

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 3

	Skills and Knowledge	Vocabulary
E safety	<p>I can talk about what makes a secure password and why they are important.</p> <p>I can protect my personal information when I am online.</p> <p>I can report concerns to an adult.</p> <p>I can recognise websites and games appropriate for my age.</p> <p>I can make good choices about how long I spend online.</p> <p>I can ask an adult before downloading files and games from the Internet.</p> <p>I can post positive comments online.</p>	<p>File sharing, Instant Message, Multimedia Messaging Service, Parental Control, Social Network, Profile, Privacy, Password, Safety, Sharing, Trust, Cyber-bullying, Blocking, Risk, Chat room, Username/Tag, Friend requests</p>
Programming	<p>I can break an open-ended problem up into smaller parts.</p> <p>I can put programming commands into a sequence to achieve a specific outcome.</p> <p>I can test my program and can recognise when I need to debug it.</p> <p>I can use repeat commands.</p> <p>I can describe the algorithm I will need for a simple task.</p> <p>I can detect a problem in an algorithm which could result in unsuccessful programming.</p>	<p>Algorithm, Background, Block, Command, Control, Debug, Event, Forever, Imagine, Implement, Input, mistakes, Movement, Pattern, Output, Repeat, Rotation, Sequence, Sprite, Stage, Pause</p>
Handling Data	<p>I can talk about the different ways data can be organised.</p> <p>I can search a ready-made database to answer questions.</p> <p>I can collect data to help answer a question.</p> <p>I can add to a database.</p> <p>I can make a branching database.</p> <p>I can use a data logger to monitor changes and can talk about the information collected.</p>	<p>Branching database, Chart, Collect, Data, Database, Data logger, Decision tree, Graph, Information, Interpret, Investigate, Questions, Record, Results, Tally, Sort, Venn diagram</p>
Multimedia	<p>I can create different effects with different technology tools.</p> <p>I can combine a mixture of text, graphics and sound to share ideas and learning.</p> <p>I can use appropriate keyboard commands to amend text, including making use of a spellchecker.</p> <p>I can evaluate my work and improve its effectiveness.</p>	<p>Animation, App, Backspace, Clipart, Copy, Delete, Document, Edit, Enter, Folder, Font, Green screen, Image, Insert, Hyperlink, Keyboard, Layout,</p>

	I can use an appropriate tool to share my work online.	Open, Photo(graph), Right click, Save, Select, Shift, Slides, Software, Sound, Space bar, Style, Text, Video / Film
Technology in our lives	<p>I can save and retrieve work on the Internet, the school network or my own device.</p> <p>I can talk about the parts of a computer.</p> <p>I can tell you ways to communicate with others online.</p> <p>I can describe the World Wide Web as the part of the Internet that contains websites.</p> <p>I can use search tools to find and use an appropriate website.</p> <p>I can think about whether images found online are appropriate for my own work.</p>	<p>Communicate, Computing devices, Copyright email, Filter, Internet, QR Code, Reliability, Search engine, Search result, Webpage, Website, World Wide Web</p>