Badger Hill PRIMARY SCHOOL

Computing Curriculum

National Curriculum

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.*

Computer Science	Information Technology	Digital Literacy
algorithms & coding	creating digital content & presenting information	E-safety
digital systems & networks	search & selecting information	uses of technology

The computing curriculum is comprised of three strands: **computer science**, **information technology** and **digital literacy**.

- in **computer science**, pupils are taught about the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming;
- in **information technology**, pupils are taught how to use programs and computer systems to create and develop their ideas;
- in **digital literacy**, pupils are taught how to use online technologies safely, effectively and responsibly.

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Computing progression of skills

Computing Strand:	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computer Science	Use a simple algorithm to program a Bee Bot Follow a set of instructions given by a peer	Understand and write simple algorithms Understand programs need precise steps within an algorithm	Use logical reasoning to predict the outcome of program Understand what is meant by debugging and apply that to programs	Understand that events cause actions Design, write and debug a program that accomplishes a specific goal	Design an efficient program using loops Use decomposition to plan, debug and write algorithms effectively	Use selection to control the sequence of actions in a program Understand how loops are used with conditions	Design, write and debug a program that uses selection and variables Use variables in a program designed for a physical device
	Vocabulary: instruction, forwards, backwards, robot	**Vocabulary:** algorithm, program, command, sequence	**Vocabulary:** debug, input, output, sprite, code	**Vocabulary:** event, action, outcome, network	**Vocabulary:** repetition, decompose, loop, infinite loop, count-controlled loop	**Vocabulary:** selection, conditions, system	**Vocabulary:** variables, value
Information Technology	Use digital devices to access educational content, tools and apps Understand the different ways information can be represented digitally	Use a keyboard and mouse to type text and create digital drawings Experiment with formatting tools to edit text and digital artwork	Use a digital device to take a photograph Explore how information can be represented digitally	Understand how to format digital documents Create a digital database	Record and edit sound and images using digital devices Understand how information can be shared via networks	Use digital technologies to: record and edit videos; create vector images Explore ways of collecting, presenting and comparing data	Create web pages, spreadsheets and 3D digital designs Use technology to communicate and work collaboratively
	Vocabulary: computer, tablet, screen, app	**Vocabulary:** computer, digital, mouse, keyboard, edit, tool, format	**Vocabulary:** organise, create, store, retrieve, internet	**Vocabulary:** collect, present, select, data, search engine, network, database	**Vocabulary:** World Wide Web, content, share, collaborate, reliable, clone, sensing	**Vocabulary:** vector, group, layer, evaluate	**Vocabulary:** web design, CAD (computer assisted design)
Digital Literacy	Know what to do if they feel unsafe when using a digital device	Identify technology in school and at home Know how to use technology responsibly and safely	Explain how to use technology responsibly and what to do if they are worried about content or contact online Understand the difference between information that is safe to share and information that is not safe to share	Understand the uses of technology in the wider world Know what behaviour is acceptable/unacceptable online and explain how to stay safe online Give examples of personal information that should not be shared online	Explain how to use a range of technologies safely, respectfully and responsibly and explain the various ways concerns about content and contact online could be reported Understand the possible consequences and dangers associated with sharing personal information online Consider who owns online content and whether they have the right to reuse it		
	Vocabulary: password, online, safe, unsafe	**Vocabulary:** technology, online, e-safety, username, password	**Vocabulary:** personal, private, share, password, privacy, contact	**Vocabulary:** report, platform, support, social media	**Vocabulary:** copyright, ownership, plagiarism, digital footprint, cyber bullying, trolling, fake news		