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 1		
	Skills and Knowledge	**Vocabulary**
E safety	I can keep my password private. I can explain what personal information is. I can tell an adult when I see something unexpected or worrying online. I can talk about why it's important to be kind and polite. I can recognise an age appropriate website. I can agree on and follow sensible e-safety rules.	Personal information password safe adult private friend polite online internet pop up protect kind strangers log on user name technology device names – xbox etc
Programming	I can give instructions to a friend and follow their instructions to move around. I can describe what happens when I press buttons on a robot. I can press the buttons in the correct order to make a robot do what I want. I can describe what actions I will need to do to make something happen and begin to use the word algorithm.	Algorithm Backward Button Clear Code Debug Distance Floor robot Forward Go Instructions Mistake Move Pause / Wait Predict Program Turn left Turn right Sequence Stop
Handling Data	I can talk about the different ways in which information can be shown. I can use technology to collect information, including photos video and sound. I can sort different kinds of information and present it to others. I can add information to a pictogram and talk about what I have found out.	Collect Data Found out Pictogram Questions Record Sort
Multimedia	I can be creative with different technology tools. I can use technology to create and present their ideas. I can use the keyboard or a word bank on their device to enter text.	Animate App Backspace Camera Delete Insert Keyboard Open Photo(graph) Print Right click Shift Sound Space bar Video / Film
Technology in our lives	I can recognise the way we use technology in our classrooms. I can recognise ways that technology is used at home and in my community. I can begin to identify some of the benefits of using technology.	Communicate Search Technology / Computing devices World Wide Web / Internet