



Brookside Primary School
Learn Together - Achieve Together

Teaching of Computing at Brookside Primary School



The intent, implementation and impact for the learning of Computing at Brookside Primary School

Why is Computing important at Brookside Primary School?

Technology is a vital part of everyday modern life and it is constantly involving. Through the teaching of computing, we equip our children to participate in a rapidly changing world where they become confident computer users and understand how the technology works.

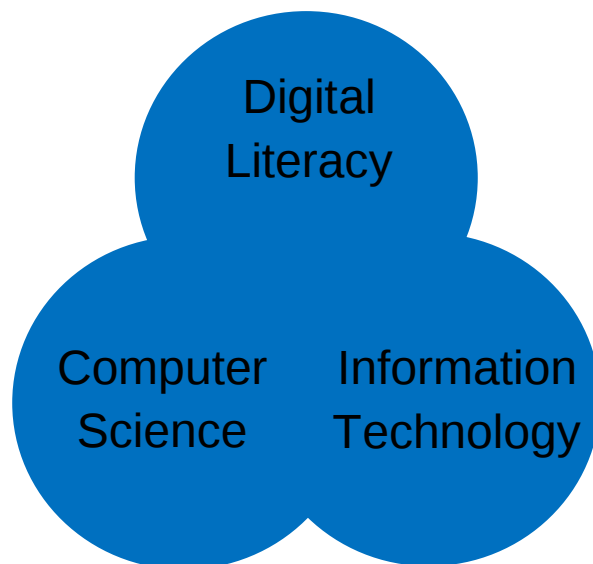
It is our intention to enable children to find, explore, analyse, exchange and present information. We also focus on developing the skills necessary for children to be able to use information in an effective way as well as making links with mathematics, science and DT.

Computing skills are a major factor in enabling children to be confident, creative and independent learners and it is our intention that children have every opportunity available to allow them to achieve this.

Our curriculum aim is that our pupils are not just passive technology users but active participants and future digital creators.

What are the key knowledge concepts in Computing at Brookside Primary School?

The computing curriculum is divided into 3 main strands as shown on the diagram below.



These strands can be broken down further into these areas:

Designing	Understanding	De-bugging
• Programs • Working with variables • Detecting and correcting errors	• Algorithms • Input and output • Selection and repetition • Computer networks • Digital footprint	• Simple problems • Solving problems
Using		E-safety
• Search technologies • Logical reasoning • A variety of software • Purposeful use i.e organising, storing, manipulating digital content		• Internet • Social media • Acceptable and unacceptable behaviour • Reporting concern

In each of the strands listed on the previous page, pupils will continually develop skills in these areas:

Logic	predicting and analysing
Algorithms	making steps and rules
Decomposition	breaking down into pairs
Patterns	spotting and using similarities
Abstraction	removing unnecessary detail
Evaluation	making judgement
Tinkering	experimenting and playing
Creating	designing and making
Debugging	finding and fixing errors
Preserving	keeping going
Collaboration	working together

What are the key Computing subject skills?

- Understanding and applying key concepts of computer science
- Analysing problems in computational terms
- Solving problems
- Evaluating and applying ICT including new or unfamiliar technologies
- Being responsible, confident and creative users of ICT
- Writing simple computer programs
- Children can talk about the principles of information and computation, how digital systems work and how to put this knowledge to use through programming
- Children are digitally literate equipping them with lifelong skills to prepare them for a future workplace
- Children are active participants in a digital world

How does Brookside Primary School ensure progression in our key knowledge and concepts in Computing?

- The curriculum identifies points where comparisons can be made
- Key concepts are revisited year on year to consolidate pupils understanding
- Knowledge that is taught builds on prior learning and is therefore more in-depth
- Increasing complexity of subject specific language and precision is expected
- Purple Mash scheme of work is used which shows clear progression in year groups
- Children gain confidence in using information technology and developing their ideas further
- Curriculum identifies points where comparisons can be made
- Progress is demonstrated through pupils work books and pupil voice

How do we know our children have made progress?

End point EYFS Children can

- Recognise a range of technology is used in places such as homes and schools
- Select and use technology for particular purposes
- Click on different icons in a computer program
- Use a range of programmable toys and equipment involving ICT
- Complete a simple program on a computer

End point Key Stage 1 Children can

- 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.

End point Key Stage 2

Children can

- 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.

Subject content and overview - Pupils should be taught to:

Our current computing curriculum is the Purple Mash scheme. This scheme has been adapted to fit the setup of our current classes. The units below are the discreet computing units, which will be covered in each class.

Hoot Owls

Hoot Owls use the early year resources on (Mini Mash or Purple Mash) as part of the Early Years curriculum to support children in working towards early learning goals.

Brookside Computing Long Term Plan

	Autumn A	Spring A	Summer A	Autumn B	Spring B	Summer B
Tawny	• Unit 1.1 Online Safety and Exploring Purple Mash • Unit 1.2 Grouping and Sorting • Unit 1.3 Pictograms • Unit 1.9 Technology Outside School	• Unit 1.4 Lego Builders • Unit 1.5 Maze Explorers	• Unit 1.6 Animated Story Books • Unit 1.7 Coding	• Unit 2.2 Online Safety • Unit 2.3 Spreadsheets • Unit 2.4 Questioning	• Unit 2.1 Coding • Unit 2.5 Effective Searching	• Unit 2.6 Creating Pictures • Unit 2.7 Making Music
Barn	• Unit 3.1 /4.1 Coding • Unit 3.2 Online Safety • Unit 3.7 Simulations	• Unit 3.3 Spreadsheets • Unit 3.10 micro:bits	• Unit 3.5 Email • Unit 3.8 Graphing	• Unit 4.2 Online Safety • Unit 3.1 /4.1 Coding • Unit 4.6 Animation	• Unit 3.9 Presenting • Unit 3.6 Branching Databases	• Unit 4.8 Hardware Investigators • Unit 3.4 Touch Typing • Unit 4.5 Logo
Eagle	• Unit 5.2 Online Safety • Unit 5.1/6.1 Coding • Unit 4.7 Effective Search	• Unit 5.5 Game Creator • Unit 4.4 Writing for different audiences	• Unit 4.10 Intro to AI • Free Code Gibbon and Gorilla activities	• Unit 4.2 Online Safety • Unit 5.8 Word Processing	• Unit 4.9 Making Music • Unit 5.9 External Devices	• Unit 4.11 micro:bit • Free Code Gibbon and Gorilla activities

Bay	• Unit 5.2 Online Safety • Unit 5.10 micro:bit • Unit 5.3 Spreadsheets	• Unit 5.4 Databases • Unit 6.5 Text Adventures	• Unit 5.6 3D Modelling • Unit 5.7 Concept Maps	• Unit 6.2 Online Safety • Unit 5.1/6.1 Coding • Unit 6.8 Understanding Binary	• Unit 6.7 Quizzing • Unit 6.6 Networks	• Unit 6.9 Spreadsheets • Unit 6.4 Blogging
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Strand Key
Computer Science
Information Technology
Digital Literacy

Outside of discreet computing time, children will cover e-safety units in links with PSHE work.