



Computing- Curriculum Overview

Curriculum Intent

Intent: We recognise that computers underpin today's modern lifestyle. Our vision is to develop independent learners who are well equipped for their future and aim for all children to gain the appropriate knowledge, skills, and competencies. They will develop confidence and independence to plan, design, create, program and evaluate information through the use of IT. Lessons will introduce the children to new computing skills and allow them to practise skills already taught. It is vital that the children learn safely and begin to develop their e-safety skills and knowledge. We aim to ensure they can use digital technology thoughtfully throughout their lives.

The computing curriculum reflects our school values in the following ways:

Ready:

We always try our best
We keep going when things get difficult
We set high expectations of ourselves
We are positive about new challenges

Respectful:

We look after our environment and our equipment
We respect difference and know that we are all equal

Responsible:

We look after ourselves and each other

Algorithms		
	Y1	Y2
Knowledge	Use some logical reasoning to predict the behaviour of simple programmes.	Understand what algorithms are, how they are implemented and that programmes work by following precise and clear instructions Create and debug simple programs

COMPUTING SKILLS				
PROGRAMMING				
	Nursery	Reception	Y1	Y2
Knowledge	Make a Bee-Bot move. Choose which buttons to press. Bee-Bots, floor maps, programmable toys.	Make a Bee-Bot follow a map. Press buttons in the right order to make a Bee-Bot do what I want it to do. Use simple software to make things happen.	Give and follow instructions with a friend to move around. Describe what will happen when I press buttons on a Bee-Bot. Press the buttons on an iPad in the right order to make my Blue-Bot follow a map. Describe what actions I need to do to make something happen and use the word algorithm. Begin to predict what will happen for a short sequence of instructions. Begin to use software/apps to create movement and patterns on a screen. Use the word debug when I correct mistakes when I program.	Give instructions to a friend (forwards, backwards, left and right turn) and follow their instructions. Use the word algorithm to talk about the order I need to do things in to make something happen. Program a robot or software to do a particular task. Read a written program and tell you what will happen. Use programming software to make objects move. Watch a program execute and spot where it goes wrong so that I can debug it.

E-SAFETY				
	Nursery	Reception	Y1	Y2
Knowledge	Stay on the program that an adult has put on. Be kind to my friends when I use the computer. Adult to select website / program,	Ask an adult when I want to use a computer. Use programs that I have been shown before. Follow the steps I have been shown to find a new program or website. Talk about the amount of time I spend using a computer, tablet or game device. Be careful with technology devices.	Begin to learn my username and password and keep it private. Tell you what personal information is. Tell an adult when I see something unexpected or worrying online. Talk about why it's important to be kind and polite. Recognise an age-appropriate website. Agree and follow sensible e-Safety rules. Follow my teacher's instructions to find a website. Discuss e-safety rules and explain why they are important KIDS SAFE: E-SAFETY programme	Explain why I need to keep my username, password and personal information private. Talk about things that might be online that I should tell an adult about. Talk about why I shouldn't stay on a computer for long amounts of time. Talk about why it is importance to be kind and polite online and in real life. Know that not everyone is who they say they are on the Internet. Understand the importance of e-safety rules and sign to say they will follow them. KIDS SAFE: E-SAFETY programme

DATA HANDLING				
	Nursery	Reception	Y1	Y2
Knowledge	Playing games on the interactive whiteboard. Watching a video clip.	Talk about different kinds of information such as pictures, video, text and sound. Use a mouse to move objects on a screen. Drag and drop using a mouse. Select a program by double clicking a mouse. Use a range of tools in a drawing program and add simple text. Add information to pictograms and tally charts. Use a computer program to find out information. Use an iPad to take photographs.	Talk about the different ways in which information can be shown such as pictures, video, text and sound. Combine different kinds of information such as photos, drawings and text. Use technology to create and present my ideas. Use the keyboard to type text. Save information and retrieve it again.	Talk about different ways I use technology to collect information, e.g. an iPad for photos and video. Make a chart or graph to show data and talk about my findings. Tell you what kind of information I could use to help me investigate a question. Use technology to organise and present my ideas in different ways. Use the keyboard to type, delete, space and edit text. Save and retrieve files on the computer.

TECHNOLOGY IN THE WORLD AROUND US				
	Nursery	Reception	Y1	Y2
Knowledge	Talk about different kinds of information such as pictures and words. Move objects on a screen. Draw pictures on a computer/ iPad.	Talk about technology that is used at home and in school. Use a safe part of the Internet to play and learn. Use technology to enhance my learning and play. Talk about different technology that they use at home and explain that phones etc. are ICT.	Recognise the ways we use technology in our classrooms. Recognise ways that technology is used in my home. Use links to websites to find information. Begin to identify some of the benefits of using technology. Understand and talk about the use of different technologies at home and in school	Explain why I use technology in school. Explain why I use technology in my home. Start to understand that other people have created the information I use. Identify benefits of using technology including finding information, creating and communicating. Talk about the difference between the Internet and things in the physical world. Google Earth, Google Expeditions. Understand how technology is used to enhance everyday life and talk about the benefits

Vocabulary Progression			
Nursery	Reception	Year 1	Year 2
	Computer, click /drag, turn /pull /push /wind /lift /press /twist, button, log in /log out, app, double click, interactive screen / whiteboard, projector /speaker /sound, key /keyboard, laptop, monitor, mouse / mouse mat, headphones, camera, television, iPad /tablet, telephone /mobile phone, CD /DVD player /video, remote control, printer	Algorithm, app, log in /log out, key /keyboard, caps lock, computer program, create, debug / debugging, email, folder, font, online, icon, copy/paste, technology, software /hardware, digital devices, logical reasoning, control, save, scroll, search engine, shift key, username /password, website, delete, Internet, program, sequence, e-safety, open (retrieve files and information), instructions, data, information, touchscreen, Wi-Fi	
Alongside this list, it is important to ensure the children in both EYFS and KS1 recognise technology and the uses of it beyond the school, in their homes and outside environment.			