



Bramley C of Infant and Nursery School

Computing

Our curriculum is designed to meet the expectations outlined in the National Curriculum and Early years foundations stage (EYFS) statutory framework. To support the Early years development, we use the Birth to 5 matters (non-statutory guidance.)

Intent

At Bramley C of E Infant and Nursery School, we aim to develop computer literate children that thrive in modern society. From an early age, we ensure that children are exposed to computing vocabulary, observe adults with technology and interact with devices on a meaningful level.

We design our curriculum to enhance computing in other subject areas such as English, maths and music – allowing children to embed and experiment with their new found skills.

Threaded within all computing, we highlight and enhance E-Safety – developing users who are conscientious of their online responsibilities. We discuss cyber bullying, its effects and varieties. We explore the sharing of personal data and social media. Most importantly, we identify technologies that are safe for children to use and what to do if they see something inappropriate.

Implementation

EYFS

In the Early Years Foundation Stage, children are exposed to technology in the world around them. They are encouraged to think about and interact with the mechanics of simple technology. Touch screen devices are introduced when ready, allowing children the formative skills of switching tablets or devices on and off and interacting with simple applications. This progresses and prepares children for computing in Key Stage 1.

KS1 and NCCE

In KS1, computing lessons follow the *National Centre for Computing Education* scheme of work, aligned to the National Curriculum. Tasks are broken down into units that target specific computing skills; coding, data input, creating media, programming, typing, and E-Safety.

During continuous/directed provision, children revisit prior computing learning – allowing autonomy and independence.

Impact

The school's teaching of computing is measured and assessed in a variety of ways. This informs the impact of our work and continuous reflection moving forward.

Assessment

Assessment in EYFS is predominantly formative, observing children as they interact with technology and develop foundation skills in computing.

Moving toward KS1, learning is measured against NCCE activities as formative and summative assessments. Learning is evidenced on paper where required and is supported by teacher judgement.

Observations

To ensure computing remains progressive, we observe lesson inputs and independent activity in class. Pupil engagement forms part of observations, where some are asked to explain what they have learnt and why it is of value to them.

Pupil Voice

To enrich our curriculum design, we ask children for feedback. Each term, we meet with a selection of children from each year group. Children tell us the things they enjoy about computing and things they might like to try moving forward.

Computing Golden Threads



Nursery / Preschool
ELG Understanding the world: Technology
Range 4-5

Reception
ELG Understanding the world: Technology
Range 5-6

Key Stage 1

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Y1	eSafety & Digital painting	Photography	eSafety & Coding	Coding	Digital writing	Digital writing
Y2	Coding	Coding	eSafety	Data	Coding	Digital Music



Core Knowledge and Skills

	Topic: Autumn	Topic: Light and Dark and Christmas	Topic: Nursery Rhymes	Topic: New Life and Easter	Topic: Friends and Family	Topic: Courage
Nursery	<p>Able to follow directions</p> <p>Enjoys drawing and writing, on screen</p> <p>Seeks to acquire the basic skills in turning on and operating some digital equipment</p> <p>Can talk about some of the things they have observed</p> <p>Shows their growing sense of self through likes/dislikes, choices and decisions</p> <p>Safer Internet Day: Smartie the penguin: What to do when you see/hear something online that makes you scared or worried</p> <p>Operates mechanical toys, e.g. turns the knob on a windup toy or pulls back friction car</p> <p>Identifies action words by following simple instructions</p> <p>Shows a sense of autonomy through asserting their ideas and preferences and making choices and decisions</p> <p>Can talk about using technology safely</p>					

Pre-School	<p>Handles books and touchscreens carefully.</p> <p>Expressing feelings in their interactions with others and beginning to talk about how others may be feeling.</p> <p>Following directions.</p> <p>Beginning to use talk to explain what is happening.</p> <p>Comments and asks questions about aspects of their familiar world.</p> <p>Manipulating a range of tools and equipment (in one hand if possible), showing increasing control.</p> <p>Taking practical action to reduce risk, showing understanding that equipment and tools need to be used safely.</p> <p>Talks about why things happen and how things work.</p> <p>Talk about their uses of technologies at home and in other environments</p> <p>When in the community and on trips to places such as the park, beginning to take photographs</p> <p>Safer Internet Day: Smartie the penguin: What to do when you see/hear something online that makes you scared or worried</p> <p>Shows interest in different occupations and ways of life.</p> <p>Talks more extensively about things that are important to them.</p> <p>Knows that information can be retrieved from digital devices and the internet.</p> <p>Develops an understanding of how to create and use sounds intentionally.</p> <p>Recognising the impact of their choices and actions on others.</p> <p>Can operate simple equipment, cameras and touchscreen devices.</p> <p>Beginning to navigate apps</p> <p>Responds to instructions with more than one element.</p> <p>Manipulating a range of tools and equipment (in one hand if possible), showing increasing control and understanding safety</p>
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	Topic: Autumn	Topic: Light and dark	Topic: Storytelling	Topic: A Bucketful of Imagination	Topic: Come Outside	Topic: Pirates and the Undersea World
Reception	<p>To be able to complete a simple computer program on electronic devices with adult support.</p> <p>To develop an understanding of our rules and routines in relation to the use of technology.</p> <p>To begin to talk about what it means to be safe online.</p> <p>To be able to open/turn on a device.</p> <p>To successfully use a touchscreen on an interactive whiteboard.</p>	<p>To be able to complete a simple computer program with greater independence.</p> <p>Beginning to be able to select a required app with some adult support.</p> <p>To begin to create content in the form of drawings on the interactive whiteboard.</p> <p>Enjoys digital books, both fiction and non-fiction.</p>	<p>To be able to complete a simple computer program independently.</p> <p>To be proactive in seeking adult support and able to articulate your wants and needs.</p> <p>To be able to coordinate actions to use technology with some support.</p> <p>Accesses digital books with greater independence.</p> <p>CEOP Jessie and friends eSafety YR Unit</p> <p>Watching videos</p>	<p>To begin to use the internet with adult support to find and retrieve information.</p> <p>Experiments with clicking on different icons to make different things happen in a computer program.</p>	<p>Develop an understanding of the purpose of different technologies.</p> <p>Knows that information can be retrieved from computers and mobile digital devices.</p> <p>To use the internet with adult supervision to find and retrieve information of interest to them.</p> <p>Greater confidence in coordinating actions to use technology more independently.</p>	<p>Plays with a range of programmable toys, as well as equipment involving ICT, such as computers, touchscreen devices, and internet-connected toys.</p>

KS1 Golden Threads	eSafety and Digital Painting Curriculum link: NC 1.4/1.5/1.6	Photography Curriculum link: NC 1.4/1.5/1.6	eSafety and Coding Curriculum link: NC 1.1/1.2/1.3/ 1.5/1.6	Coding Curriculum link: NC 1.1/1.2/1.3 1.5	Digital Writing Curriculum link: NC 1.4/1.6	Digital Writing Curriculum link: NC 1.4/1.6
Year 1	<p>NCCE Y1 Unit 1.6 eSafety Using a computer responsibly</p> <p>NCCE Y1 Unit 2.2 Digital painting Shapes and lines</p> <p>NCCE Y1 Unit 2.4 Digital painting Tools</p>	<p>NCCE Y2 Unit 2.1 Digital photography Taking photographs</p> <p>NCCE Y2 Unit 2.2 Digital photography Landscape or portrait</p> <p>NCCE Y2 Unit 2.3 Digital photography What makes a good photograph?</p> <p>NCCE Y2 Unit 2.5 Digital photography Effects</p>	<p>CEOP Jessie and friends eSafety Y1 Unit Sharing pictures</p> <p>NCCE Y1 Unit 3.1 Coding (Beebots) Buttons</p> <p>NCCE Y1 Unit 3.2 Coding (Beebots) Directions</p> <p>NCCE Y1 Unit 3.3 Coding (Beebots) Forwards and backwards</p>	<p>NCCE Y1 Unit 3.4 Coding (Beebots) Four directions</p> <p>NCCE Y1 Unit 3.5 Coding (Beebots) Getting there</p> <p>NCCE Y1 Unit 3.6 Coding (Beebots) Routes</p>	<p>NCCE Y1 Unit 5.1 Digital writing Exploring the keyboard</p> <p>NCCE Y1 Unit 5.2 Digital writing Adding and removing text</p>	<p>NCCE Y1 Unit 5.3 Digital writing Exploring the toolbar</p> <p>NCCE Y1 Unit 5.4 Digital writing Making changes to text</p>

KS1 Golden Threads	Coding Curriculum link: NC 1.1/1.2/1.3/ 1.4	Coding Curriculum link: NC 1.1/1.2/1.3/ 1.4	eSafety Curriculum link: NC 1.4/1.5/1.6	Data Curriculum link: NC 1.4/1.6	Coding Curriculum link: NC 1.1/1.2/1.3/ 1.4	Digital music Curriculum link: NC 1.4
Year 2	<p>NCCE Y1 Unit 6.1 Coding Comparing tools</p> <p>NCCE Y1 Unit 6.2 Coding Joining blocks</p> <p>NCCE Y1 Unit 6.3 Coding Make a change</p>	<p>NCCE Y1 Unit 6.4 Coding Adding sprites</p> <p>NCCE Y1 Unit 6.5 Coding Project design</p> <p>NCCE Y1 Unit 6.6 Coding Following my design</p>	<p>CEOP Jessie and friends eSafety Y2 Unit Playing games</p> <p>NCCE Y2 Unit 1.2 eSafety IT in school</p> <p>NCCE Y2 Unit 1.4 eSafety The benefits of IT</p> <p>NCCE Y2 Unit 1.5 eSafety Using IT safely</p>	<p>NCCE Y2 Unit 4.1 Data Counting and comparing</p> <p>NCCE Y2 Unit 4.2 Data Enter the data</p> <p>NCCE Y2 Unit 4.3 Data Creating pictograms</p> <p>NCCE Y2 Unit 4.4 Data What is an attribute?</p> <p>NCCE Y2 Unit 4.6 Data Presenting information</p>	<p>NCCE Y2 Unit 3.2 Coding Same but different</p> <p>NCCE Y2 Unit 3.3 Coding Making predictions</p> <p>NCCE Y2 Unit 3.4/3.5 Coding Mats and routes/algorithm design</p> <p>NCCE Y2 Unit 3.6 Coding Debugging</p>	<p>NCCE Y1 Unit 5.1 Digital Music How music makes us feel</p> <p>NCCE Y1 Unit 5.2 Digital Music Rhythms and patterns</p> <p>NCCE Y1 Unit 5.3 Digital Music How music can be used</p> <p>NCCE Y1 Unit 5.4 Digital Music Notes and tempo</p> <p>NCCE Y1 Unit 5.5 Digital Music Creating digital music</p> <p>NCCE Y1 Unit 5.6 Digital Music</p>

						Reviewing and editing music
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National curriculum statements

1.1 understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions

1.2 create and debug simple programs

1.3 use logical reasoning to predict the behaviour of simple programs

1.4 use technology purposefully to create, organise, store, manipulate and retrieve digital content

1.5 recognise common uses of information technology beyond school

1.6 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.