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: 7		**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 understands the importance of communicating safely and respectfully online, and the need for keeping personal information private. Understands how to effectively use search engines. Understands why computers are connected in a network.

Classifies a range of software including operating systems, utility and application software. Explains the difference between hardware and software, and their roles within a computer system. Illustrates how digital computers use binary to represent all data. Summarises the relationship between data representation and data quality.

Uses 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. Demonstrate simple algorithms using loops, and selection. Detects and corrects errors i.e. debugging, in algorithms. Uses logical reasoning to predict the behaviour of programs. Builds programs that implement algorithms to achieve given goals.

Knows that users can develop their own programs, and can demonstrate this by creating a simple program in an environment that does not rely on text. Detects and corrects simple semantic errors i.e. debugging, in programs.

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:
Online safety, Storyboarding, Creating Editing, Analysis
Sequencing, Selection, Audience, Evidence, Queries, Graph types
Cell reference, Formula Function,

Autumn 1	**Networking - E-Safety, Using computers (folders etc.) and the Internet** Summarises the difference between the internet and internet service e.g. world wide web. Shows an awareness of, and can use a range of internet services e.g. VOIP.

	Understands the importance of communicating safely and respectfully online, and the need for keeping personal information private. Understands how to effectively use search engines. Understands why computers are connected in a network. Navigates the web and can carry out simple web searches to collect digital content. Explains the difference between a web browser and a search engine. Obtains content from the world wide web using a web browser. Knows what to do when concerned about content or being contacted.
Autumn 2	**Computers - Inputs/Outputs and Memory** Classifies a range of software including operating systems, utility and application software. Explains the difference between hardware and software, and their roles within a computer system. Gives examples of how data is stored on a computer. Explains the function of the main internal parts of basic computer architecture. Outlines the concepts behind the input-process-output cycle. Recognises that a range of digital devices can be considered a computer. Recognises and can use a range of input and output devices. Recognises that all software executed on digital devices is programmed.
Spring 1	**Data Representation - Excel (Database introduction)** Illustrates how digital computers use binary to represent all data. Summarises the relationship between data representation and data quality. Classifies different types of data (text, number) and understands how these are used in different situations. Demonstrates how filters or single criteria searches can find information. Understands the difference between data and information. Knows why sorting data in a flat file can improve searching for information. Recognises that digital content can be represented in many forms. Distinguishes between some of these forms and can explain the different ways that they communicate information. Recognises that data can be structured in tables to make it useful.
Spring 2	**IT - Graphic Design and Copyright (Photoshop)** Uses 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 Shows an awareness for the quality of digital content collected. Shares their experiences of technology in school and beyond the classroom. Talks about their work and makes improvements to solutions based on feedback received. Demonstrates how to store and edit digital content using appropriate file and folder names. Demonstrates use of computers safely and responsibly, knowing a range of ways to report unacceptable content and contact when online. Understands the legal frameworks governing the use of information.
Summer 1	**Computational Thinking - Algorithms and decomposition**

	Constructs solutions (algorithms) that use repetition and two-way selection. Solves problems through decomposition. Demonstrate simple algorithms using loops, and selection. Detects and corrects errors i.e. debugging, in algorithms. Understands that computers need precise instructions. Demonstrates care and precision to avoid errors. Defines what an algorithm is. Reproduces/ Follows algorithms step-by-step.
Summer 2	**Programming - Basic Programming Techniques (Scratch)** Uses logical reasoning to predict the behaviour of programs. Builds programs that implement algorithms to achieve given goals. Demonstrates how arithmetic operators, if statements, and loops, are used within programs. Declares and assigns variables. Knows that users can develop their own programs, and can demonstrate this by creating a simple program in an environment that does not rely on text. Detects and corrects simple semantic errors i.e. debugging, in programs. Observes that programs execute by following precise instructions. Executes, checks and changes programs.

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://blockly.games/ (Puzzle coding)
https://turtleacademy.com/

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

Teaching Staff Contact Details			
Name	**Role**	**Email**	**Tel**
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