



Becontree Primary School

Computing Curriculum Overview

Nursery Objectives

Reception Objectives

Objectives covered in both phases

	Programming		Data	Communication	Digital Literacy & Research	Multimedia
EYFS	Objectives		Objectives	Objectives	Objectives	Objectives
	P0.1 Use a variety of electronic toys in play situations (dance mats, remote control toys) using basic directional language		Graphs: D0.1 Begin to develop simple classification skills by carrying out simple sorting activities away from the computer	Word processing: C0.1 Develop mouse control on different devices: • Use mouse to draw a simple picture • Use mouse to select a simple tool • Use mouse to open software	Research: R0.1 Use a shortcut to open a website or select an appropriate app R0.2 Use buttons on a webpage to explore the website R0.3 Know who to go to if they need help when on internet	Creating images: M0.1 Listen to stories, music on digital devices M0.2 Use camera or mobile device to collect photographs M0.3 Use sound recorder or mobile device to record sounds
	P0.2 Respond to simple cause and effect devices (e.g. push a button to hear a sound)		D0.2 Continue to develop simple classification skills by carrying out simple sorting activities using computing			
	P0.3 Explore toys that simulate control devices e.g. traffic lights, scanner, microwave, cash tills			C0.2 Use a paint program to make marks, using simple tools, to communicate their ideas		
	P0.4 Explore a simple adventure program or simulation / role play software		D0.3 Produce simple paper-based pictograms as part of a group	C0.3 Use different forms of electronic communication in free play		
	P0.5 Explore the commands needed to control a range of electronic toys		D0.4 Produce simple pictograms on the computer as part of a group	C0.4 Begin to use a keyboard to produce text on screen, and develop familiarity with letters, numbers, backspace, arrow keys and space bar • Use keyboard to type their name • Match upper case and lower case letters		
	P0.6 Be aware of everyday devices that sense data e.g. bar codes, metal detectors, sound recorders, light sensors, automatic doors, thermometers, library card					
	P0.7 Be aware that people and computers follow instructions					
	P0.8 Program a simple floor robot (Bee-Bot / Roamer) to carry out a short sequence of steps					
Relevant statements for computing from 2020 Development Matters	Three and Four-Year-Olds	Personal, Social and Emotional	Remember rules without needing an adult to remind them.			
		Development Physical Development	Match their developing physical skills to tasks and activities in the setting.			
		Understanding the World	Explore how things work.			
	Reception	Personal, Social and Emotional	Show resilience and perseverance in the face of a challenge.			
		Development Physical Development	Know and talk about the different factors that support their overall health and wellbeing: -sensible amounts of 'screen time'.			
		Expressive Arts and Design	Develop their small motor skills so that they can use a range of tools competently, safely and confidently. Explore, use and refine a variety of artistic effects to express their ideas and feelings.			

	Autumn A Technology in Our Classroom	Autumn B Digital painting	Spring A Moving a robot	Spring B Grouping data	Summer A Digital writing	Summer B Programming animations
Yr 1 Online safety taught within each unit	Digital Literacy(E-safety) • To create rules to keep us safe and healthy when we are using technology	Digital literacy(E-safety) • To compare staying safe online to the real world	Digital Literacy (E-safety) • To explain why it is important to be kind to people online	Digital Literacy (E-safety) • To know when to speak to adults about online worries.	Digital Literacy (E-safety) • To identify personal information.	Digital Literacy (E-safety) • To explain the purpose of passwords
	Digital literacy: Computing Systems and Networks • To identify technology • To identify a computer and its main parts • To use a mouse in different ways • To use a keyboard to type • To use the keyboard to edit text • To create rules for using technology responsibly	Information Technology: Creating Media • To describe what different freehand tools do • To use the shape tool and the line tools • To make careful choices when painting a digital picture • To explain why I chose the tools I used • To use a computer on my own to paint a picture • To compare painting a picture on a computer and on paper	Computer Science: Programming A • To explain what a given command will do • To act out a given word • To combine forwards and backwards commands to make a sequence • To combine four direction commands to make sequences • To plan a simple program • To find more than one solution to a problem	Information Technology: Data and information • To label objects • To identify that object can be counted • To describe objects in different ways • To count objects with the same properties • To compare groups of objects • To answer questions about groups of objects	Information Technology: Creating media • To use a computer to write • To add and remove text on a computer • To identify that the look of text can be changed on a computer • To make careful choices when changing text • To explain why I used the tools that I chose • To compare typing on a computer to writing on paper	Computer Science: Programming B • To choose a command for a given purpose • To show that a series of commands can be joined together • To identify the effect of changing a value • To explain that each sprite has its own instructions • To design the parts of a project • To use my algorithm to create a program

	Autumn A IT around us	Autumn B Digital photography	Spring A Robot algorithms	Spring B Pictograms	Summer A Digital music	Summer B Programming quizzes
Yr 2 Online safety taught within each unit	Digital Literacy (E-safety) To identify ways to use information technology safely (create a poster)	Digital Literacy (E-safety) To explain the importance of asking for permission when taking photos (create a poster about taking photographs of someone)	Digital Literacy (E-safety) To explain the importance of passwords	Digital Literacy(E-safety) To display myself appropriately online	Digital Literacy (E-safety) To explain strategies to use when dealing with concerns over content or contact online	Digital Literacy (E-safety) To identify safe decisions for online scenarios.
	Digital Literacy: Computing systems and network: - To recognise the uses and features of information technology - To identify the uses of information technology in the school - To identify information technology beyond school - To explain how information technology helps us - To explain how to use information technology safely - To recognise that choices are made when using information technology	Information Technology: Creating media - To use a digital device to take a photograph - To make choices when taking a photograph - To describe what makes a good photograph - To decide how photographs can be improved - To use tools to change an image - To recognise that photos can be changed	Computer science Programming A: - To describe a series of instructions as a sequence - To explain what happens when we change the order of instructions - To use logical reasoning to predict the outcome of a program - To explain that programming projects can have code and artwork - To create and debug a program that I have written	Information Technology Data and Information: - To recognise that we can count and compare objects using tally charts - To recognise that objects can be represented as pictures - To create a pictogram - To select objects by attribute and make comparisons - To recognise that people can be described by attributes - To explain that we can present information using a computer	Information Technology: Creating media: - To say how music can make us feel - To identify that there are patterns in music - To experiment with sound using a computer - To use a computer to create a musical pattern - To create music for a purpose - To review and refine our computer work	Computer science: Programming B: - To explain that a sequence of commands has a start - To explain that a sequence of commands has an outcome - To create a program using a given design - To change a given design - To create a program using my own design - To decide how my project can be improved

	Autumn A Connecting Computers	Autumn B Stop-Frame Animation	Spring A Sequencing Sounds	Spring B Branching Databases	Summer A Desktop Publishing	Summer B Events and Actions in Programs
Yr 3 Online safety taught within each unit	Digital Literacy (E-safety) • To identify rules on how to stay safe online	Digital Literacy • To explain why information on the internet is not always accurate	Digital Literacy • To identify ways information can be found online about people	Digital Literacy • To formulate rules about how to stay safe using Emails	Digital Literacy • To describe digital footprint	Digital Literacy • To identify ways the internet connects people
	Digital Literacy: Computing systems and networks - To explain how digital devices function - To identify input and output devices - To recognise how digital devices can change the way we work - To explain how a computer network can be used to share information - To explore how digital devices can be connected - To recognise the physical components of a network	Information Technology: Creating media - To explain that animation is a sequence of drawings or photographs - To relate animated movement with a sequence of images - To plan an animation - To identify the need to work consistently and carefully - To review and improve an animation - To evaluate the impact of adding other media to an animation	Computer Science: Programming A - To explore a new programming environment - To identify that commands have an outcome - To explain that a program has a start - To recognise that a sequence of commands can have an order - To change the appearance of my project - To create a project from a task description	Information Technology: Data and information - To create questions with yes/no answers - To identify the attributes needed to collect data about an object - To create a branching database - To explain why it is helpful for a database to be well structured - To plan the structure of a branching database - To independently create an identification tool	Information Technology: Creating media - To recognise how text and images convey information - To recognise that text and layout can be edited - To choose appropriate page settings - To add content to a desktop publishing publication - To consider how different layouts can suit different purposes - To consider the benefits of desktop publishing	Computer Science: Programming B - To explain how a sprite moves in an existing project - To create a program to move a sprite in four directions - To adapt a program to a new context - To develop my program by adding features - To identify and fix bugs in a program - To design and create a maze-based challenge

	Autumn A The Internet	Autumn B Audio Production	Spring A Repetition in Shapes	Spring B Data Logging	Summer A Photo editing	Summer B Repetition in Games
Yr 4 Online safety taught within each unit	Digital Literacy (E-safety) • To evaluate the consequences of unreliable content	Digital Literacy(E-safety) • To identify ways people steal personal information	Digital Literacy (E-safety) • To analyse how technology can impact on lifestyles	Digital Literacy (E-safety) • To assess the credibility of source on the internet	Digital Literacy (E-safety) • To create secure passwords	Digital Literacy (E-safety) • To identify the risks and benefits of installing software including apps.
	Digital Literacy: Computing Systems and Networks • To describe how networks physically connect to other networks • To recognise how networked devices make up the internet • I can describe where websites are stored when uploaded to the WWW • To describe how content can be added and accessed on the World Wide Web (WWW) • To recognise how the content of the WWW is created by people • To evaluate the consequences of unreliable content	Information Technology: Creating Media • To identify that sound can be recorded • To explain that audio recordings can be edited • To recognise the different parts of creating a podcast project • To recognise the different parts of creating a podcast project • To combine audio to enhance my podcast project • To evaluate the effective use of audio	Computer Science: Programming A • To identify that accuracy in programming is important • To create a program in a text-based language • To explain what 'repeat' means • To modify a count-controlled loop to produce a given outcome • To decompose a task into small steps • To create a program that uses count-controlled loops to produce a given outcome	Information Technology: Data and Information • To explain that data gathered over time can be used to answer questions • To use a digital device to collect data automatically • To explain that a data logger collects 'data points' from sensors over time • To recognise how a computer can help us analyse data • To identify the data needed to answer questions • To use data from sensors to answer questions	Information Technology: Creating Media • To explain that the composition of digital images can be changed • To explain that colours can be changed in digital images • To explain how cloning can be used in photo editing • To explain that images can be combined • To combine images for a purpose • To evaluate how changes can improve an image	Computer Science: Programming B • To develop the use of count-controlled loops in a different programming environment • To explain that in programming there are infinite loops and count controlled loops • To develop a design that includes two or more loops which run at the same time • To modify an infinite loop in a given program • To design a project that includes repetition • To create a project that includes repetition

	Autumn A Systems and searching	Autumn B Video Production	Spring A Selection in Physical Computing	Spring B Flat-File Databases	Summer A Introduction to Vector Graphics	Summer B Selection in Quizzes
Yr 5 Online safety taught within each unit	Digital Literacy (E-safety) To explain how online identity can be copied, modified or altered	Digital Literacy (E-safety) To identify ways to collaborate positively online	Digital Literacy (E-safety) To describe ways that information online can be used by others to make a judgement	Digital Literacy (E-safety) To describe ways technology can affect healthy lifestyles	Digital Literacy (E-safety) To consider the consequences of plagiarism.	Digital Literacy(E-safety) To identify the advantages, disadvantages, permissions and purposes of altering an image digitally and the reasons for this
	Digital Literacy: Computing system and networks - To explain that computers can be connected together to form systems - To recognise the role of computer systems in our lives - To experiment with search engines - To describe how search engines select results - To explain how search results are ranked - To recognise why the order of results is important, and to whom	Information Technology: Creating media - To explain what makes a video effective - To identify digital devices that can record video - To capture video using a range of techniques - To create a storyboard - To identify that video can be improved through reshooting and editing - To consider the impact of the choices made when making and sharing a video	Computer Science: Programming A - To control a simple circuit connected to a computer - To write a program that includes count-controlled loops - To explain that a loop can stop when a condition is met - To explain that a loop can be used to repeatedly check whether a condition has been met - To design a physical project that includes selection - To create a program that controls a physical computing project	Information Technology: Data and Information - To use a form to record information - To compare paper and computer-based databases - To outline how you can answer questions by grouping and then sorting data - To explain that tools can be used to select specific data - To explain that computer programs can be used to compare data visually - To use a real-world database to answer questions	Information Technology: Creating Media - To identify that drawing tools can be used to produce different outcomes - To create a vector drawing by combining shapes - To use tools to achieve a desired effect - To recognise that vector drawings consist of layers - To group objects to make them easier to work with - To apply what I have learned about vector drawings	Computer Science: Programming B - To explain how selection is used in computer programs - To relate that a conditional statement connects a condition to an outcome - To explain how selection directs the flow of a program - To design a program which uses selection - To create a program which uses selection - To evaluate my program

	Autumn A Communication and Collaboration	Autumn B Web Page Creation	Spring A Variables in Games	Spring B Introduction to Spreadsheets	Summer A 3D Modelling	Summer B Sensing Movement
Yr 6 Online safety taught within each unit	Digital Literacy: To explain why websites have age restrictions	Digital Literacy: To explain the purpose of privacy settings	Digital Literacy: To explore how you would report cyberbullying	Digital Literacy: To interpret emotions behind texts and messages	Digital Literacy: To identify the positive and negative influences of technology on health and the environment.	Digital Literacy (E safety) To explain how and why apps request payment
	Digital Literacy: Computing system and networks - To explain the importance of internet addresses - To recognise how data is transferred across the internet - To explain how sharing information online can help people to work together - To evaluate different ways of working together online - To recognise how we communicate using technology - To evaluate different methods of online communication	Information Technology: Creating media - To review an existing website and consider its structure - To plan the features of a web page - To consider the ownership and use of images (copyright) - To recognise the need to preview pages - To outline the need for a navigation path - To recognise the implications of linking to content owned by other people	Computer Science: Programming A - To define a 'variable' as something that is changeable - To explain why a variable is used in a program - To choose how to improve a game by using variables - To design a project that builds on a given example - To use my design to create a project - To evaluate my project	Information Technology: Data and Information - To create a data set in a spreadsheet - To build a data set in a spreadsheet - To explain that formulas can be used to produce calculated data - To apply formulas to data - To create a spreadsheet to plan an event - To choose suitable ways to present data - To develop a program to use inputs and outputs on a controllable device	Information Technology: Creating Media - To recognise that you can work in three dimensions on a computer - To identify that digital 3D objects can be modified - To recognise that objects can be combined in a 3D model - To create a 3D model for a given purpose - To plan my own 3D model - To create my own digital 3D model	Computer Science: Programming B - To create a program to run on a controllable device - To explain that selection can control the flow of a program - To update a variable with a user input - To use a conditional statement to compare a variable to a value - To design a project that uses inputs and outputs on a controllable device Transition Project - Creating a micro: bit counter - Creating a micro: bit timer