Computing Key Stage 3 Curriculum Plan Year 7

Department Information:
Computing is taught to all KS3 students. Year 7 & 8 have one lesson a week and Year 9 have 3 lessons over a two-week period.

ACHIEVE in the curriculum:
Students are expected to be ambitious during their learning in KS3. They will have opportunities to collaborate on tasks with their peers. In addition,
students can demonstrate their integrity, endurance and versatility particularly when it comes to challenging topics e.g. programming.

Curriculum Aims & Intent:
The aim is for students to understand and apply the fundamental principles and concepts of Computer Science, including analysing and solving problems through practical experience by designing, writing and debugging programs. Students will become informed on how to stay safe online by learning about a range of online safety topics. Students will use their creativity to creating multimedia publications as well through coding.

Resources:
PG Online resources, CAS/STEM resources, other teacher resources, the internet, laptops/computers.
https://www.bbc.co.uk/bitesize/subjects/zvc9q6f
https://scratch.mit.edu/
https://www.w3schools.com/python/

How we keep parents informed:
Year 7 - Progress reports are published 4 times per year, in October, December, April and July, with a face-to-face parents' evening in May.

How parents can help their child:
Parents/carers can help students by supporting their child's learning and providing a suitable space to study as well as helping them develop good study skills and by encouraging students to be curious and explore topics and applications.

What we study and when:

Term	Unit, Topic Or Summary Of Work Covered	Knowledge, Understanding & Skills Developed	ACHIEVE / Personal Development Focus	How The Work Is Assessed	Careers Links
1	**Digital Safety**	-Navigates around the school systems. -Understands the importance of communicating safely and respectfully online, and the need for keeping personal information private. -Navigates around the web, carries out web searches, and obtains content.	Ambitious Endurance	Creates an effective e-safety poster that meets the needs of the target audience.	Designing publications.

2	**Scratch**	-Uses logical reasoning to build a program that implements algorithms (Game Development). -Demonstrates the use operators, if statements, loops and assigns variables. -Detects and corrects errors.	Ambitious Endurance Collaborative Happy	Develops an effective game to meet given success criteria.	Game developer, Programmer
3	**Spreadsheets**	-Identifies features of a spreadsheet. -Formats a spreadsheet. -Creates formulae and uses functions, interprets data. -Creates graphs.	Ambitious Endurance	Review/Assessment.	Handling data, Finance
4	**Flowcharts & Control**	-Understands an algorithm and sequence of instructions. -Identifies flowchart symbols and break a problem down (decomposition). -Develop control flowcharts.	Ambitious Endurance Collaborative	Review/Assessment.	Control and simulations e.g. greenhouses, automated homes/cars/factories, and collecting data using sensors e.g. scientific/weather research
5	**Turtle (Python)**	-Defines what an algorithm is. Follows algorithms step-by-step. -Constructs algorithms that use repetition. -Use of loops and selection. -Detects and debugs algorithms.	Ambitious Endurance Collaborative	Review/Assessment.	Game developer, Programmer
6	**Understanding Computers**	-Collects, analyses and evaluates information for a given topic. - Shows an awareness of elements of a computer and the CPU. - Recognises and classifies input, output and storage devices. - Outlines the input-process-output cycle.	Ambitious Endurance Collaborative	Designs and creates an effective digital artefact. Review/Assessment.	Digital design, Technology industry.