



Rawmarsh Ryecroft Infants School – Disciplinary Knowledge

Computing	Values and Vision "Secure, Happy and Successful" Resilience - I always keep going Respect - I value everybody and everything Care - I look after my world and the people in it. Achievement - I try to be the best I can be Community - I am proud of where I belong		
	Intent Children will be taught a high-quality computing education that equips them to be able to use computational thinking and creativity. We will build on children's knowledge and understanding to ensure that children are able to use information technology to create programs and other content. Computing also ensures that pupils become digitally literate where they can develop their ideas through information and communication technology.	Implementation At Ryecroft our Computing curriculum has been developed to ensure coverage and progression across all year groups. It is linked through the half terms theme driven to allow cross curricular links to learning where possible. By the end of Year Two, it is expected that most children will have developed their knowledge and understanding and possess all of the skills required to be competent users of digital technology.	Impact Children will have developed knowledge, understanding and skills to help them with the challenges that the digital environment presents. Children's knowledge and skills will develop progressively as they move through the school, not only to enable them to meet the requirements of the National Curriculum but to prepare them to become competent users of digital technology in the next phase of their education.

Objectives and Vocabulary			
	FS2 Taken from Development Matters 2012	Year 1	Year 2
Objectives	- Operates mechanical toys, e.g. turns the knob on a wind-up toy or pulls back on a friction car. - Completes a simple program on a computer. - Uses ICT hardware to interact with age-appropriate computer software. - Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.	<u>National Curriculum</u> - create and debug simple programs. - predict the behaviour of simple programs - use technology to create, store and manipulate digital content. - 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 on the internet or other online technologies.	<u>National Curriculum</u> - create and debug simple programs. - use logical reasoning to predict the behaviour of simple programs - use technology purposefully to create, organise, store, manipulate and retrieve digital content - 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 on the internet or other online technologies.
Vocabulary	Computer, Ipad/tablet, Mouse, Keyboard, Buttons, Switch, online safety	Space bar, Mouse, Keyboard, screen, Username, Password, code, Debug, File, Save, Font, tools, technology, online safety	Object, action, program, event, click, start, app, share, Run, Algorithm, software, Image, digital, portrait, landscape, Light sources, flash, Focus, background, Editing, Filter, format, technology, online safety, cyberbullying, tool bar, code, debug

In Computing we need to be able to

	FS2 Taken from Development Matters 2012	Year 1	Year 2
Computer Science	I know how to make toys work. I can follow a simple instruction. I can give a simple instruction.	I can describe what actions I will need to do to make something happen and begin to use the word algorithm. I can explain what my program should do. I can press the buttons in the correct order to make my robot do what I want and describe what happens. 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 on a program. I can write/input a simple code. I know when I have made a mistake on a program.	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. I can write a code. I know what an algorithm is. I can put things in order for the code to work. I can program simple software. I know how to debug my program when it goes wrong. I know how to design and program an app
Information Technology	I can operate simple equipment. I show interest in technological toys with knobs or pulleys, or real objects such as cameras or mobile phones. I can complete a simple program on a computer. I can complete a familiar game on the computer using the mouse or keyboard. I know different ways to retrieve information. E.g., Internet, radio, phone, Television.	I can identify the main parts of a computer. I can use technology to create and present my ideas using a given format with support. I can use the keyboard or a word bank on my device to enter text. I can save information on my device with support. I can use technology to collect information, including photos and videos from a given file. I can sort different kinds of information and present it to others. I can recognise ways that technology is used in my home and community.	I can recognise the uses and features of information technology. I can use technology to organise and present my ideas in different ways. I can identify the uses of information technology in school and in the community. I can explain how technology helps us. I can tell you why I use technology in my home and community and why it is useful. I can use different devices to take photos effectively. I can change the effects of a photo using an editing program. I know what to look out for to see if a photo has been changed.

		I can begin to identify some of the benefits of using technology. I know where the space bar is. I know how to write in capital letters. I can use a keyboard and keyboard. I can change the style and size of font. I can input a picture or video from a given file. I can make marks on a screen and explain which tools I used. I can use the paint tools to draw a picture. I can explain why I used the tools I used. I can use a computer on my own to paint a picture.	I can take a photo using correct light, orientation and framing. I can use the keyboard on my device to add, delete and space text for others to read. I can save and retrieve information on the device I use. 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 and talk about the data in it. I know how to input text, photos, videos or sound recordings on a program. I know how to organise and present my ideas on a program. I can use the tool bar confidently to change the font. I can add an image to a program/document.
Digital Literacy	I can use ICT hardware to interact with age-appropriate computer software.	I can keep my password private and understand why. I am aware of the importance of keeping safe online at school and home. I can identify rules to keep us safe and healthy when we are using technology in and beyond the home. I can give examples of how to keep safe online.	I can explain in detail 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 and why it is important to be kind and polite both online and in real life. I know that not everyone is who they say they are on the Internet and I can agree and follow sensible e-Safety rules. I know the importance of computer safety and keeping safe online. I know how to keep safe online and what to do if something happens. I can explain how to use information technology safely. I understand what cyberbullying is and where to go to for help.