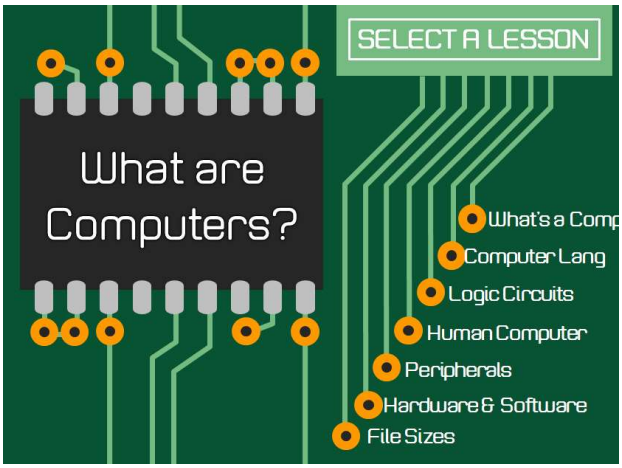
2. Curriculum Implementation

Key Stage 3

At KS3 all teachers will deliver the same units, the same topics and the same lesson activities from the same set of resources but are free to use their professional judgement to tailor the content as they see fit to match the unique prior learning and ability of the class in front of them. The experience all students must remain similar though so that all students get the same quality curriculum throughout KS3 regardless of the teacher/s they have but the flexibility is there for the teacher to seize opportunities as and where they see them to develop the learning further.

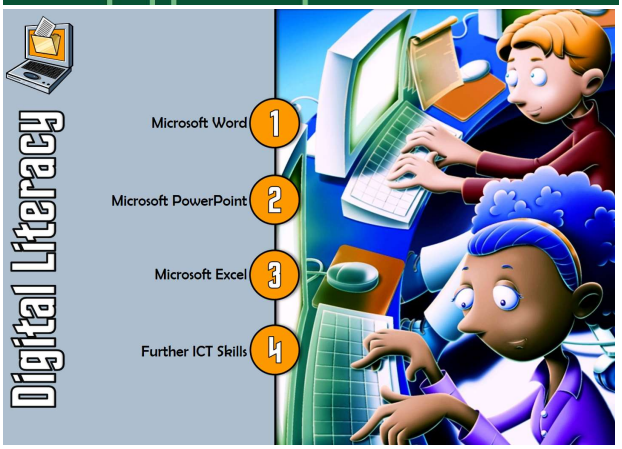
The below structure maps out what units the students will study, a general description and rationale for each unit and what topics are covered.

Year 7



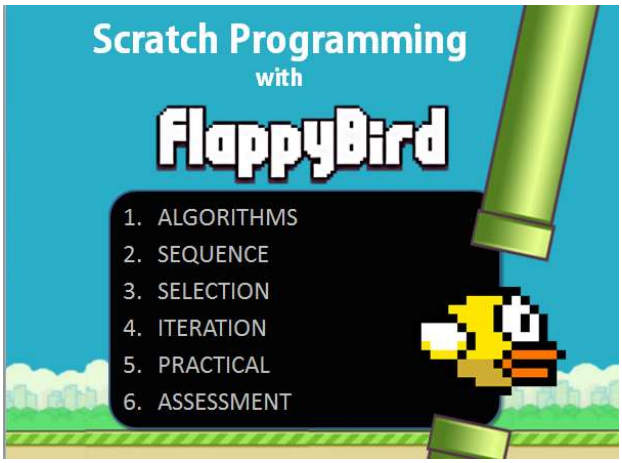
7.1 What are Computers? Part I

Gives learners an understanding of the key components that make up a computer system, including inputs and outputs and hardware. In addition they will be introduced to binary and how to convert between binary and denary numbers and will study units of measurement for file sizes.



7.2 Digital Literacy

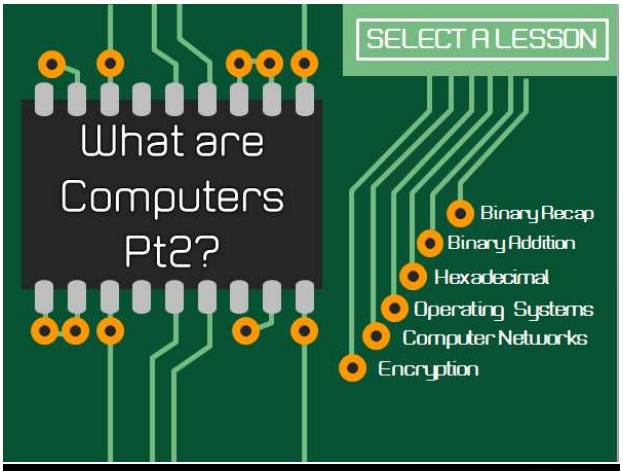
Learners will develop their digital literacy skills, learning how to use Microsoft Office programs to make digital documents and tools that are used in everyday life and in industry. There will also be a focus on some advanced skills such as appropriate screenshot tools, headers and footers etc to enable them to make really professional looking documents



7.3 Scratch Programming

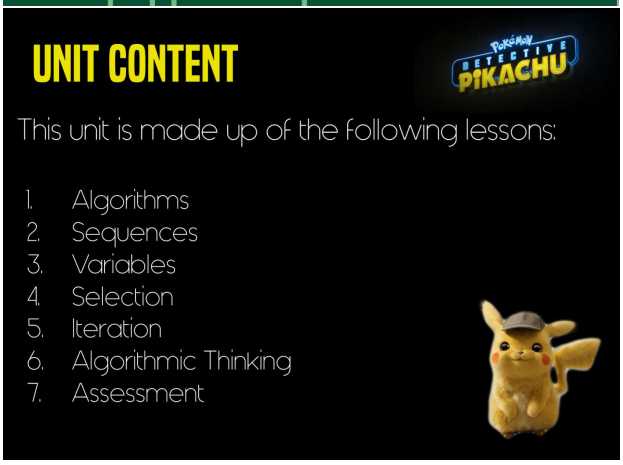
Learners will develop their programming skills and their ability to problem-solve using programming by developing their understanding of the key programming constructs using Scratch. Students will also examine Flowcharts as a way of planning an algorithm. Students will also use Microbits during this unit to explore the link between the programming and the hardware of a computer further.

Year 8



8.1 What are Computers? Part II

This will be a continuation of 'What are Computers?' in year 7. This will build upon the knowledge developed in year 7, particularly regarding the binary number system and introduce some of the more complex concepts of modern computing including Hexadecimal, OS, Networks and Encryption.



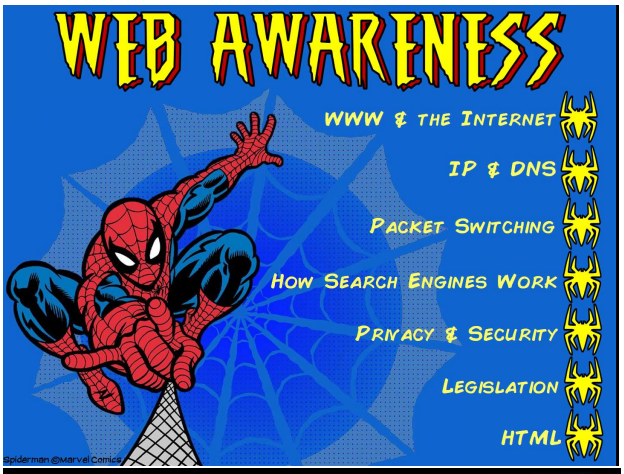
8.2 VB.NET Pt1

Students will build and recap previous knowledge on programming constructs and apply that learning to the text based programming language VB.NET which will further their ability to program. Additional topics such as abstraction and decomposition will extend their understanding of how to think like a programmer and apply what they have learned.

8.3 Digital Imaging

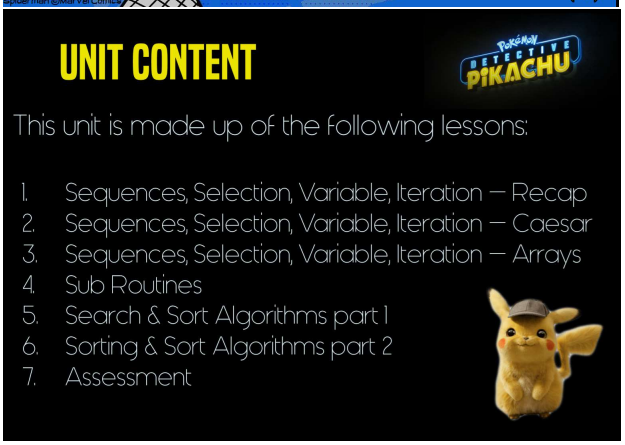
This unit examines how binary 1's and 0's can be used to represent sound and images and builds upon previous work on binary and file sizes calculations to practically apply it to file sizes for images and sound. We will finish off with a project using Photoshop to develop and extend the ICT capability of the students create a 'Fake News' article.

Year 9



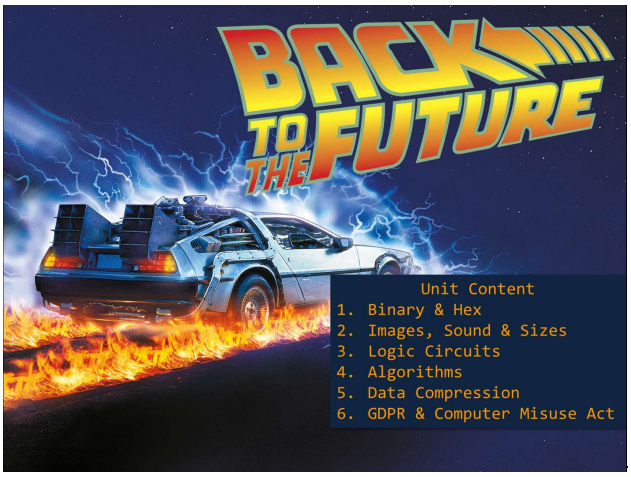
9.2 Web Awareness

This unit examines how the Internet works, considers what the world wide web is and what the internet is. Additionally the learners consider how the internet sends data from one place to another, how search engines work, how we can secure ourselves online and how do we develop basic pages using HTML and CSS.



9.2 VB.NET programming Pt2

Students will build and recap previous knowledge on programming constructs and apply that learning to some real world challenges. Their skill base will then be extended by looking at subroutines, arrays and topics such as searching/sorting algorithms will extend their understanding of programming.



9.3 Back To The Future

This scheme of work is designed to give learners a recap and extension of a selection of the KS3 topics that are key going into the GCSE Computer Science course. Students will examine topics such as binary addition, subtraction, digital imaging, Logic circuits and many more. There will be some sample GCSE questions from past papers included as part of the lesson activities to increase the challenge in this unit.