Stalham High School - Subject Curriculum Overview

Subject: Computer Science						
Year 10						
Half -Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Themes/ Content/ Units covered 	Dismantling a PC to identify hardware inside Learning about the purpose of the fetch execute cycle Learning about CPU components and the Von Neuman Architecture Writing your first programs in Python Discovering how to debug your own code and identify syntax errors Using arithmetic and comparison operators in algorithms Learning about data types and casting in algorithms	Learning about the performance of the CPU Learning about embedded systems Learning about primary storage (e.g. ROM, RAM and virtual memory) Applying sequence in programming Identifying and using selection in programming Exploring more complex programs	Learning about secondary storage (e.g. magnetic, optical and solid state) Tackling a long answer exam question Learning the units of data capacity Converting data units (e.g. bytes to kilobytes) Identifying and using count-controlled iteration Identifying and using condition-controlled iteration Programming project	Learning why computers need to store data in binary Converting denary to binary numbers and vice versa Adding 2 binary numbers together Converting from hexadecimal to binary and vice versa Converting from denary to hexadecimal and vice versa Representing algorithms as flow charts and using trace tables Generating random numbers in programs	Learning how computers process characters Learning how computers process images Learning how computers process sound Learning how compression algorithms are used Exploring Boolean logic; creating truth tables and designing logic diagrams	Learning string manipulation and applying these to algorithms Using file handling operations (open, read, write, close) Using arrays when solving problems Using programs (functions and procedures) to produce structured code