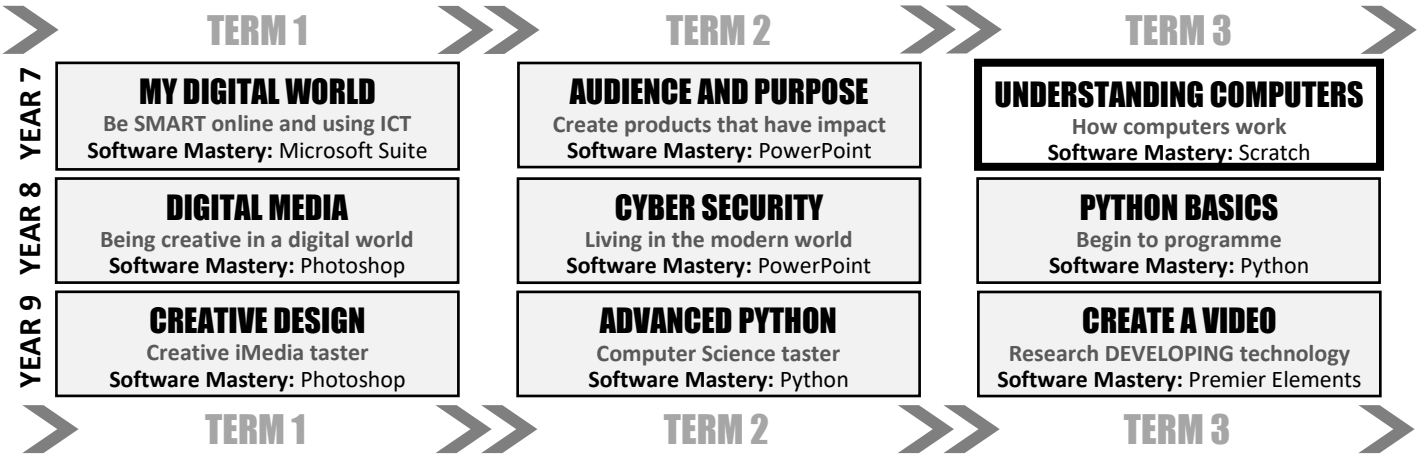
LEARNING JOURNEY & LEARNING JOURNEY

YEAR 7 – COMPUTING: TERM 3

UNDERSTANDING COMPUTERS – How computers work

OVERALL LEARNING JOURNEY FOR KEY STAGE 3 COMPUTING



This unit is an introduction to the fundamentals of programming, such as iteration and selection using Scratch. Invented by MIT, Scratch is an open-source system that enables individuals to program interactive stories, games, and animations. Instead of typing code, Scratch uses visual blocks like puzzle pieces to create a program.

Aim of this unit:
This unit will take the whole of this term to complete. Topics to be covered:

- How to use Scratch as an introduction to programming, learning key programming concepts
- How a computer system works, including the components that make up a computer and how these work Evaluation in relation to audience and purpose

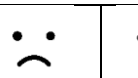
The aim of the ned of the unit is to design and create a game in Scratch. This will be completed over a series of lessons, which will be assessed on demonstration of knowledge of the fundamentals of programming concepts.

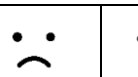
Assessment:
Each lesson contains tasks to complete independently. Some of the Python exercises will be logged online whereas others will be assessed on paper.

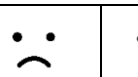
At the end of this unit there will be a 40-minute exam paper on all the topics covered this year.

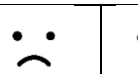
This test, as well as the skills demonstrated on Scratch will determine the final grade for this unit.

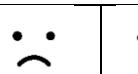
Homework:
Will be set at least once a fortnight with the expectation only 20 minutes is spent completing these. Homeworks will be a combination of written, research, investigative tasks.

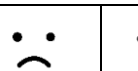
DATE:			
RAG rate your understanding:			**LESSON 1: Animate a sprite**
			Program | Scratch | Back drop | Sprite | Event | Wait command

DATE:			
RAG rate your understanding:			**LESSON 2: Around a maze**
			Collison detection | Forever loop | IF … THEN condition

DATE:			
RAG rate your understanding:			**LESSON 3: Shark and fish**
			Import | Shrink | Rotation | Variable | Delay

DATE:			
RAG rate your understanding:			**LESSON 4: Input Output and Storage**
			Hardware | Software | Input | Output | Storage | Cloud

DATE:			
RAG rate your understanding:			**LESSON 5: CPU, RAM, and ROM**
			CPU | RAM | ROM | Instruction | Speed | Dual Core

DATE:			
RAG rate your understanding:			**AWE & WONDER: AI and machine learning**
			Facial recognition | Fingerprint recognition | Neural network | Self-driving cars | Sensors | Embedded | Camera | Push button | Rules | Decisions | Training data | Machine learning | Intelligence | Virtual assistants