Computing Key Stage 3 Curriculum Plan Year 8

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://app.edublocks.org/
https://code.org/tools/applab
https://www.w3schools.com/python/

How we keep parents informed:
Year 8 - Progress reports are published 4 times per year, in October, December, April and July, with a face-to-face parents' evening in March.

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	**Edublocks**	-Constructs algorithms that use repetition and selection. -Demonstrates use of loops and selections. -Understands the need for precise instruction. -Detects errors and debugs programs.	Ambitious Endurance Collaborative	Review/Assessment.	Developer, Programmer.
2	**Edublocks Websites**	-Constructs algorithms that use repetition and selection, and detects/debugs errors.	Ambitious Endurance	Develops an effective web page.	Website designer, Programmer

		-Understands what HTML is and uses HTML to structure static web pages. -Recognises & modifies HTML tags. -Understands what CSS is and the benefits of using CSS. - Views the web page in a browser.			
3	**AI**	-Understands what is meant by AI and Machine Learning -Discusses ethical issues surrounding the application of information technology beyond school. Evaluate and explain how the use of technology can impact on society. -Understands the use of AI and ML in everyday life.	Ambitious Endurance	Review/Assessment.	AI, Machine Learning.
4	**Text-based programming (Python)**	-Describes what an algorithm and program are and how they differ. -Writes simple programs using print and inputs. -Understands data types and comparative and Boolean operators. - Establishes the difference between a while loop and a for loop. -Identifies the differences between, and appropriately uses if, if then and else statements. Has practical experience of a high-level textual language. -Uses logical reasoning to predict the behaviour of programs. -Declares and assigns variables.	Ambitious Endurance Collaborative	Review/Assessment.	Developer, Programmer.
5	**Computer Crime & Cybersecurity**	-Identifies different types of computer crime. -Learns about the Computer Misuse Act and examples of computer misuse. -Is aware of who might hold data and the possibility of identity theft. -Learns about Copyright Law and copyright infringement. Creates a digital poster to show understanding. -Shows an understanding of the Health & Safety Law.	Ambitious Endurance	Review/Test.	Cybersecurity.
6	**App Development (App Lab)**	- Identifies when a problem needs to be broken down (decomposition). Uses a block-based programming language to create a sequence. - Implement and customise GUI elements to meet the needs of the user. - Uses user input in an event driven programming environment (App Lab). - Uses variables. Identifies and fix common coding errors and establishes user needs when completing a creative project.	Ambitious Endurance Collaborative Versatility	Designs and creates an effective app.	App Developer, Programmer.