Wallace Fields Infant School & Nursery
Computing Progression Overview

<table>
<tr><th colspan="2">Computing</th></tr>
<tr><td colspan="2">Although Computing/Technology is no longer in the EYFS we aim for all children to leave Reception able to:

• Know how to stay safe when online
• Successfully navigate a tablet by using the touch screen to select an app
• Login to a webpage/app</td></tr>
<tr><td colspan="2">2-3 years
• Can use sound buttons on books and electronic toys
• Plays with electronic toys through role play e.g. phones, keyboards</td></tr>
<tr><th>3-4 years</th><th>In Reception</th></tr>
<tr><td>• Identifies where the home button is
• Can swipe left and right
• Can take a photo using the camera app
• Knows to tell an adult if they don’t like something they see online.</td><td>• Is able to open/turn on a device
• Can select a required app
• Can login using their password and username
• Successfully uses the touch screen
• Can talk about what it means to be safe online</td></tr>
<tr><td colspan="2">Reception Key Vocabulary:
Anchor words: ipad, unlock, lock, camera
Goldilocks words: screen, swipe, home button
Step on: app, device, tablet, password, username, online</td></tr>
</table>

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Computing: End of Key Stage One National Curriculum Expectations		
Computer Science	**Information Technology**	**Digital Literacy**
KS1: • Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions • Create and debug simple programs • Use logical reasoning to predict the behaviour of simple programs	**KS1:** • Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	**KS1:** • Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact or other online technologies.

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Year Group	Computer Science	Information Technology	Digital Literacy
Year One	• Children can give instructions that demonstrate they are anticipating the outcome and understand the effect that accuracy of the instructions has on the outcome. • Children know that an algorithm is a set of instructions used to solve a problem or achieve an objective and that an algorithm written for a computer to follow is called a program. • Children can work out what is wrong in a simple algorithm when the steps are out of order and can write their own simple algorithm. • Children can use the buttons to move a character purposefully and can plan their moves several steps at a time towards the goal rather than one step at a time. • Children can consider a variety of factors when coding, including the way that the program is designed. • Children can design programs that control the look and the actions of objects. • Children can think about the need for precise, purposeful, ordered instructions. • Children know that any unexpected outcome is due to the code that they have created and make logical attempts to try to fix this code. • Children can consider the purpose of a program when designing it and can construct their code purposefully to make objects interact. • Children can read code one line at a time and make good attempts to envision the bigger picture of the overall effect of the program. • Children can explain the possible actions that their objects could have including, moving, responding to being clicked on and collision with other objects.	• Children can physically sort, collate, edit, present, search through, re-order and re-structure items using a range of given criteria. • Children can sort items into clearly defined groups using given criteria. • Children can collate and organise class data into a physical pictogram and a virtual pictogram. • Children can then interrogate this data to answer given questions. • Children can create, store, retrieve and share their own pictograms. • Children can create an interactive story. They can manipulate the properties of their story by changing the images, adding animations and sound as well as typing, copying and pasting pages. • Children know the importance of saving their work, overwriting saved files and retrieving their saved work. • Children can manipulate how a program looks by adding and changing backgrounds, characters, sounds and objects. • Children consider the end user of their program and make purposeful changes to the user interact to enhance functionality. • Children can save and open spreadsheets, enter a limited quantity of data into cells, manipulate data using the 'move cell' tool and use the image tool box to add clipart.	• Children understand what is meant by technology and can identify a limited number of examples both in and out of school. • **RSHE**-Children demonstrate an awareness of online safety using their own private usernames and passwords for purple mash, Bug club etc. • **RSHE** Children understand the importance of keeping information, such as their usernames and passwords private and actively demonstrate this in lessons. • Children take ownership of their work and save this in their own private space.

Year One Key Vocabulary*:*

Anchor: computer, direction, challenge, arrow, rewind, forward, backwards, right turn, left turn, button, sort, keys, delete, password, information, save

Goldilocks: program, debug, character, predict, instruction, action, background, undo, pictogram, data, animation, e-Book, font, file, sound effect, backspace, clipart, lock, spreadsheet, technology, username, private, online, columns, rows,

Step On: code, scale, criteria, collate, cursor, cells, search engine, avatar, notification**,** algorithm

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Year Group	Computer Science	Information Technology	Digital Literacy
Year Two	• Children can explain that an algorithm is a set of instructions to complete a task. • Children can turn algorithms of more than one step into code e.g., they have made a program that follow the algorithm 'when the turtle is clicked it moves forward then turns right.' • Children show an awareness of the need to be precise in their designs so that algorithms can be successfully translated into code. • Children can create a program that achieves a specific purpose. • Children can identify and correct errors. • Children can identify the parts of a program that respond to specific events and initiate specific actions. • Children can predict and describe using a cause and effect sentence, what will happen in a program.	• Children can open, edit and save spreadsheets • Children can enter data into cells, allocate a value to an image and manipulate data using copying and pasting. • Children use images and can present data in a variety of ways. • Children can create pictograms to represent data. • Children demonstrate their ability to organise data using a database and can run simple searches on their data set. • Children use a binary tree to sort information and can manipulate their data, answering questions relating to this. They can store and retrieve data. • Children can use a paint program to create an image replication of an established style e.g. pointillism • Children can use tools to enhance a picture, demonstrating their ability to manipulate a digital image. • Children can efficiently store and retrieve their work from their saved area. • Children use the sounds with 2Sequence to create a composition. They demonstrate their ability to manipulate digital content by editing and amending their composition.	• Children can effectively retrieve relevant, purposeful digital content using a search engine. • Children understand the terminology, layout and features of a search engine. • Children can create a leaflet to demonstrate and consolidate their acquired knowledge of effective searching. • Children understand how to use the Purple Mash search pad and know the implications of inappropriate searches. • Children begin to understand how things are shared electronically by using the display board on Purple Mash. • **RSHE**-Children develop an understanding of how to use email safely and responsibly. • **RSHE**-Children know how to report inappropriate content to their teacher.

Year Two Key Vocabulary*:*

Anchor: algorithm, program, debug, backspace, columns, rows, spreadsheet, pictogram, question, data, store, present, report, search

Goldilocks: translated, input, scale, command, code, code block, cause and effect, copy and paste, cells, count tool, image toolbox, lock tool, move cell tool, speak tool, database, retrieve, value, email, inappropriate, content, attachment

Step on: binary tree, composition, manipulate, digital footprint