



Reception

Computing (non-statutory)

Computing will be woven into different areas of learning and the non-statutory guidance from Birth to 5 will be used.

Knowledge and Skills: (Taken from Birth to Five Non-Statutory)

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'.
- Shows confidence in choosing resources and perseverance in carrying out a chosen activity

Physical Development

- Develop their small motor skills so that they can use a range of tools competently, safely and confidently.
- Uses simple tools to effect changes to materials
- Handles tools, objects, construction and malleable materials safely and with increasing control and intention

Expressive Arts and Design

- Explore, use and refine a variety of artistic effects to express their ideas and feelings.
- Completes a simple program on electronic devices
- Uses ICT hardware to interact with age appropriate computer software
- Can create content such as a video recording, stories, and/or draw a picture on screen
- Develops digital literacy skills by being able to access, understand and interact with a range of technologies
- Can use the internet with adult supervision to find and retrieve information of interest to them

Statutory ELG: NONE

ELG Links

ELG Personal, Social and Emotional Development (Managing Self)

Children at the expected level of development will:

- Be confident to try new activities and show independence, resilience and perseverance in the face of challenge.
- Explain the reasons for rules, know right from wrong and try to behave accordingly.

ELG Expressive Arts and Design (Creating with Materials)

Children at the expected level of development will:

- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.

Birth to Five Matters:

Children require access to a range of technologies, both digital and non-digital in their early lives. Exploring with different technologies through play provides opportunities to develop skills that children will go on to develop in their lifetimes. Investigations, scientific inquiry and exploration are essential components of learning about and with technology both digitally and in the natural world. Through technology children have additional opportunities to learn across all areas in both formal and informal ways. Technologies should be seen as tools to learn both from and with, in order to integrate technology effectively within early years practice

	Autumn			Spring			Summer		
	Theme	Key Objectives (Chris Quigley)	Knowledge and Skills	Theme	Key Objectives (Chris Quigley)	Knowledge and Skills	Theme	Key Objectives (Chris Quigley)	Knowledge and Skills
Year 1 1st half term	Espresso block coding Unit 1a	<ul style="list-style-type: none"> ➤ To code 	<ul style="list-style-type: none"> • Understand what an algorithm is • Move skills to drag and drop • Write and test simple programmes • Predict behaviour of simple programmes 	We are TV chefs	<ul style="list-style-type: none"> ➤ To communicate ➤ To collect ➤ To connect ➤ To code 	<ul style="list-style-type: none"> • Investigate recipes and TV cookery programmes • Programme a sandwich making robot • Film a recipe video on iPads • Edit and review video • Upload to iMovie 	We are rhythmic	<ul style="list-style-type: none"> ➤ To communicate ➤ To collect ➤ To code 	<ul style="list-style-type: none"> • Record audio on an i-Pad • Programme ScratchJr to create repeating patterns • Explore different effects that can be applied to audio. • Experiment with a range of virtual instruments
2nd half term	We are treasure hunters	<ul style="list-style-type: none"> ➤ To code ➤ To collect 	<ul style="list-style-type: none"> • Record a simple algorithm • Begin to programme beebots • Create a debug simple programs. • Debug algorithms 	We are digital artists	<ul style="list-style-type: none"> ➤ To connect ➤ To communicate ➤ To collect 	<ul style="list-style-type: none"> • Design own illustrations on paper • Create and store illustrations using 2simple • Retrieve and manipulate illustration • Add texts to illustrations to design an e-book 	We are detectives	<ul style="list-style-type: none"> ➤ To collect ➤ To communicate 	<ul style="list-style-type: none"> • Organise data into groups and subgroups • Organise data into a table • Present data in different formats.
Year 2 1st half term	Espresso block coding- start, 2a	<ul style="list-style-type: none"> ➤ To code 	<ul style="list-style-type: none"> • Understand what an algorithm is • Build blocks to create a simple algorithm 	We are game testers	<ul style="list-style-type: none"> ➤ To connect ➤ To code 	<ul style="list-style-type: none"> • Understand what an algorithm is • Begin to programme an algorithm using scratch 	We are animators	<ul style="list-style-type: none"> ➤ To communicate 	<ul style="list-style-type: none"> • Understand how animation works • Storyboard to plan animation

			<ul style="list-style-type: none"> • Write and test simple programs • Predict behaviour using simple programmes • Begin to debug simple algorithms 			<ul style="list-style-type: none"> • Predict simple programme behaviour • Use technology safely 			<ul style="list-style-type: none"> • Create characters, props and backgrounds • Record audio to accompany animation
2nd half term	We are astronauts	➤ To code	<ul style="list-style-type: none"> • Understand what algorithms are • Use beebots to familiarise with algorithms and inputs • Use Scratch to create sprites and backgrounds • Creating multiple images • Simple algorithms to control movement 	We are zoologists	<ul style="list-style-type: none"> ➤ To communicate ➤ To collect 	<ul style="list-style-type: none"> • Record information as a tally • Write data in excel • Produce bar chart/graphs • Discover google maps 	We are photographers	<ul style="list-style-type: none"> ➤ To connect ➤ To communicate 	<ul style="list-style-type: none"> • Consider technical and artistic merits of photographs • Review, reject and pick images • Edit and enhance photographs
Year 3 1st half term	Espresso coding	➤ To code	<ul style="list-style-type: none"> • Design and write for specific goals • Use sequence, selection, and repetition in programs • Work with variables and various forms of input and output • Generate appropriate inputs and predicted outputs to test programs • Use logical reasoning to explain simple algorithms, detect and correct errors • 	We are bug fixers	➤ To code	<ul style="list-style-type: none"> • Develop a number of strategies for finding errors in programs • Build up resilience and strategies for problem solving • Increase their knowledge and understanding of Scratch • Recognise a number of common types of bug in software. 	We are co-authors	<ul style="list-style-type: none"> ➤ To collect ➤ To communicate ➤ To connect 	<ul style="list-style-type: none"> • Practise research skills • Write for a target audience • Develop collaborating and proofreading skills • Be aware of their responsibilities when editing other people's work
2nd half term	We are programmers	➤ To code	<ul style="list-style-type: none"> • Plan and create an algorithm for an animated scene. • Write a program in Scratch to create characters, dialogue, 	We are presenters	<ul style="list-style-type: none"> ➤ To connect ➤ To collect ➤ To communicate 	<ul style="list-style-type: none"> • Review sport and camera shots • Record videos using iPads • Edit videos using iMovie • Improve videos 	We are opinion pollsters	<ul style="list-style-type: none"> ➤ To communicate ➤ To collect ➤ To connect 	<ul style="list-style-type: none"> • Understand some elements of survey • Design, carry out and assess survey • Use online data collection

			<ul style="list-style-type: none"> costumes, backdrops and sound. Review and correct mistakes 			<ul style="list-style-type: none"> Evaluate videos 			<ul style="list-style-type: none"> Produce charts to analyse data Interpret results.
Year 4 1st half term	Espresso coding- HTML Unit 1: Introduction to HTML	<ul style="list-style-type: none"> To code To communicate To collect To connect 	<ul style="list-style-type: none"> Understand different elements of a URL Understand terms HTML Add headings and subheadings to a web page. Add Images to a webpage. Add text to a webpage. Debug a system. 	We are makers	<ul style="list-style-type: none"> To code To communicate 	<ul style="list-style-type: none"> Design, write and debug programs that accomplish specific goals. Use sequence, selection and repetition in programs. Test and debug programs using micro:bit. 	We are artists	<ul style="list-style-type: none"> To code To communicate 	<ul style="list-style-type: none"> Use cloning tools and repeating tools to create tessellating designs Use scratch to code a short algorithm that will create repeating patterns Refine and develop work using Inkscape Evaluate it and receive feedback from their peers Develop awareness of computer-generated art
2nd half term	We are software developers	<ul style="list-style-type: none"> To code To communicate To connect 	<ul style="list-style-type: none"> Use Excel to use reporter operations to solve calculations Develop a game using selection and repetition Use methods to debug Use a range of input and output of computer games 	We are musicians	<ul style="list-style-type: none"> To connect To communicate To collect 	<ul style="list-style-type: none"> Use sequence software to arrange sound clips Record samples Use Isle of Tune and Garage Band to edit music Create and develop a musical composition Refine ideas through reflection and discussion 	We are meteorologists	<ul style="list-style-type: none"> To collect To communicate To connect To code 	<ul style="list-style-type: none"> Use data collected from weather station to understand and interpret data Input data into excel Create graphs Create report and discuss Use a green screen to report on the weather.

Year 5 1st half term	Espresso Coding- HTML Unit 3: HTML Links	<ul style="list-style-type: none"> ➤ To code ➤ To communicate ➤ To connect ➤ To collect 	<ul style="list-style-type: none"> • Create links using HTML • Create links from pictures to websites • Create links from separate website page using divs • Create multiple divs with multiple links inside • Edit text, colour, background of website page • Debug a system 	We are cryptographers	<ul style="list-style-type: none"> ➤ To communicate ➤ To connect ➤ To code 	<ul style="list-style-type: none"> • Transmit information in semaphore • Use simple circuits to send and receive Morse code • Make connections between the internet and semaphore and Morse code • Research and use a mono-alphabetic cipher and a Caesar cipher • Identify importance of unique passwords and develop own 	We are adventure gamers	<ul style="list-style-type: none"> ➤ To communicate ➤ To connect ➤ To code 	<ul style="list-style-type: none"> • Plan non-linear presentations • Add and edit images in a presentation • Use hyperlinks for navigation • Record and add audio narration to a presentation • Use commenting tools to give feedback on a presentation
2nd half term	We are game developers	<ul style="list-style-type: none"> ➤ To code ➤ To connect ➤ To communicate ➤ To collect 	<ul style="list-style-type: none"> • Create a storyboard for an original game • Create backgrounds and sprites on Scratch • Begin to use code to bring the game to life • Detect errors and debug the code 	We are architects	<ul style="list-style-type: none"> ➤ To code ➤ To communicate 	<ul style="list-style-type: none"> • Understand the work of architects, designers and engineers. • Develop familiarity with a simple CAD (computer-aided design) tool. • Develop spatial awareness by exploring and experimenting with 3-D virtual environment 	We are VR designers	<ul style="list-style-type: none"> ➤ To communicate ➤ To connect ➤ To code ➤ To collect 	<ul style="list-style-type: none"> • Explore real-world and imagined locations in VR. • Create 360 degrees photosphere images • Link physical objects to digital content using QR codes • Create their own VR scene • Program objects and interactions in VR.

Year 6 1 st half term	presso Python Unit 2- Python Graphics	<ul style="list-style-type: none"> ➤ To code 	<ul style="list-style-type: none"> • Introduce movements with Python graphics • Use codes for shapes and colour • Use codes for backgrounds, lines, shapes and graphics • Debug systems <p>Use https://repl.it/ and/ or Thonny to input codes used and develop skills</p>	We are computational thinkers	<ul style="list-style-type: none"> ➤ To connect ➤ To communicate 	<ul style="list-style-type: none"> • Reason logically about algorithms • Understand that some algorithms are more efficient than others. • Use algorithms for searching and sorting a list. 	We are AI developers	<ul style="list-style-type: none"> ➤ To communicate ➤ To collect 	<ul style="list-style-type: none"> • Use decision trees to classify data • Consider ethical principles when designing AI systems • Learn how speech recognition works
2 nd half term	We are toy makers	<ul style="list-style-type: none"> ➤ To code ➤ To connect 	<ul style="list-style-type: none"> • How computers use stored programs to connect input to output. • Work with the physical components of a system • Design and write a program for an embedded system • Plan a complex project by decomposing it into smaller parts. 	We are advertisers	<ul style="list-style-type: none"> ➤ To communicate ➤ To collect 	<ul style="list-style-type: none"> • Identify and research features of successful adverts • Plan storyboard for collaborative advert • Shoot video footage using iPads • Assemble footage and edit using iMovie • Export a completed TV advert 	We are publishers	<ul style="list-style-type: none"> ➤ To connect ➤ To communicate ➤ To collect 	<ul style="list-style-type: none"> • Research and source content • Develop word processing skills • Combine text and images from a range of sources together • Contribute to a class leavers' book