Brookside Academy Skills, Knowledge and Vocabulary document
Computing

Aims

The national curriculum for computing aims to ensure that all pupils:

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- are responsible, competent, confident and creative users of information and communication technology.

KS1
Pupils should be taught to: • understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions • create and debug simple programs • use logical reasoning to predict the behaviour of simple programs • use technology purposefully to create, organise, store, manipulate and retrieve digital content • recognise common uses of information technology beyond school • use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies
KS2
Pupils should be taught to: • design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts • use sequence, selection, and repetition in programs; work with variables and various forms of input and output • use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs • understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration • use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content • 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 and information • use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Computing Intention Statement

At Brookside we are aware the world of technology is ever changing and the importance of delivering a high-quality computing curriculum. By introducing the pupils to a wide range of technology during their time at the academy, we hope we are producing digitally literate learners and problem solvers. Our intention is that computing will not only be taught as a series of skills but will also engage and enrich our children's experiences by supporting their creativity and cross curricular learning.

We want our pupils to leave the academy confident in using different forms of technology and to ensure that they know how to stay safe online whilst achieving these goals. Online safety underpins all aspects of our computing curriculum. It is taught during computing lessons in an age and developmentally appropriate manner whilst also being celebrated across the academy annually on Safer Internet Day.

Within our school community, we place great importance in the use of technology as a device which supports and enriches links and communications within our locality as well as within the wider world.

Year 6		
	Skills and Knowledge	**Vocabulary**
E safety	I am able to protect my password and other personal information. I can explain the consequences of sharing too much about myself online. I can support friends to protect themselves and make good choices online, including reporting concerns to an adult. I am able to explain the consequences of spending too much time online or on a game. I am able to explain the consequences of myself and others of not communicating kindly and respectfully. I am able to protect their computer or device from harm on the Internet.	Password Pin Username Cyberbullying Platform Social Media Unsecure Secure Privacy Settings Age rating Appropriate
Programming	I can deconstruct a problem into smaller steps, recognising similarities to solutions used before. I can explain and program each of the steps in their algorithm. I can evaluate the effectiveness and efficiency of an algorithm while they continually test the programming of that algorithm. I can recognise when they need to use a variable to achieve a required output. I can use logical reasoning to detect and correct errors in algorithms and programs.	Algorithm Command Control Debug Effect Input Output Sequence Sprite

		Variable
Handling Data	I can plan the process needed to investigate the world around me. I can select the most effective tool to collect data for my investigation. I can check the data I collect for accuracy and plausibility. I can interpret the data I collect. I can present the data I collect in an appropriate way.	Analyse Anomaly Average Chart Data Database Formulae Field Model Plausible Process Tally
Multimedia	I can combine a range of media, recognising the contribution of each to achieve a particular outcome. I can tell you why I select a particular online tool for a specific purpose. I can be digitally discerning when evaluating the effectiveness of my own work.	Audience Document Edit Folder Font Insert Hyperlink Layout Slides Sound effect Style Tab Template
Technology in our lives	I can tell you the internet services I need to use for different purposes. I can select an appropriate tool to communicate and collaborate online. I can talk about the way search results are selected and ranked. I can check the reliability of a website. I can tell you about copyright and acknowledge the sources of information that I find online.	Copyright Filter Hyperlink QR Code Reliability