Computing Curriculum Map

Computing Curriculum Intent

At Heather Avenue Infant School, we understand and recognise the needs of all our children and families; in response, we offer a story rich, topic based curriculum, underpinned by Early Years Foundation Stage or the Key Stage 1 National Curriculum.

When teaching Computing, we provide the opportunity to learn and discover through an enquiry-based approach. Through this approach, the children engage, enquire, explore, evaluate and express. Children are encouraged to develop skills for learning, including the ability to listen, discuss, think, question and reflect, investigate, create and build on knowledge and understanding.

Through Computing, we prepare and equip children to participate in a world with continually developing technology.

We believe that each child should complete their time with us as an enthusiastic learner across all areas of a broad and balanced curriculum, ready for the next phase of their educational journey. We strive to prepare pupils for the opportunities, responsibilities and experiences of the next phase of their education and future life by giving them a wide range of real-life, memorable experiences.

Computing Curriculum Implementation

All staff members receive training on our curriculum areas and how to effectively implement them; the majority of this is completed as part of our staff meetings and led by subject leaders, but also by relevant external providers. Teachers have a good understanding of Computing and its component parts including knowledge and understanding of digital literacy (including e-safety), computer science and information technology.

Our Curriculum maps (with identified key vocabulary) are used to create medium term plans. These show the sequence of learning and links to our class topics.
Computing is taught using a specific scheme of work; training is provided and revisited during staff meetings or coaching sessions. This ensures that identified concepts are taught correctly.

During their time with us, children learn from high quality stimuli. All teachers scaffold learning and skills so that children develop their understanding as well as building the confidence needed to carry out and complete their own work. Blocks of work result in a product/outcome created independently/collaboratively by the children. Further links are made across the curriculum for all subjects to ensure learning is embedded and revisited.

All staff ensure that there are high expectations across school, with high challenge/low threat leading to a growth mindset and lots of genuine positive praise for positive behaviours, progress and success in all areas of school life.

Teachers are adept at assessing children using their own professional knowledge via formative and summative assessments, assessments are recorded on Classroom Monitor and Tapestry. Children who require additional support are quickly identified and supported via differentiation / intervention. Those requiring extension are identified and mastery approaches used to further progress their learning.

Consistently high standards of teaching are implemented across the curriculum and can be evidenced through learning walks, book scrutiny and thorough discussions with children and staff. SLT and the Computing subject leader play a pivotal role in monitoring this process. Our Local Advisory Board and the Wensum Trust further monitor our provision.

Computing Curriculum Impact

Children achieve well at Heather Avenue Infant School and leave with firm foundations in Computing. Pupils will be able to connect with others responsibly, use coding skills effectively, find, explore, analyse, exchange and present information and will be creative users of information and communication technology. Our children are prepared for continued success and the next phase of their educational journey.

Computing Curriculum Map

	Skills	Knowledge	Topic Titles
Reception	**e-Safety** ● I can ask an adult when I want to use the internet ● I can tell an adult when something worrying or unexpected happens when I am using the internet ● I can be kind to my friends ● I can talk about the time I spend using a ● computer/tablet/game device ● I am careful with technology devices **Programming** ● I can make a floor robot move ● I can make choices about the buttons and icons I press, touch or click on	**e-Safety** ● To know the internet is a place I can find information ● To know examples of what something worrying online looks like ● I can name different types of devices e.g. computer, tablet and phone Vocabulary Internet, information, device, computer, tablet, phone **Programming** ● To know the functions of the buttons on the floor robot Vocabulary Floor robot (Bee Bot), software, button, icon, press, touch, click, function	Autumn: Magical Me Spring: To Infinity and Beyond / Dinosaur Roar Summer: Journeys and Teddy Bear Picnic

		Technology in our Lives	Technology in our Lives	
		• I can tell you about technology that is used at home and in school • I can operate simple equipment • I can use a safe part of the Internet to play and learn	• I can name some of the technology that is used at home, e.g. TV, tablet, phone, computer • I know some safe programs and websites I can use to learn Vocabulary Technology, television, camera, program, website	
	Year One	e-Safety • I can keep my password private • I can tell you what personal information is • I can tell an adult when I see something unexpected or worrying online • I can talk about why it's important to be kind and polite • I can recognise an age-appropriate website • I can agree and follow sensible e- safety rule	e-Safety • To know what a password is and why it is important to keep it safe • To know the term username • To know some of my personal information, e.g. name, address, age, phone number, school • To know some trusted adults I can report worrying things I might see on the internet • To know how to find the thinkuknow website and how report worrying things • To know some websites that are appropriate for my age	**Autumn**: Muck, Mess and Mixtures or Turn Back Time (alternating) **Spring**: Let's Go On a Super Safari or Jungle Fever (alternating) **Summer**: Get Set Go! or My Amazing Body (alternating)

Programming
- I can give instructions to my friend and follow their instructions to move around
- I can describe what happens when I press buttons on a robot
- I can press the buttons in the correct order to make my robot do what I want
- I can describe what actions I will need to do to make something happen and begin to use the word 'algorithm'
- I can begin to predict what will happen for a short sequence of instructions
- I can begin to use software/apps to create movement and patterns on a screen
- I can use the word 'debug' when I correct mistakes when I program

<u>Vocabulary</u>
Internet, information, device, computer, tablet, phone., password, username, personal information, age appropriate.

Programming
- I know some simple instructional language e.g. forwards, backwards, left and right
- To know the functions of the buttons on the floor robot (From Yr R)
- To know what an algorithm is (set of instructions)
- To know the language software, hardware and application (app)
- To know what debug means. (identify and remove errors)

<u>Vocabulary</u>
Floor robot (Bee Bot), software, button, icon, press, touch, click, function, forwards, backwards, left, right, function, software, hardware, application (app), algorithm, debug
Handling Data

Handling Data
- I can talk about the different ways in which information can be shown.
- I can use technology to collect information, including photos, video and sound.
- I can sort different kinds of information and present it to others.
- I can add information to a pictogram and talk to you about what I have found out.

Multimedia
- I can be creative with different technology tools.
- I can use technology to create and present my ideas.
- I can use the keyboard or a word bank on my device to enter text.
- I can save information in a special place and retrieve it again.

Technology in our lives
- I can use hyperlinks to websites to find information.

- I know information can be shown and collected in different forms e.g. pictures, videos, text, sound.
- I know the value of sorting information

Vocabulary
Hold, icon, drag, text, object, video, technology, information, sort, pictogram

Multimedia
- To know what a mouse is and its function
- To what a keyboard does
- To know what the save icon looks like.
- To know the difference between a screen and a touch screen.

Vocabulary
Mouse, keyboard, tools, icon, screen, touch screen.

Technology in our Lives
- I can recognise the way we use technology in our classroom.

	• I can begin to identify some of the benefits of using technology	• I can recognise ways that technology is used in my home and community Vocabulary Technology, television, camera, program, website, hyperlink, technology,	

| Year Two | e-Safety
● I can explain why I need to keep my password and personal information private
● I can describe the things that happen online that I must tell an adult about
● I can talk about why I should go online for a short amount of time
● I can talk about why it is important to be kind and polite online and in real life
● I know that not everyone is who they say they are on the Internet | e-Safety
● To know what a password is and why it is important to keep it safe
● To know my username(s) and password(s) from memory
● To know my personal information from memory, e.g. name, address, age, phone number, school
● To know some trusted adults I can report worrying things I might see on the internet
● To know how to find the thinkuknow website and how report worrying things
● To know some websites that are appropriate for my age.
● To know the age restrictions for some of the social media websites and games

Vocabulary
Internet, information, device, computer, tablet, phone, password, username, personal information, age appropriate, age restrictions, social media | **Autumn**: Muck, Mess and Mixtures or Turn Back Time (alternating)

Spring: Let's Go On a Super Safari or Jungle Fever (alternating)

Summer: Get Set Go! or My Amazing Body (alternating) |

Programming
- I can give instructions to my friend (using forward, backward and turn) and physically follow their instructions
- I can tell you the order I need to do things to make something happen and talk about this as an algorithm
- I can program a robot or software to do a particular task
- I can look at my friend's program and tell you what will happen
- I can use programming software to make objects move
- I can watch a program execute and spot where it goes wrong so that I can debug it

Programming
- I know some simple instructional language e.g. forwards, backwards, turn. left and right
- To know the functions of the buttons on the floor robot (From Yr R)
- To know devices use algorithms to perform all tasks
- To know that programs execute by following precise and unambiguous instructions
- To know the language software, hardware and application (app)
- To know what debug means. (Identify and remove errors)

Vocabulary
Floor robot (Bee Bot), software, button, icon, press, touch, click, function, forwards, backwards, left, right, function, software, hardware, application (app), algorithm, debug.
execute, precise, unambiguous, instructions.

Handling Data
- I talk about the different ways I use technology to collect information, including a camera, microscope or sound recorder
- I can make and save a chart or graph using the data I collect
- I can talk about the data that is shown in my chart or graph
- I am starting to understand a branching database
- I can tell you what kind of information I could use to help me investigate a question

Multimedia
- I can use technology to organise and present my ideas in different ways.
- I can use the keyboard on my device to add, delete and space text for others to read.
- I can save and open files on the device I use

Handling Data
- I know that I can use software/websites to create graphs and charts
- I know the value of sorting information
- I know what a branching database is

Multimedia
- To know what a mouse is and its function
- To know what a keyboard does including the function of backspace, the spacebar and shift keys
- To know what the save and open icons looks like

Vocabulary

	Technology in our Lives ● I can tell you why I use technology in the classroom ● I can tell you why I use technology in my home and community ● I am starting to understand that other people have created the information I use ● I can identify benefits of using technology including finding information, creating and communicating ● I can talk about the differences between the Internet and things in the physical world	Hold, icon, drag, text, object, video, technology, information, sort, pictogram, mouse, backspace, spacebar, shift, save, open **Technology in our Lives** ● To know why I use technology in the classroom ● To know why I use technology in my home and community ● To know that other people have created the information I use ● To know the differences between the internet and things in the physical world Vocabulary Technology, television, camera, program, website hyperlink, technology, communicating, physical world	