

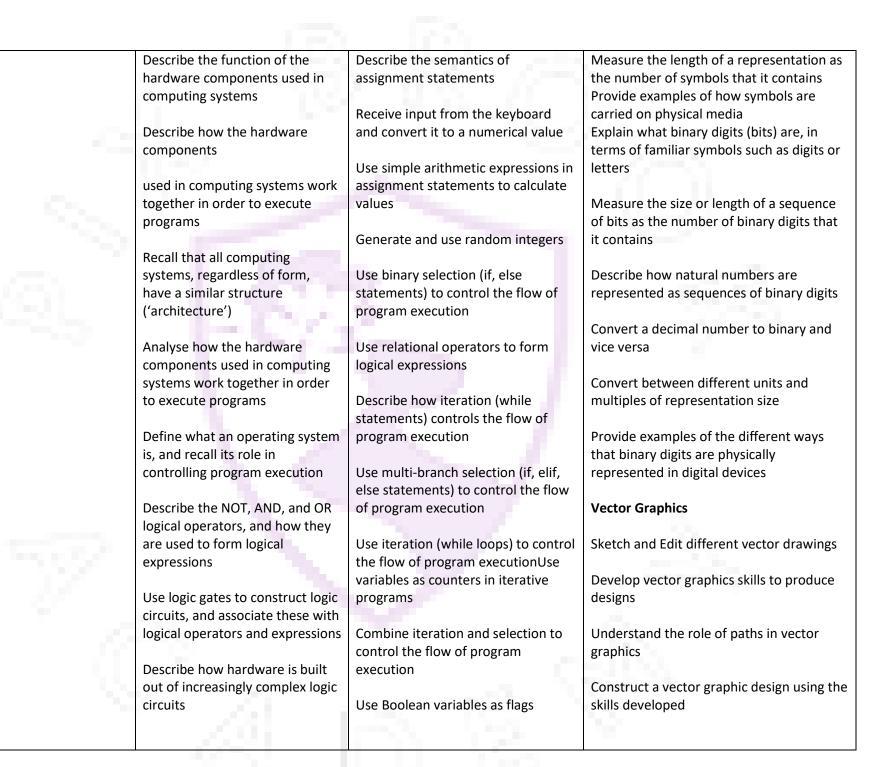
CURRICULUM MAP (Long term plan)

SUBJECT : Computing

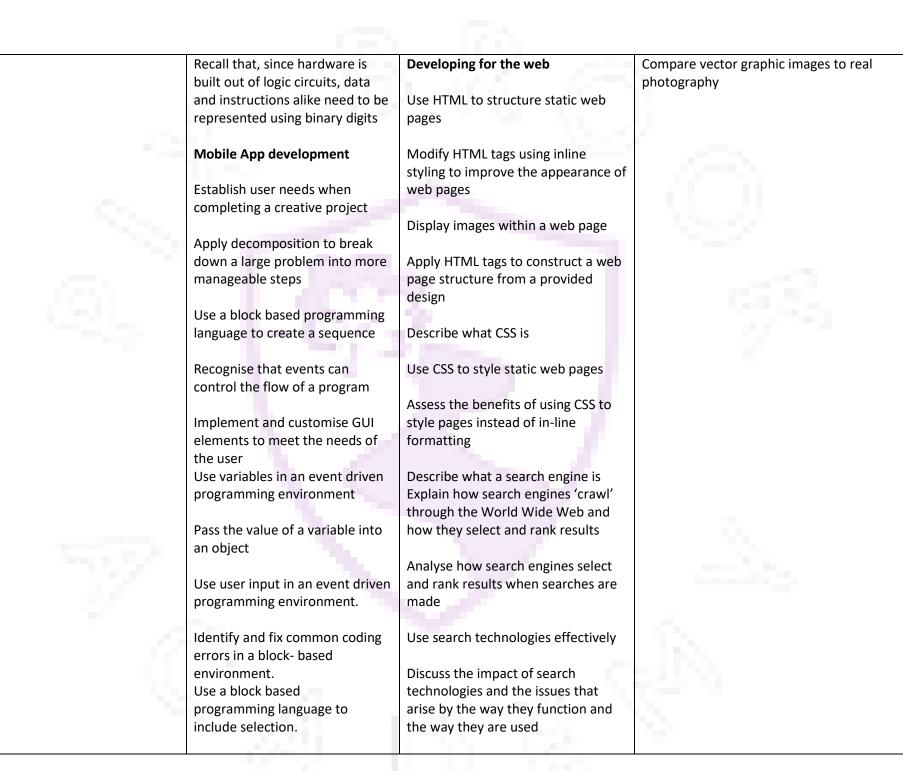
YEAR GROUP: 8

| | Cycle 1 | Cycle 2 | Cycle 3 |
|---------------------------------|-----------------------------------|------------------------------------|---|
| | Autumn | Spring | Summer |
| Substantive knowledge – | Computing Systems | Introduction to Python | Representations |
| Essential knowledge & | | | |
| conceptual understanding of the | Computer systems | Algorithms | Data and Information |
| National Curriculum | Data and information | Programming | Computer Systems |
| | Information technology | | |
| | Programming | Developing for the web | Vector Graphics |
| | | | |
| | Mobile App development | Information Technology | Creating Media |
| | | Creating Media | Design and Development |
| | Algorithms | Design and Development | Effective use of tools |
| | Programming | Communication & Networks | Information technology |
| | Using media | Algorithms Programming | |
| | Computer systems | | |
| | Design and Development | 1997 - A. | |
| | Networks | | |
| Disciplinary knowledge - what | Computing systems | Introduction to Python | Representations |
| skills are practised? | | | |
| 58 | Recall that a general- purpose | Describe what algorithms and | List examples of representations |
| | computing system is a device for | programs are and how they differ | |
| | executing programs | | Recall that representations are used to |
| | | Locate and correct common syntax | store, communicate, and process |
| | Recall that a program is a | errors | information |
| | sequence of instructions that | | |
| | specify operations that are to be | Recall that a program written in a | Provide examples of how different |
| | performed on data | programming language needs to be | representations are appropriate for |
| | | translated in order to be executed | different tasks |
| | Explain the difference between a | by a machine | |
| | general- purpose computing | | Recall that characters can be represented |
| | system and a purpose-built | Write simple Python programs that | as sequences of symbols and list example |
| | device | display messages, assign values to | of character coding schemes |
| | | variables, and receive keyboard | |
| | | input | |









| | Use variables in an event driven programming environment Pass the value of a variable into an object Use user input in an event driven | Create hyperlinks to allow users to navigate between multiple web pages Implement navigation to complete a functioning website | |
|-------------------------------|--|--|--|
| 4 | programming environment. Identify and fix common coding errors in a block- based environment. | | |
| (6) | Use a block based programming language to include selection. | 2 | |
| Key questions | How instructions are stored and | What are the benefits to websites in | What is binary? |
| (What is the learning about?) | executed within a computer | terms of communication in using 1 | |
| | system? | universal scripting language? | How does it work in circuitry? |
| | How is binary used to store various data types? | What are the benefits of using CSS to a website? | Why do computers use binary? |
| | | | How do I Convert between binary and |
| | How can computers collect data | How can I develop online-based | decimal (vice versa)? |
| | from various input devices, including sensors and application | platforms for a specific purpose? | What are the different ways binary dig |
| | software? | How can I use sequence, selection | are physically represented in digital |
| | | and iteration to develop a program | devices? |
| | What is the difference between | to solve a problem? | |
| | hardware and application | | What is a vector drawing? |
| | software, and their roles within a | What is the difference between, and | |
| | computer system? | appropriately I can use if and if, then and else statements? | How can you use paths to create a stronger vector drawing? |
| | Can I understand that digital | | 1.1.2. |
| | computers use binary to | Can I use variable and relational | |
| | represent all data? | operators within a loop to govern termination? | |
| | How can I create and reuse | | 10 s. |
| | digital artefacts and multiple | Can I use loops and a sequence of | |
| | | selection statements in programs, | |



| | applications across a range of | including an IF, THEN and ELSE | |
|----------------------------------|--|---|---|
| | devices? | statement? | |
| | Can I identify when a problem | | |
| - C: | needs to be broken down? | | |
| | Can I apply decomposition to | | - 6m3 |
| | break down a larger problem into more manageable steps? | | |
| | Can I establish user needs when completing a creative project? | | |
| Assessment | Computer systems - End of unit online test. | End of unit online tests. Practical assessment of creating a website. | End of unit online tests. Practical assessment of creating a vector graphic |
| Verbal feedback used in place of | | | design. |
| live marking approach. | Mobile App development - End | | |
| | of unit online test and practical | and the second se | |
| | assessment. | | |
| Literacy (L), Numeracy (N), | Combining hardware and | Writing and presenting information | Looking at symbols used in place of |
| Oracy (O) opportunities | software terminologies. Problem | suitable for audience and purpose. | language. Problem solving. |
| | solving and algorithmic thinking. | Problem solving and algorithmic thinking. | |
| Cross Curricular Opportunities | History - learning the history of computer systems and chronology of events. | | Music and History - learning the history of communication. Learning about rhythm through the use of Morse Code. |
| | | | Art - learning about drawing and vector designs. |
| SMSC / Character/Careers | Confidence, Initiative, Aspiration. | Confidence. Resilience. Initiative. | Initiative, Aspiration, Resilience and |
| /Cultural Capital | Resilience, Problem Solving. | Video Game responsibility. Online | Problem Solving. |
| (personal development) | | safety. | |
| Equality and Diversity | Names and characters used in | Names and characters used in | Names and characters used in |
| | presentations represent people with disabilities and different ethnicities. | presentations represent people with disabilities and different ethnicities. | presentations represent people with disabilities and different ethnicities. |
| Super Curriculum | Use of AppLab website | Use of Python App | Using Inkscape to develop vector designs. |
| (personal development) | Coding club | Coding club | Coding club |



