Early Computing

The Early Years Foundation Stage (EYFS) computing curriculum builds foundational problem-solving and digital literacy skills through play-based learning and cross-curricular activities rather than a formal standalone subject.

Core Components of Early Computing

- Unplugged Activities: Developing logical thinking, pattern spotting, and algorithmic awareness through games, storytelling, and physical play without screens.
- Tinkering and Exploration: Allowing children to press buttons, lift flaps, and figure out how everyday mechanical or electronic toys work.
- Familiarisation with Hardware: Introducing basic equipment like tablets, digital cameras, interactive whiteboards, and programmable toys (such as Bee-Bots).
- Resilience and Debugging: Encouraging trial and error when a toy or simple program does not do what the child expects.

By the end of the Reception year in England, children are expected to achieve goals including:

Personal, Social and Emotional Development

- Show resilience and perseverance in the face of a challenge.
- Know and talk about the different factors that support their overall health and wellbeing: sensible amounts of 'screen time'.

Physical Development

- Develop their small motor skills so that they can use a range of tools competently, safely and confidently.

Mathematics

- Count objects, actions and sounds.
- Link the number symbol (numeral) with its cardinal number value.
- Select, rotate and manipulate shapes to develop spatial reasoning skills.
- Continue, copy and create repeating patterns.

Expressive Art and Design

- Explore, use and refine a variety of artistic effects to express their ideas and feelings.

The activities offered in the EYFS environment:

Technology in the Environment

Understanding how technology functions in the real world.

- Identifying technology: Recognising everyday devices like traffic lights, barcode scanners, tablets, and remote controls.
- Understanding purpose: Learning that technology is a tool built by humans to help us solve problems or complete tasks.
- Roleplay exploration: Using old keyboards, non-functional phones, or wooden devices in imaginative play to mimic adult tech use.

Early Algorithms & Sequencing

Building the logical foundation for computer coding without using a screen.

- Following instructions: Completing step-by-step tasks, such as following a recipe or building a Lego model.
- Giving directions: Using directional language (forward, backward, turn) to guide a friend or a programmable toy (like a Bee-Bot) through a maze.
- Pattern recognition: Spotting and repeating patterns in music, dance, or blocks, which mirrors how computers process routines.

Cause and Effect (Interactive Media)

Learning that an action produces a specific, predictable reaction.

- Button pressing: Exploring toys where pressing a button makes a light turn on, a sound play, or a flap pop up.
- Digital interaction: Using a touchscreen to drag an object, trace a letter, or play a simple, age-appropriate game.
- Control mechanics: Discovering how to control a digital environment using a mouse, trackpad, or joystick.

Digital Literacy & Safety

Staying safe and understanding boundaries in a digital world.

- E-Safety foundations: Learning to ask a trusted adult before using a device or when seeing something unusual on a screen.
- Screen balance: Developing an early understanding of healthy screen time limits versus active, physical play.
- Ownership and respect: Knowing that digital content (like a photo or a drawing on a tablet) belongs to someone and should be treated with care.