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Beacon Business Innovation Hub

KS3 Computing and IT
Course Outline

Subject: KS3 Computing and IT	
Term	**Main Assessment task**
Autumn 1	
• Media – Vector Graphics • Programming essentials in Scratch part 1	End of unit test
Autumn 2	
• Programming essentials in Scratch part 2 • Computing systems	End of unit test
Spring 1	
• Representations binary, numbers, text units. • Introduction to Python Programming	End of unit test
Spring 2	
• Using Media – gaming support for a cause – Word processing, licensing, plagiarism • Physical computing	End of unit test
Summer 1	
• Cyber security • Developing for the web	End of unit test
Summer 2	
• Modelling data - spreadsheet	End year test

Course Description

Description	
KS3 Computing and IT	
Assessment	
Students will develop the following Computing/IT knowledge and skills.	

Knowledge:
- Difference between hardware and software and their roles
- The main functions of an operating system
- Digital computers using binary to represent all data
- How an image is represented in binary
- Which software is most suitable for a particular task
- Different ways to keep data safe
- How the world wide web works
- Encryption and how it is used to keep data safe
- What 'if statements' and 'loops' are and how to use them effectively
- How a network and the internet work
- How standard sorting and searching algorithms are performed

Skills:
- Using a range of input and output devices
- Binary and decimal conversions and binary addition
- Using logical reasoning to predict outcomes
- Being able to break down a problem and create a suitable solution
- Being able to effectively use search engines
- Making appropriate improvements to solutions based on feedback received, and comment on the success of the solution
- Being able to use arithmetic operators, 'if statements' and 'loops' to create a program
- Being able to find and correct errors in programs (debugging)
- Being able to declare and assign variables
- Using html to create a simple website
- Creating digital products for a particular audience

Out of class learning including home-learning

Students will be set regular work to help them to reinforce their understanding of topics and to help them to regularly review concepts that they have studied during the course of the year.