CURRICULUM MAP (Long term plan)

SUBJECT : Computing **YEAR GROUP: 5**

	Cycle 1 **Autumn**	**Cycle 2** **Spring**	**Cycle 3** **Summer**
Substantive knowledge – Essential knowledge & conceptual understanding of the National Curriculum	**Systems and searching** Digital literacy skills Effective use of tools Information technology Computer systems Networks **Creating media - Vector Drawing** Creating media Design and development Effective use of tools Information technology	**Programming A - Selection in physical computing** Algorithms Programming **Data and Information – flat file databases** Data and information Effective use of digital tools Programming	**Programming B – Selection in quizzes** Algorithms Programming Information technology Effective use of digital tools
Disciplinary knowledge - what skills are practiced?	**Systems and searching** Understand the school network and why it is important Be discerning in evaluating digital content Use technology safely, respectfully and responsibly Understand computer networks including the internet **Creating media - Vector Drawing** Use Google Drawings to create simple drawings Implement different tools into your vector drawings (zoom,	**Programming A - Selection in physical computing** Make a sequence that includes a variable Define a condition as an expression that will be evaluated as either true or Identify that selection uses conditions to control the flow of a sequence Identify where selection statements can be used in a program Modify a program to include selection	**Programming B – Selection in quizzes** Explain how selection is used in computer programs Relate that a conditional statement connects a condition to an outcome Explain how selection directs the flow of a program Design a program that uses selection Create a program that uses selection Evaluate my program

	copy and paste, shape, colour, etc.)	Detect and correct errors in a program (debugging) **Data and Information – flat file databases** Identify records and fields in databases Use sorting functions to organise data in the correct way Use comparison operators (<, >, and, or, etc.) to locate specific data required to answer questions Use databases to solve real world problems.	
Key questions (What is the learning about?)	Can I explain that computers can be connected together to form systems? Can I recognise the role of computer systems in our lives? Can I recognise how information is transferred over the internet? Can I explain how sharing information online lets people in different places work together? Can I evaluate different ways of working together online? Can I identify that drawing tools can be used to produce different outcomes?	Can I explain how to set up a simple circuit on a computer? Can I understand how to use loops in a program? Can I explain count-controlled and condition-controlled loops? Can I define the word database? Can I compare paper and computer-based databases? Can I explain how to use tools on a database software?	What is a condition? What are condition statements? How do conditions control the flow of a program? Can conditions be used in loops? What is selection? What is selection use for in programs?
Assessment	End of unit online tests. Teacher assessment of project (creating a vector drawing).	End of unit online tests.	End of unit assessment.

Verbal feedback used in place of live marking approach.			
Literacy (L),**Numeracy** (N), **Oracy** (O) **opportunities**	Use of shapes in vector drawin (N) Use of technical vocabulary for computer networks.	Problem solving and algorithmic thinking (N)	Problem solving and algorithmic thinking (N)
Cross Curricular Opportunities	English - drawing is based on the Curse of the Maya book. Art - use of vector drawing compared to artistic drawing.	English - 'real-life' scenario based on Kensuke's Kingdom. Geography - see different countries' flags and populations, etc.	All subjects – students to make a quiz on a topic they have studied in any school subjects this academic year.
SMSC / Character/Careers (C) (personal development)	Peer support and experimentation. Confidence. Resilience. Initiative.	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	Cyber security Graphic designer	Coder Gamer	Coder
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. Ada Lovelace	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			
British Values Democracy The rule of Law Individual Liberty	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. 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		

Mutual Respect and Tolerance of others SMSC Character Education	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. 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. 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.