

COMPUTING: Year 10

Course Outline



Half term	TOPIC	CONTENT	Suggestions for enrichment activities (eg: films, websites, books, museums and activity centres)
1	Theory	What is a computer system, importance, reliability, professional and legal standards.	Students should sign up to the MOOC website http://www.cambridgegcsecomputing.org/new-course
	Programming	Algorithms – flow diagrams and pseudocode, sequential, selection and iteration programs. Data types – integer, real, Boolean, character, string	Python is a free programming language – students should have downloaded and installed a copy at home and be writing their own programs.
OCTOBER HALF TERM HOLIDAY			
2	Theory	The CPU (including LMC), binary, memory, input and output devices, storage devices.	http://www.cs4fn.org/ is an online website for anyone interested in computer science.
	Programming	High level language, machine code, translators: compiler, interpreter and assembler, IDE facilities and tools.	http://codingbat.com/ is an example of online tutorials for Python programs
CHRISTMAS HOLIDAYS			
3	Theory	Computer software - operating systems, utility programs, different types.	Students have access to 90 GCSE computing short videos that they should be watching – need to copy from Shared Area of computer network.
	Programming	Solving problems, designing algorithms.	http://www.robozzle.com/ is an online website where students can solve problems by programming a robot.
FEBRUARY HALF TERM HOLIDAY			
4	Theory	Data in computers – units, number, character, images, sound, instructions Databases – concept, DBMS, relational databases.	Reading computer magazines, such as PC Advisor, PC User, etc. to get up-to-date information about computer technology.
	Programming	Data types – integer, real, Boolean, character, string, arrays. Justify data types, define variables and constants. Test data – justification, expected outcome.	https://docs.python.org/3/tutorial/index.html is the online tutorial for Python, designed by the group that make Python.
EASTER HOLIDAYS			
5	Preparation	LMC sample task. App Inventor HelloPurr task	LMC is a free program that can be installed on home computer. A copy is available on network.
	Controlled Assessment	Research for Controlled Assessment Unit 452 Practical Investigation.	Students should be using different websites, YouTube video tutorials, etc.
MAY HALF TERM HOLIDAY			
6	Controlled Assessment	Controlled Assessment Unit 452 Practical Investigation. Choice of App Inventor (Android mobile phone apps using MIT App Inventor) or LMC low level programming tasks.	App Inventor is web-based software to create Android Apps. Students should be using it at home. There are plenty of tutorials to work through.