Hatherley Infant School

Teaching and learning intent for **Computing**

NC -

- understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following a sequence of instructions
- write and test simple programs
- use logical reasoning to predict the behaviour of simple programs
- organise, store, manipulate and retrieve data in a range of digital formats
- communicate safely and respectfully online, keeping personal information private, and recognise common uses of information technology beyond school.

Reception		Year 1	Year 2
○ To know how to operate simple equipment. (turn on an iPad and use a remote control). ○ To shows an interest in technological toys with knobs or pulleys, or real objects such as cameras or mobile phones. ○ To show skills in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images. ○ To know that information can be retrieved from computers ○ To complete a simple program on a computer/iPad. ○ To use ICT hardware to interact with age-appropriate computer software.	Online safety, sharing and communication	○ To log in safely. ○ To understand the importance of logging out. ○ To search purple mash to find resources. ○ To save work. ○ To find saved work. ○ To open saved work. ○ To start to add pictures and text to work. ○ To find examples of where technology is used. ○ To record examples of technology outside school.	○ To identify the steps that can be taken to keep personal data and hardware secure. ○ To understand that information put online leaves a digital footprint or trail. ○ To have some knowledge and understanding about sharing more globally on the Internet. ○ To understand how we should talk to others in an online situation. ○ To know how to refine searches using the Search tool. ○ To use digital technology to share work on Purple Mash. ○ To be introduced to Email as a communication tool using 2Respond simulations. ○ To open and send simple online communications in the form of email.

○ To recognise that a range of technology is used in places such as homes and schools. ○ To select and use technology for particular purposes.	Coding, programming and Computational thinking	○ To compare the effects of complete instructions to completing tasks without complete instructions. ○ To consider how the order of instructions affects the result. ○ To follow and create simple instructions on the computer. ○ To understand and use direction keys. ○ To understand how to create and debug a set of simple instructions (algorithm). ○ To understand how to change and extend an algorithm. ○ To understand what coding means. ○ To save and share work. ○ To know the save, print, open and new icon.	○ To understand what an algorithm is. ○ To design algorithms. ○ To code algorithms. ○ To compare different object types. ○ To use different commands. ○ To know what debugging is. ○ To solve problems in order to debug programs.
	Presenting data	○ To know what a spreadsheet program looks like. ○ How to enter data into spreadsheet cells. ○ To use 2Calculate image tools to add clipart to cells. ○ To use 2Calculate control tools: lock, move cell, speak and count. ○ To understand that data can be represented in picture format. ○ To contribute to a class pictogram. ○ To use a pictogram to record the results.	○ To use 2Calculate image, lock, move cell, speak and count tools to make a counting machine. ○ To learn how to copy and paste in 2Calculate. ○ To use the totalling tools. ○ To use 2Calculate to collect data and produce a graph. ○ To learn about data handling tools that can give more information than pictograms. ○ To use yes/no questions to separate information. ○ To construct a binary tree to identify items. ○ To use 2Question (a binary tree database) to answer questions. ○ To use a database to answer more complex search questions.

	Represent information in different ways	○ To introduce e-books and the 2Create a Story tool. ○ To add animation to a story. ○ To add sound to a story, including voice recording and music the children have composed. ○ To add backgrounds to a story by copying and pasting pages. ○ To share e-books.	○ To explore how a story can be presented in different ways. (animation) ○ To make a quiz about a class topic. ○ To make a fact file on a non-fiction topic. ○ To make a presentation to the class.

Key Vocabulary:

technology, arrow keys, backspace key, cursor, columns, cells, clipart, count tool, delete key, image toolbox, lock tool, move cell tool, rows, speak tool, spreadsheet, log in, username, password, avatar, log out, save, notification, tools, action, background, button, character, code, design, coding, command, input, object, program, animation, e-book, font, file, sound effect, direction, arrow, undo, rewind, forward, backwards, right turn, left turn, debug, instruction, algorithm, pictogram, data, repeat.