

Programming
 (Algorithms, Sequencing and testing code)
 Beebot / Roamer / Probot

Computer Science	<u>Flowol.</u>	
	<p><i>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.</i></p> <p><i>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.</i></p> <p>This unit introduces children to flowcharts and how they are used to program and control devices. Lessons are designed to be used with Flowol software (version 4.0), which includes simulations of real life automatic computer systems. Children 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. Further learning can be extended by using external devices.</p>	

Communication Publishing and collaborating
 (Multimedia Word Processing)

IT Skills	<u>Radio Station</u>	<u>3D Modelling</u>	
	<p><i>Select, use and combine a variety of software on a range of digital devices to create content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</i></p> <p>This unit allows children to use</p>	<p><i>Select, use and combine a variety of software (including Internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data</i></p>	

	<p>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 children write scripts and design additional advertising for their Radio Station. Opportunities are included for children to present, listen, review and evaluate their own content as well as professional and commercial examples, plus those created by their peers.</p>	<p>and information</p> <p>In this unit the children extend their drawing skills to create 3D models based on using the software SketchUp. The free version of this is suitable for the unit. Children 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.</p>	
<p><u>Online Safety</u></p>	<p><i>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</i></p> <p>In this unit, children 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. Children 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.</p>		