COMPUTING

UNDERSTANDING OF THE WORLD 3 (Technology)

This document shows how our Computing curriculum develops from Nursery to Year 2.

<u>*Intent: EYFS*</u>

In the Early Years Foundation Stage (Nursery and Reception) our focus for teaching and learning is on developing the children's hands-on experience with technology. Our children have been born into a technological world and so we use IT to support learning across the curriculum. This includes exploring programmable toys, mark making and completing games linked to learning on the interactive whiteboard both independently and collaboratively. From Reception onwards, children also spend time learning with their teacher in the ICT room where they have access to computers and i-pads to develop specific computing skills and to enhance their learning across the curriculum. E-Safety and ensuring children know how to be safe online at home and at school is a safeguarding priority in school. Our E-Safety policy can be found on our website under 'Our School – Statutory Policies'. To keep our children safe at school, our Internet is highly filtered by Updata.

	Learning experiences – implementation	Key vocabulary	Development Matters in the EYFS
Nursery	• Developing independence in selecting CDs and using the CD player to listen to music • Exploring toys that move in different ways (cause and effect) • Exploring technological toys with knobs, buttons and pulleys (cause and effect) • Using the interactive whiteboard for mark making • Exploring and interacting with books and toys that make sounds (pressing buttons, lifting flaps) • Exploring, investigating and using torches	Computer, TV, mobile phone, camera, tablet, CD player, whiteboard, on/off, up/down, wind, turn, press	• Seeks to acquire basic skills in turning on and operating some ICT equipment. • Operates mechanical toys, e.g. turns the knob on a wind-up toy or pulls back on a friction car. • Knows how to operate simple equipment, e.g. turns on CD player and uses remote control. • Shows an interest in technological toys with knobs or pulleys, or real objects such as cameras or mobile phones. • Shows skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images. • Knows that information can be retrieved from computers
Reception	• Exploring, investigating and using torches, household implements, pulleys, construction kits, CD players, remote control resources • Use computers and I-pads to complete simple learning games, activities and research • Programming 'Beebots' (programmable toy) to follow simple instructions • Using the programme '2Go' to follow basic directions and instructions	Electricity, button, press, mouse, Internet, click, search, forwards, backwards, left, right, turn, number names	• Completes a simple program on a computer. • Uses ICT hardware to interact with age-appropriate computer software. **Early Learning Goal** Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.

Intent: Year 1 and 2

As the children move into Key Stage 1, we build on and develop from their experiences in the EYFS. Some computing skills are taught discretely but teaching is frequently linked to experiences across the curriculum in order to provide opportunities for children to apply their developing computing skills in meaningful contexts for learning.

The National Curriculum Key Stage 1 programmes of study for Computing tell us:

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.

	Learning experiences – implementation	Key vocabulary	National Curriculum Programmes for Study for Key Stage 1
Year 1	• Specific E-safety units are delivered in both Year 1 and Year 2 to emphasize the importance of safety online at home and at school • Researching - Researching for cross-curricular topic work using 'Espresso' • Coding - Espresso Year 1 units: building and moving characters in a sequence of movements (algorithms) • Programming - Programming Beebots to move around different mats and tracks. Extending instructions to include complex routes and reworking sequences when instructions fail. • Publishing – Using 2Publish to write non-chronological reports linked to topic. Creating speech bubbles, message borders.	**'Zip it! Block it! Flag it!'** is our mantra to ensure pupils are safe both in school and out of school. Stranger danger, Internet, private, personal information, age appropriate Drag, right, left, click, double click, unit, character, move, instructions, algorithm Beebot, mat, forwards, backwards, sequence, route, debug Type, record, information, picture, caption, heading, sub-heading	• 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. • 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.
Year 2	• E-safety - Playing age appropriate games, discussing online chat, closing and reporting inappropriate material (text and photos) • Email - Using email safely e.g. not sharing personal information online. • Coding - Espresso Year 2 units: building and moving characters in a sequence of movements (algorithms) • Researching - Researching for cross-curricular topic work using 'Espresso'	**'Zip it! Block it! Flag it!'** is our mantra to ensure pupils are safe both in school and out of school. Stranger danger, Internet, private, personal information, age appropriate, email, digital image, photograph.	• 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. • use technology purposefully to create, organise, store, manipulate and retrieve digital content. • recognise common uses of information technology beyond school

• What are Apps? • Publishing and word processing - Using Microsoft Office to word process documents for a particular purpose e.g. Harvest invitation and prayer (Year 2 Harvest Festival) • Publishing and creating - Using 2 (paint/publish) to produce a creative response to artwork e.g. Rousseau 'Tiger in a thunderstorm'.	Icon, double click, open, document, type, keyboard, mouse, monitor, save, retrieve, close, drive, network. Technology, computing, research, Google, search, Alexa, website, search engine. Paint, thin line, thick line, paint tools, spray can, fill, background, caption.	