

### Our approach to the Computing Curriculum in Early Years Foundation Stage

**“A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world.” DfE 2013**

In the EYFS at Broke Hall Primary School we lay the foundations on which future learning is built. Our aim is for children to be digitally literate: the ability to be able to express themselves and communicate ideas using tools and technology and participate fully in the modern digital world and laying the foundations of computational thinking.

We recognise that computing as a subject can be learned without using computers. We plan computing activities which

- are imaginative and fun
- challenge
- involve being creative
- require collaboration and sharing
- involve listening, understanding, following and giving instructions
- encourage describing, explaining and elaborating
- encourage investigation
- involve problem solving
- include lots of ‘unplugged’ activities: computing without computers

We focus greatly on computational thinking which runs throughout our curriculum.

Internet safety is paramount and we understand we have a duty to keep children safe and teach them how they can keep themselves safe online through taking part in Internet Safety Week and through stories such as Unplugged and Chicken Clickin. Online safety is also incorporated into Anti-Bullying Week and we educate parents through newsletters, giving support where needed. Children also learn how to keep equipment safe and how to handle and use it properly.

### **Computational Thinking in EYFS**

In EYFS, computational thinking is developed through play, routines, stories, problem-solving, and talk. Children learn to sequence, follow and give instructions, recognise patterns, solve problems, and persist with challenges. These skills are embedded across all areas of learning and support children’s thinking, communication, and independence.

### Development Matters – Mapping Table

Area of Learning	Development Matters Focus	Nursery – What this looks like	Reception – What this looks like	Key Vocabulary
<b>Communication &amp; Language</b>	Understanding instructions, sequencing ideas, explaining thinking	Follows simple instructions; responds to sequencing language	Gives clear step-by-step instructions; explains thinking and choices	first, next, then, last, because, why
<b>PSED</b>	Persistence, confidence, managing challenges	Tries again with adult support; accepts help	Identifies problems; adapts approach independently	try, fix, change, check, keep going
<b>Physical Development</b>	Spatial awareness, following directions	Responds to positional language; moves body on request	Plans and sequences movement; uses directional language	forward, backward, left, right, up, down

<b>Mathematics</b>	Patterns, sorting, order, position	Sorts by one feature; copies simple patterns	Sorts by multiple features; creates and explains patterns	pattern, repeat, same, different, sort
<b>Understanding the World</b>	Cause and effect, how things work, technology	Explores through trial and error	Predicts outcomes; uses technology purposefully	if, then, why, happen
<b>Expressive Arts &amp; Design</b>	Planning, creating, refining ideas	Explores materials freely; repeats actions	Plans creations; evaluates and improves work	plan, make, change, improve

### Curriculum Progression:

Nursery	Reception
<p><b><u>Vocabulary</u></b> First, next, instruction, rule, turn, stop, go, forwards, backward, repeat, pattern, same, different, again</p> <p><b><u>Knowledge/ Skills</u></b> <b>Algorithms and programming</b></p> <ul style="list-style-type: none"> <li>• Extends and create ABAB patterns – stick, leaf, stick, leaf.</li> <li>• Follow 1-2 step instructions</li> <li>• Gives simple instructions</li> <li>• Predicts what comes next</li> <li>• Notice and correct an error in a repeating pattern (debugging).</li> <li>• Respond to and ask “I wonder...” questions</li> </ul> <p><b>Information Technology</b></p> <ul style="list-style-type: none"> <li>• Know how to operate simple equipment and toys with knobs, pullies etc.</li> <li>• Children can switch devices on &amp; off</li> <li>• Navigate familiar apps on smartboard</li> </ul> <p><b>Digital Literacy</b></p> <ul style="list-style-type: none"> <li>• Uses ICT hardware to interact with age-appropriate computer software</li> <li>• Completes a simple program on electronic devices</li> </ul> <p><b>Online Safety</b></p> <ul style="list-style-type: none"> <li>• Children know that being on screen all the time can mean they miss out on other things</li> <li>• Children can talk about different things to do when not on screen</li> </ul>	<p><b><u>Vocabulary</u></b> Sequencing/directional words (first, next, last, before, after, left, right, up, down etc), because, why, try, fix, change, improve, sort</p> <p><b><u>Knowledge/ Skills</u></b> <b>Algorithms and programming</b></p> <ul style="list-style-type: none"> <li>• Follow 3 + step instructions</li> <li>• Begin to describe a sequence of events, real or fictional, using words such as ‘first’, ‘then...’ (this later becomes an algorithm)</li> <li>• Programmes movement using Beebots or role play</li> <li>• follow and create sets of instructions for a planned outcome, test and debug</li> <li>• Solve a practical problem through trial and improvement</li> <li>• Ask questions about the best way to solve a problem</li> </ul> <p><b>Information Technology</b></p> <ul style="list-style-type: none"> <li>• To make toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images</li> <li>• Describe some of the ways in which ICT might be used in day-to-day family life.</li> <li>• Select, open and navigate familiar apps</li> </ul> <p><b>Digital Literacy</b></p> <ul style="list-style-type: none"> <li>• Can create content such as a video recording, stories, and/or draw a picture on screen</li> <li>• Independently use classroom technology purposefully during independent learning time.</li> </ul> <p><b>Online Safety</b></p> <ul style="list-style-type: none"> <li>• Children understand that we need to be safe online</li> <li>• Children understand that we should not buy things online before checking with a trusted adult</li> <li>• discuss why we need to be open and honest with trusted adults</li> <li>• explain that we should never arrange to meet someone we have met online</li> </ul>