

# Brookside Academy Skills, Knowledge and Vocabulary document

## Computing Year 5

### 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 5**

**Skills and Knowledge**

**Vocabulary**

**E safety**

Can protect their password and other personal information.  
Can explain why they need to protect themselves and their friends and the best ways to do this, including reporting concerns to an adult.  
Know that anything they post online can be seen, used and may affect others.  
Can talk about the dangers of spending too long online or playing a game.  
Can explain the importance of communicating kindly and respectfully.  
Can discuss the importance of choosing an age-appropriate website or game.  
Can explain why they need to protect their computer or device from harm.  
Know which resources on the Internet they can download and use.

Block  
Filter  
Unfollow  
Unfriend  
Report  
Safety  
Restrictions  
Reliable  
Accept  
Request  
Permission  
Cyber bullying  
Cyber crime  
Profile  
Troll  
Verification  
Meeting  
Advice  
Virus  
Content  
Appropriate  
E-safety  
Social networking  
Security  
Gaming  
YouTube  
Censorship  
App  
Hacking  
Sharing  
Oversharing  
Private/ Public  
Parental Control  
Password  
Webcam

<p><b>Programming</b></p>	<p>Can decompose a problem into smaller parts to design an algorithm for a specific outcome and use this to write a program.  Can refine a procedure using repeat commands to improve a program.  Can use a variable to increase programming possibilities.  Can change an input to a program to achieve a different output.  Can use 'if' and 'then' commands to select an action.  Can talk about how a computer model can provide information about a physical system.  Can use logical reasoning to detect and debug mistakes in a program.  Can use logical thinking, imagination and creativity to extend a program.</p>	<p>Algorithm  Block  Broadcast  Collaboration  Command  Computational thinking  Control  Debug  Design  Effect  Event  Implement  Input  Pattern  Output  Repeat  Rotation  Sequence  Variable  X position / Y position</p>
<p><b>Handling Data</b></p>	<p>Can use a spreadsheet and database to collect and record data.  Can choose an appropriate tool to help collect data.  Can present data in an appropriate way.  Can search a database using different operators to refine their search.  Can talk about mistakes in data and suggest how it could be checked.</p>	<p>Anomaly  Average  Chart  Collect  Data  Database  Formulae  Field  Graph  Hypothesis  Information  Interpret  Investigate  Model  Plausible  Predict  Questions  Record</p>

		<p>Results Tally Sort Venn diagram</p>
<p><b>Multimedia</b></p>	<p>Can use text, photo, sound and video editing tools to refine their work. Can use the skills they have already developed to create content using unfamiliar technology. Can select, use and combine the appropriate technology tools to create effects that will have an impact on others. Can select an appropriate online or offline tool to create and share ideas. Can review and improve their own work and support others to improve their work</p>	<p>Animate Animation App Audience Bullet points Clipart Comic strip Document Edit Folder Font Green-screen Insert Heading / subheading Hyperlink Layout Right click Select Screen shot Shift Slides Software Sound effect Sound recording Storyboard Tab Template</p>
<p><b>Technology in our lives</b></p>	<p>Can describe different parts of the Internet. Can use different online communication tools for different purposes. Can use a search engine to find appropriate information and check its reliability. Can recognise and evaluate different types of information they find on the World Wide Web. Can describe the different parts of a webpage. Can find out who the information on a webpage belongs to.</p>	<p>Blog Communicate Computing devices Copyright Email Digital content</p>

		Digital advertising Filter Hyperlink Internet Internet Services QR Code Reliability Search engine Search result Search query Vlog Webpage Website World Wide Web
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