Falconer School

Curriculum Intent:

We are committed to providing a personalised curriculum which allows students to grow in confidence, build resilience and realise their full potential; equipping them with the skills and knowledge needed for future success.

Course Information			
Year: 9		**Subject: Computing**	
Subject	Computing	**Subject Lead contact information**	c.patel@falconer.herts.sch.uk
Exam Board	n/a	**Specification code**	n/a

Subject Content

In computing, students will be introduced to demonstrates simple algorithms using loops, and selection. Detects and corrects errors i.e. debugging, in algorithms. Demonstrates data transmission between digital computers over networks, including the internet i.e. IP addresses and packet switching. Constructs static web pages using HTML.

To learn python and to use a range of operators and expressions e.g. Boolean, and applies them in the context of program control. Understands and applies parameter passing.
Understands and uses two dimensional data structures.

Understand what is required for the development of an interactive media product which they will use a variety of software to manipulate and present digital content: data and information. Creates digital content to achieve a given goal through combining software packages and internet services to communicate with a wider audience. Investigates the differences between different Operating Systems, and the advantages and disadvantages of these.

Differentiation:

Differentiation is the way the teacher adapts the classroom materials to provide the right kind of challenge to each student. This allows all students to access the same piece of work, at their own level. Some examples of differentiation used in Computing are:

- Visual aids
- Scaffolding
- Breaking tasks in to smaller chunks
- Check points/Project plans to check levels of progress
- Exemplars

Technical Terms:
Syntax Debugging, Sequence, Iteration, Flowcharts, Pseudo coding, Types of Testing: Unit, System, User Syntax

Logic gates – AND, OR, NOT Devices – Input, Output Storage

Autumn 1	**Computational Thinking - Programming algorithms** Evaluates the effectiveness of algorithms and models for similar problems. Develops solutions to complex problems independently. Finds where information can be filtered out in generalising problem solutions (abstraction). Uses logical reasoning to predict outputs, showing an awareness of inputs.

	Selects similarities and differences in situations and uses these to solve problems (pattern recognition). **All year 9's will practise working on Turtle Programming and Coding websites**
Autumn 2	**Programming - Further programming techniques in python** Tests solutions thoroughly to determine the effectiveness of the solution. Appreciates the effect of the scope of a variable. Uses a range of operators and expressions e.g. Boolean, and applies them in the context of program control. Understands and applies parameter passing. Understands and uses two dimensional data structures. Designs, writes and debugs modular programs using functions. Selects appropriate variables and relational operators within a loop to govern termination. Establishes the difference between a while loop and a for loop. Identifies the differences between, and appropriately uses if and if, then and else statements. Has practical experience of a high level textual language. **All year 9's will practise working on Turtle Programming and Coding websites**
Spring 1	**Learning outcome 1 (Unit 01 Investigate interactive media production)** The learner will: Understand what is required for the development of an interactive media product The learner must know about: -the features of an interactive media product -the target audience of an interactive media product -the processes and techniques needed for the development of an interactive media product -health and safety issues related to computer use
Spring 2	**Learning outcome 2 (Unit 01 Investigate interactive media production)** The learner will: Experiment with interactive media products and their production in relation to a brief The learner must demonstrate: -experimentation with the processes and techniques needed for the development of an interactive media product

Summer 1	**Learning outcome 3 (Unit 01 Investigate interactive media production)** The learner will: Review their experimentation with interactive media products The learner must evaluate: - use of processes and techniques - strengths and weaknesses
Summer 2	**Learning outcome 1 (Unit 02 Plan and prepare for an interactive media product)** The learner will: Understand how to produce a proposal to meet a brief The learner must know about: - ideas development - audience/end user - technical aspects - design aspects - content

Assessment Details

Assessment will take place each term at various points. Students will have the opportunity to reflect what they've learn throughout each term either in a theory or a practical assessment.

What can I do to support my child at home?

To work through material online on the google classroom, and use BBC Bite size.

Free online software available such as:

www.scratch.mit.edu
www.photopea.com
www.pixelart.com
www.wix.com
www.piskelapp.com
www.pivotanimator.net
https://www.python.org/
https://bournetocode.com/
https://blockly.games/ (Puzzle coding)
https://turtleacademy.com/

Recommended resources
Linux, Photoshop, Pivot, Scratch, Photopea, Dreamweaver, Microsoft Word, PowerPoint, Excel, and Publisher.

Teaching Staff Contact Details			
Name	**Role**	**Email**	**Tel**
C.Patel	Teacher	c.patel@falconer.herts.sch.uk	020 8950 2505