

**Core Content Overview:**

Development of Office software skills, including word processors, spreadsheets and databases.	Introduction of visual and text based programming languages. Creating a Pac Man game.	Introduction to flow diagrams and algorithms
Computational theory – logic gates and 8 bit binary	Programming of an ozobot	Understanding of eSafety issues.

**Key Skills:**

Typing skills  
 Managing files and folders  
 Project design and planning  
 Writing computer code  
 Representing algorithms through flow diagrams.

<b>GRADE</b>	<b>DESCRIPTOR</b>
Yr 7 Grade 7	As a matter of course will produce high quality Office documents making good use of the available formatting options. Will be able to independently plan and develop a program making use of testing to solve a problem. Will be able to represent their programs diagrammatically through a flow diagram. Will be able to evaluate their work, commenting on its strengths and weaknesses.
Yr 7 Grade 4/5	Be confident in using the common formatting options in Office applications. Understand and use correctly technical terms to describe actions performed using hardware and software. Be able to independently use programming software to create code to perform a set task. Evaluate and comment on a project suggested meaningful improvements.
Yr 7 Grade 1	Know how to format work in the standard office applications. Be able to use basic technical terminology. Know how to use single lines of code to perform a set task. Have a basic understanding of the hardware and software associated with a PC.

<b>Core Content Overview:</b>		
Programming of a computer game using a range of techniques, for instance, space invaders.	Study of emerging technology and how it may impact on our lives; a study of input, process and output models of computing.	Use of Computer Aided Design software.(Google Sketchup)
Computational theory 8 bit binary and ASCII.	The development of programming skills using a textual based language.	Developing a flat file database application (Top Trumps database).
<b>Key Skills:</b>		
Design and planning skills for project development. Literacy and evaluation skills. 3D visualisation skills. Graphical design skills. Development of programming vocabulary and techniques.		
<b>GRADE</b>	<b>DESCRIPTOR</b>	
Yr 8 Grade 7	Will be confident in using a graphically based programming language to create a realistic and complex game. Will be confident in experimenting and independently problem-solving programming issues. Will be able describe in some detail emerging technology and evaluate the impact both positive and negative on individuals and society. They will be able to independently make complex CAD models that match a design brief. They will be able to use a textual based programming language to produce a modular programme making efficient use of the options available. They will be able to confidently describe a database and its key features.	
Yr 8 Grade 4/5	Will be able to use a graphic-based programming language to create a working game that records scores and has meaningful gameplay. Be able to describe emerging technology and suggest the advantages and disadvantages that it may bring. Will be able to use CAD software to produce realistic representations of buildings. Will be able to use many of the options of a textual based programming language to design and create a programme. They will understand the key features of a database.	
Yr 8 Grade 1	Will be able to use a graphics based programming language to control a sprite through the keyboard. Be able to give examples of new technology and how it may affect their lives in the near future. Be able to draw simple 3 dimensional representations of a building using CAD software. Be able to calculate 4 bit binary to denary conversions. They will be able to identify the key features of a database.	

<b>Core Content Overview:</b>		
Computational theory – binary, decimal, fixed point binary, binary arithmetic, ASCII and bitmap images.	Design and coding of programmes making use of textual based programming languages.	Production of a complex multi-application project, called Buddy Beans.
Understanding of eSafety issues.	Build a computer model of the Caesar cipher, a bitmap drawing application and a password strength testing application.	
<b>Key Skills:</b>		
Design and planning skills, Higher level coding skills, designing and integrating a variety of applications to complete an extended project, designing products to match specified users. Reviewing, critically analysing and evaluation of own and others products.		
<b>GRADE</b>	<b>DESCRIPTOR</b>	
Yr 9 Grade 7	Will be able to confidently design and write programmes for a specified purpose making use of a wide range of functions and procedures. Will be able to make efficient use of a range of options in graphics and animation software. Able to write nested iterative rootives and use selection. Will be understand how text and images are stored on a computer as digital data and be able to convert between the two.	
Yr 9 Grade 4/5	Will be able to design and produce modular based programmes making use of a range of standard coding language constructs. Will make a single table database and associated output. Will be understand how text and images are stored on a computer as digital data.	
Yr 9 Grade 1	With support will be able to create simple programmes using textual based programming software. Will create a project that makes use of a number of separate software applications. Will be understand that text is stored on a computer as digital data.	

