The Computing Curriculum at Kings Heath Primary School

Subject intent

A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

The computing curriculum has 3 strands:

Computer Science (Programming) – Coding units will now replace the Switched ON Computing scheme, they are skill based and focus explicitly on coding and programming skills and knowledge. *These are full units of work and can be blocked or taught weekly but should contain a minimum of 6 hours teaching & learning.*

Online Safety – The Digital Literacy strand ensures our children are getting a consistent and progressive online safety message across a school year. Usually a stand-alone lesson once per half term.

Digital Literacy – these are skills which will enhance the every day teaching of core subjects, they are progressive and will provide children with a wide variety of multi-media knowledge and opportunity. These are EXPLICIT lessons / learning to be taught.

Computing overview

END OF YEAR EXPECTATIONS:

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
• Log on / off to a computer independently • How to open / reopen the internet on different devices • How to close programmes correctly (ipad / laptop)	• Create, save and load documents using a range of software (e.g. word, pages, PowerPoint, keynote) • use technology purposefully to create, organise, store, manipulate and retrieve digital content • recognise common uses of information technology beyond school • To write, open and reply to a simple email	• Create, save and load documents using a range of software (e.g. word, pages, PowerPoint, keynote) • Children to use a wider range of functions within programmes such as hyperlinking, spell checking and importing. • To open, reply and send emails with attachments	• Typing competence • Creating folders and organising their own work • To create tables & charts using Excel / Numbers	• Create 3D models using software • To name the main parts of a computer • Understand the term variable	• 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.

IT IS EXPECTED BY THE END OF KS1 ALL 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 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

IT IS EXPECTED BY THE END OF KS2 ALL 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
- use technology safely, respectfully and responsibly;
- recognise acceptable/unacceptable behaviour;
- identify a range of ways to report concerns about content and contact