <ul style="list-style-type: none"> Creating media Design and development Effective use of tools Information technology Safety and security
Disciplinary knowledge - what skills are practiced?	<p>Communication and collaboration</p> <ul style="list-style-type: none"> Use search technologies effectively Appreciate how results are selected and ranked Be discerning in evaluating digital content Use technology safely, respectfully and responsibly Understand computer networks including the internet <p>Programming A - Variables in games</p>	<p>Data and information - Introduction to spreadsheets</p> <ul style="list-style-type: none"> Identify columns, rows, cells, and cell references in spreadsheet software Use formatting techniques in a spreadsheet Use basic formulas with cell references to perform calculations in a spreadsheet (+, -, *, /) Use the autofill tool to replicate cell data Explain the difference between data and information 	<p>Creating media – we page creation</p> <ul style="list-style-type: none"> Use technology safely, respectfully and responsibly Recognise acceptable/unacceptable behaviour Select and use appropriate software to create a website Put images onto a website (and videos) Use search engines to locate information Be selective about which information to include.

	<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>Programming B - Sensing movement</p> <p>Apply skills used in Variables in games unit to a physical computing device.</p>	
<p>Key questions (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 compare and review existing websites?</p> <p>Can I describe copyright law and the use of images?</p> <p>Can I use images and videos on a web page?</p> <p>Can I include links to internal and external sources on a website?</p>

	Can I design a project that uses variables?	Can I develop a program that uses inputs and outputs on a controllable device?	
Assessment 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 project (creating a website).
Literacy (L), Numeracy (N), Oracy (O) opportunities	Use of technological vocabulary (L) Problem solving and algorithmic thinking (N)	Using Microsoft Excel for mathematical calculations (N) Problem solving and algorithmic thinking (N)	Writing and presenting information suitable for audience and purpose (L, O)
Cross Curricular Opportunities			History - website based on the Tudors.
SMSC / Character/Careers (C) (personal development)	Peer support and experimentation. Confidence. Resilience. Initiative. Video Game responsibility	Resilience, initiative, aspiration.	Integrity. Aspiration, Creativity. Resilience, Initiative, Confidence.
Equality and Diversity	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.
Super Curriculum (personal development)	KS2 Code club	KS2 Code club	KS2 Code club
Careers	Trainee solicitor Professional gamer	Software engineer Games designer	Digital content creator Gaming content creator
Equality and Diversity Gender Disability Religion Race Sexuality	Diverse representation within text/ videos/website links on Slides. Display shows a variety of people in technology of different genders/orientations and from different ethnicities. Hedy Lamarr	Diverse representation within text/ videos/website links on Slides. Display shows a variety of people in technology of different genders/orientations and from different ethnicities. Black Computing History	Diverse representation within text/ videos/website links on Slides. Display shows a variety of people in technology of different genders/orientations and from different ethnicities. Alan Turing
Local Community Links			

<p>British Values Democracy The rule of Law Individual Liberty Mutual Respect and Tolerance of others SMSC Character Education</p>	<p>Within lessons children have the opportunity to contribute to discussions, have their opinions heard, view other children's work and give them feedback. Students are encouraged to allow everyone to have their say on particular topics and also how to present different pieces of work.</p> <p>Children are taught about the implications of posting negative comments on social media and also the implications of cyber bullying. Children are taught how to use the Internet safely, at school and at home, and how to report any images/messages deemed to be inappropriate. Children are taught about how to leave a positive digital footprint and how this may affect them in later life.</p> <p>Children are encouraged to make choices, safe in the knowledge they are in a safe and supportive environment. The school provides boundaries for the children to make choices safely.</p> <p>When using the Internet to research different faiths and beliefs, children are encouraged to show levels of respect. Students are taught about their etiquette online and how to engage in an online community positively.</p>
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