Crossfell Computing Curriculum Overview 2022-23

Computing	Strategic Searching Online	3D Modelling: SketchUp	Flowol	Online Safety	Scratch 3.0 Developing Games	Radio Station
Year 5	**Autumn (1) 7 weeks**	**Autumn (2) 8 weeks**	**Spring (1) 6 weeks**	**Spring (2) 6 weeks**	**Summer (1) 5 weeks**	**Summer (2) 6 weeks**
What We Will Learn	Pupils will learn to use search engines with increasing efficiency. They will learn how to refine their searches using various techniques, such as using Boolean operators and using keywords. Pupils will also learn to look for clues to decide if a website can be trusted and whether the information presented is reliable. They will also learn how search engines work and how their search returns are ranked in a particular order. Finally, pupils will begin to learn how to get a web page towards the top of a returned search and will evaluate a web page based on search engine optimisation criteria.	In this unit the pupils extend their drawing skills to create 3D models based on using the software SketchUp. Pupils will learn how to create simple and complex 3D models. They will be able to add detail and manipulate 3D models using a variety of tools.	This unit introduces pupils to flowcharts and how they are used to program and control devices. Pupils are taught to build sequences of instructions, control multiple outputs and structure algorithms with decisions and inputs. Although many external hardware interfaces can be attached and linked to a computer using Flowol, this unit is designed as an introduction to the software and the concepts of flowchart programming.	Pupils will learn about email safety with a focus on preventing and dealing with spam. They will consider the importance of strong passwords and learn how to create them. Pupils will build on their knowledge of plagiarism and fair use of people's work by learning how to write citations and references for websites they may use. They will scrutinise photographs that they see online and learn how easy it is to manipulate pictures and present them as reality.	This unit builds on the previous unit in Year 4 (Questions and Quizzes) using Scratch to build and edit algorithms for simple games. The unit is designed to help pupils develop their skills in writing their own algorithms as well as editing and debugging existing codes.	This unit allows pupils to use software and digital devices for recording sound. Based around the theme of a Radio Station, it is designed to encourage a creative approach that includes interviewing, making adverts and using jingles. Other software is incorporated where pupils write scripts and design additional advertising for their Radio Station. Opportunities are included for pupils to present, listen, review and evaluate their own content as well as professional and commercial examples, plus those created by their peers.
What We Will Do	Pupils will search for information using appropriate search engines. They will refine their searches using appropriate keywords, with support, pupils can begin to use strategies to check the reliability of information on web pages. Pupils will begin to discuss and explain how search engines work using some key vocabulary and the way search results are selected and ranked. Pupils can explain what search engine optimisation (SEO) is.	Pupils can draw 2D shapes or lines. They can draw simple 3D models. Pupils can manipulate 2D shapes into 3D shapes. They can import 3D models from the 3D warehouse. They can use a range of SketchUp tools including: shape, push, pull, orbit, pan, zoom, erase and fill.	Pupils can follow written instructions to draw a simple flowchart. They can insert symbols into a flowchart. Pupils can add inputs into a flowchart. They can identify conventional symbols, understanding the process of each stage.	Pupils will identify spam email. They will discuss and explain what to do with spam email. Pupils understand why they should cite a source and not take credit for the work. They will explain the rules for creating a strong password using a set of rules. Pupils will discuss and debate the fact that everything they see online is not be true.	Pupils can move and edit blocks as part of an algorithm. Pupils can add additional effects and features, such as sound or point scoring, to enhance the appeal of a game.	Pupils can record and play their own sounds in recording software. They can import an existing sound file into recording software to play. Pupils can choose appropriate software for sound recording. They can plan and record a radio advert
Skills Learned	Pupils will develop their analytic skills and be able to identify the difference between the Internet (Google) and the World Wide Web and that search engines are stored on the World Wide Web. They will be able to use search technologies effectively and understand how information is selected.	Pupils will build on prior learning to develop their drawing skills to be able to select, use and combine a variety of software to design and create a 2/3D drawing.	Pupils will build on prior knowledge to develop their skills and be able to use the control software (Flowol) to create a simple flowchart, then learn how to edit, delete and insert new symbols.	Pupils will further develop their online safety knowledge and be able to explain the importance of having a strong password and be able to identify a range of ways to report concerns about an emails content or contact.	Pupils will develop their problem solving skills to be able to design a set of instructions on paper for a character game and be able to convert it over into Scratch algorithm.	Pupils will develop their analytic skills to examine and identify features of advertisements using their ideas to design their own advert to be recorded using audio software as part of their radio station or podcast.