Computing

Reviewed April 2022

At Horndale we understand that although the 'Technology' aspect has been removed from the new EYFS Framework, Computing contains important sets of skills for pupils to gain to prepare them for life in Key Stage 1 and beyond. The curriculum at Horndale encourages pupils to use their computing skills form home within the setting with an increasing emphasis on problem solving, understanding why the technology did not do what they wanted as well as how to ensure they safe when using modern technology. As pupils begin Key Stage 1 they build on these skills with dedicated Computing sessions to manipulate a wide range of programs for a purpose. Regular computing lessons ensure pupils' online safety is at the forefront of pupils when using online resources. Their vocabulary is built on and developed further as they increase their programming skills in preparation for more detailed coding in Key Stage 2.

Nursery

Key Knowledge & Skills	Vocab	Opportunities and Experiences	Development Matters /ELG Links
To use equipment that simulates control devises, such as push button toys. To explore outcomes when individual buttons are pressed on programmable toys. To use a variety of input devices.(iPad, whiteboard, voice recorders) Recognise simple technologies in the world around us.	Push Press Forwards Backwards Go Stop Touch Record phones, computers, printers, television, tablets, washing machine, tumble dryer, dishwasher, microwave	Investigate a range of push button resources, simple cause and effect toys. To play with and explore programme toys such as bee bots, remote control cars, listening station. To play with and explore input devices such as, talk buttons, iPads, whiteboards. Recognise and name, etc.	3 and 4 year olds will be learning to: Explore how things work.

Reception			
Key Knowledge & Skills	Vocab	Opportunities and experience	Development Matters /ELG Links
To follow and give simple instructions to operate programmable toys and computer software. To identify mistakes in simple instructions. To understand that ICT can be used to communicate ideas in different ways. To use a variety of input devices.(keyboard, mouse, camera) To use appropriate websites to locate small amounts of information with support. Choose images and enter text into a search engine to find specific given websites. To log onto the network. Know to tell someone if they view content they think is inappropriate or upsetting.	Build on Nursery vocab. Left Right Click Drag Instruction Program Website Keyboard Mouse Monitor Printer Log on Internet Online Safety	Use Beebots, Beebot app & Alex to follow and give simple instructions and identify simple mistakes in instructions. Use a variety of programmes to communicate ideas, busy things, iPads, voice recorders, talk buttons. Explore the keyboard and mouse on the computers. Talk about and show how to access CBeebies, top marks, busy things programmes. To learn how to log onto the computer and how to print. E- safety – Smartie the Penguin.	

Year One		
Topic/Unit of Work	**Key Vocabulary**	**Key Knowledge/ Skills**

Autumn Term: Online Safety Builds on: Prepares for: Key Questions: 1. How do I log into Purple Mash? 2. How do I create an avatar? 3. How do I navigate Purple Mash? 4. How do I save work into my work folder? 5. How do I find work in my work folder? 6. What do some of the different symbols mean on a computer? 7. Why is it important to log out?	Log in, avatar, username, password, log out, notification, save	**NC Objective/s:** - 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 on the internet or other online technologies.
Pictograms Key Questions: 1. How can I find out how everyone travels to school? 2. How can I use a computer program to create a simple pictogram? 3. What other data can I use in a pictogram? **Lego Builders** 1. What is an algorithm? 2. Can I follow simple instructions on the computer? 3. How does the order of an instruction affect the result?	Pictogram, data, collate, Instruction, algorithm, computer, program, debug	**NC Objective/s:** - use technology purposefully to create, organise, store, manipulate and retrieve digital content - understand what algorithms are; how they are implemented as programs on digital devices;
Spring Term: Maze Explorers Key Questions 1. Which direction is which? 2. How can I fix a mistake in an algorithm? 3. Can I extend an algorithm? **Technology Outside School** 1. What is technology? 2. What different types of technology are there?	Direction, rewind, left turn, challenge, forward, debug, arrow, backwards, instruction, undo, right turn, algorithm technology	**NC Objective/s:** - create and debug simple programs - recognise common uses of information technology beyond school
Animated Stories 1.What is an e-book? 2. What drawing tools can I use to make a picture? 3. How can I change the font? 4. How do I add an animation? 5. How do I add a sound? 6. Can I create my own e-book?	Animation, font, sound effect, e-book, file, display board	**NC Objective/s:** - use technology purposefully to create, organise, store, manipulate and retrieve digital content

Summer Term: Coding 1. What is coding? 2. What is a block code? 3. How do I use design mode? 4. How can I make a character move using code? 5. How can I make a character move when clicked?	Action, character, coding, background, code block, collision detection, button, code design, command, design mode	**NC Objective/s:** - understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
Spreadsheets 1. What are the features of a spreadsheet? 2. How do I add an image to a spreadsheet? 3. How do I total on a spreadsheet?	Arrow keys, cells, lock tool, backspace, clipart, cell, cursor, row, delete, column, spreadsheet	**NC Objective/s:** - use technology purposefully to create, organise, store, manipulate and retrieve digital content

Year Two		
Topic/Unit of Work	**Key Vocabulary**	**Key Knowledge/ Skills**
Autumn Term: Coding 1. What is an algorithm? 2. How do I create an algorithm using different coding tools? 3. How do I debug an algorithm? 4. Can I predict where something will move on an algorithm? 5. What have I learned about creating algorithms?	Action, character, command, algorithm, code block, debug, bug, code design	**NC Objective/s:** - Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. -
Online Safety 1. How are things shared electronically? 2. What is an e-mail? 3. How do I respond to an email? **Spreadsheets** 1. Can I remember what I learned about spreadsheets? 2. How do I copy and paste? 3. How can I use a spreadsheet to calculate? 4. How can I use data to create a block graph?	Search, display board, internet, sharing, e-mail, attachment, digital footprint Move cell, rows, columns, equals, copy and paste, count, backspace, cells, spreadsheet, lock, image	**NC Objective/s:** - 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 on the internet or other online technologies. - Use technology purposefully to create, organise, store, manipulate and retrieve digital content
Spring Term: Questioning 1. Why are pictograms not always the best? 2. What is a closed question? 3. What is a binary tree? 4. Can I use a binary tree to find information? 5. What is a database?	Pictogram, collate, avatar, question, binary tree, database, data	**NC Objective/s:** - Use technology purposefully to create, organise, store, manipulate and retrieve digital content
Effective Searching 1. What is a search engine? 2. How can I find answers using the internet? 3. What have I learned about search engines?	Internet, search, search engine,	**NC Objective/s:** - Recognise common uses of information technology beyond school - Use technology purposefully to create, organise, store, manipulate and retrieve digital content

Summer Term: Making Music 1. How do I speed up or slow down a tune? 2. How can I add sounds to a piece of music? 3. How do I record a sound and upload it?	Bpm, instrument, soundtrack, composition, music, tempo, digitally, sound effects, volume,	**NC Objective/s:** - Use technology purposefully to create, organise, store, manipulate and retrieve digital content
Presenting Ideas 1. How can I represent digital content? 2. How do I create an online quiz? 3. Why are tables useful? 4. What software can I use to make a presentation?	Concept map, quiz, narrative, node, non-fiction, audience, animated, presentation	**NC Objective/s:** - Recognise common uses of information technology beyond school - Use technology purposefully to create, organise, store, manipulate and retrieve digital content