

Hemingbrough Community Primary School

Progression of Skills

Computing



Area: Computer Science – Programme of Study Statements

EYFS	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
<ul style="list-style-type: none"> Learn how to operate a camera to take photographs of meaningful creations or moments 	<ul style="list-style-type: none"> 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 Recognise common uses of information technology beyond school. 		<ul style="list-style-type: none"> Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts Use sequence, selection, and repetition in programs; work with variables and various forms of input and output Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs 		<ul style="list-style-type: none"> Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts Use sequence, selection, and repetition in programs; work with variables and various forms of input and output Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs 	

Area: Computer Science – Outcomes

EYFS	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
I can take a simple picture on a range of devices	<p>I can give instructions to my friend and follow their instructions.</p> <p>I can describe what happens when I press buttons on a robot.</p> <p>I can press the buttons in the correct order to make my robot do what I want.</p> <p>I can describe what actions I will need to do to make something happen and begin to use the word algorithm.</p> <p>I can begin to predict what will happen for a short sequence of instructions.</p> <p>I can begin to use software/apps to create movement and patterns on a screen.</p>	<p>I can give instructions to my friend (using forward, backward and turn) and physically follow their instructions to move in a shape</p> <p>I can tell you the order I need to do things to make something happen and talk about this as an algorithm.</p> <p>I can program a robot or software to do a particular task.</p> <p>I can look at my friend's program and tell you what will happen.</p> <p>I can use programming software to make objects move.</p> <p>I can watch a program execute and spot where it</p>	<p>I can plan and sequence instructions to achieve a specific outcome.</p> <p>I can put programming commands into a sequence to make a model or object move.</p> <p>I keep testing my program and can recognise when I need to debug it.</p> <p>I can use repeat commands.</p> <p>I can solve an open-ended problem such as making shapes or a dancing character.</p> <p>I can describe the algorithm I will need for a simple task.</p> <p>I can detect a problem in an algorithm which could result in</p>	<p>I can use a procedure to simplify a program.</p> <p>I can use a sensor to detect a change which can select an action within my program.</p> <p>I can use logical thinking to solve an open-ended problem.</p> <p>I can use efficient procedures.</p> <p>I know that I need to keep testing my program while I am putting it together.</p> <p>I can use a variety of tools to create a program.</p> <p>I can recognise an error in a program and debug it.</p> <p>I recognise that an algorithm will help me to sequence more complex programs.</p>	<p>I can refine a procedure using repeat commands.</p> <p>I can talk about how procedures improve programs.</p> <p>I can use a variable to increase programming possibilities.</p> <p>I can change an input to a program to achieve a different output.</p> <p>I can use 'if' and 'then' commands to select an action.</p> <p>I can talk about how a computer model can provide information about a physical system.</p> <p>I can use logical reasoning to detect and debug mistakes in a program.</p> <p>I use logical thinking, imagination and</p>	<p>I can deconstruct a problem into smaller steps, recognising similarities to solutions used before.</p> <p>I can explain and program each of the steps in my algorithm for a device or onscreen activity.</p> <p>I can evaluate the effectiveness and efficiency of my algorithm while I continually test the programming of that algorithm.</p> <p>I can recognise when I need to use a variable to achieve a required output.</p> <p>I can use a variable and operators to stop a program.</p> <p>I can use different inputs (including</p>

	I can use the word debug when I correct mistakes when I program.	goes wrong so that I can debug it.	unsuccessful programming.	I recognise that using algorithms will also help solve problems in other learning such as Maths, Science and Design and Technology.	creativity to extend a program. I can design an algorithm for a specific outcome and use this to write a program for a device or onscreen activity	sensors) to control a device or onscreen action and predict what will happen. I can link errors in a program to a problem in the algorithm on which it is based
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Area: Information Technology – Programme of Study Statements

EYFS	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
<ul style="list-style-type: none"> Use a simple online paint tool to create digital art. 	<ul style="list-style-type: none"> Use technology purposefully to create, organise, store, manipulate and retrieve digital content. Store and retrieve data and know some ways in which information is represented digitally. 		<ul style="list-style-type: none"> Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, system and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. errors in algorithms and programs 		<ul style="list-style-type: none"> Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, system and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. 	

Area: Information Technology – Outcomes

EYFS	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
I can find an app to make to create digital art.	<p>I can be creative with different technology tools.</p> <p>I can use technology to create and present my ideas.</p> <p>I can use the keyboard or a word bank on my device to enter text.</p> <p>I can save information in a special place and retrieve it again.</p> <p>I can talk about the different ways in which information can be shown.</p> <p>I can use technology to collect information, including photos, video and sound.</p> <p>I can sort different kinds of information and</p>	<p>I can use technology to organise and present my ideas in different ways.</p> <p>I can use the keyboard on my device to add, delete and space text for others to read.</p> <p>I can tell you about an online tool that will help me to share my ideas with other people.</p> <p>I can save and open files on the device I use.</p> <p>I talk about the different ways I use technology to collect information, including a camera, microscope or sound recorder.</p> <p>I can make and save a chart or</p>	<p>I can create different effects with different technology tools.</p> <p>I can combine a mixture of text, graphics and sound to share my ideas and learning.</p> <p>I can use appropriate keyboard commands to amend text on my device, including making use of a spellchecker.</p> <p>I can evaluate my work and improve its effectiveness.</p> <p>I can use an appropriate tool to share my work online.</p> <p>I can talk about the different ways data can be organised.</p> <p>I can search a ready-made</p>	<p>I can use photos, video and sound to create an atmosphere when presenting to different audiences.</p> <p>I am confident to explore new media to extend what I can achieve.</p> <p>I can change the appearance of text to increase its effectiveness.</p> <p>I can create, modify and present documents for a particular purpose.</p> <p>I can use a keyboard confidently and make use of a spellchecker to write and review my work.</p>	<p>I can use text, photo, sound and video editing tools to refine my work.</p> <p>I can use the skills I have already developed to create content using unfamiliar technology.</p> <p>I can select, use and combine the appropriate technology tools to create effects that will have an impact on others.</p> <p>I can select an appropriate online or offline tool to create and share ideas.</p> <p>I can review and improve my own work and support others to improve their work.</p> <p>I can use a spreadsheet and database to</p>	<p>I can talk about audience, atmosphere and structure when planning a particular outcome.</p> <p>I can confidently identify the potential of unfamiliar technology to increase my creativity.</p> <p>I can combine a range of media, recognising the contribution of each to achieve a particular outcome.</p> <p>I can tell you why I select a particular online tool for a specific purpose.</p> <p>I can be digitally discerning when evaluating the effectiveness of my own work and</p>

	<p>present it to others.</p> <p>I can add information to a pictograph and talk to you about what I have found out.</p>	<p>graph using the data I collect.</p> <p>I can talk about the data that is shown in my chart or graph.</p> <p>I am starting to understand a branching database.</p> <p>I can tell you what kind of information I could use to help me investigate a question.</p>	<p>database to answer questions.</p> <p>I can collect data help me answer a question.</p> <p>I can add to a database.</p> <p>I can make a branching database.</p> <p>I can use a data logger to monitor something I am investigating.</p> <p>I can talk about the information collected using a data logger.</p>	<p>I can use an appropriate tool to share my work and collaborate online.</p> <p>I can give constructive feedback to my friends to help them improve their work and refine my own work.</p> <p>I can organise data in different ways.</p> <p>I can collect data and identify where it could be inaccurate.</p> <p>I can plan, create and search a database to answer questions.</p> <p>I can choose the best way to present data to my friends.</p> <p>I can use a data logger to record and share my readings with my friends.</p>	<p>collect and record data.</p> <p>I can choose an appropriate tool to help me collect data.</p> <p>I can present data in an appropriate way.</p> <p>I can search a database using different operators to refine my search.</p> <p>I can talk about mistakes in data and suggest how it could be checked.</p>	<p>the work of others.</p> <p>I can plan the process needed to investigate the world around me.</p> <p>I can select the most effective tool to collect data for my investigation.</p> <p>I can check the data I collect for accuracy and plausibility.</p> <p>I can interpret the data I collect.</p> <p>I can present the data I collect in an appropriate way.</p> <p>I use the skills I have developed to interrogate a database.</p>
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Area: Digital Literacy (incl. e-safety) – Programme of Study Statements

EYFS	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
<ul style="list-style-type: none"> Recognise that a range of technology is used in places such as homes and schools When using the internet alongside an adult, or independently learning what to do if they come across something that worries them or makes them feel uncomfortable 	<ul style="list-style-type: none"> Recognise common uses of information technology beyond school Use technology purposefully to retrieve digital content from the school public drive and the Internet Use technology safely and respectfully, keeping personal information private. Know where to go for help and support when they have concerns about content or contact on the internet or other online material 		<ul style="list-style-type: none"> Understand computer networks including the internet; how they can provide multiple services, such as the world-wide web; and the opportunities they offer for communication and collaboration Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour, identify a range of ways to report concerns and inappropriate behaviour. 		<ul style="list-style-type: none"> Understand computer networks including the internet; how they can provide multiple services, such as the world-wide web; and the opportunities they offer for communication and collaboration use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour, identify a range of ways to report concerns and inappropriate behaviour. 	

Area: Digital Literacy (incl. e-safety) – Outcomes

EYFS	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
<p>I can handle devices carefully.</p> <p>I can ask an adult when I want to use the Internet.</p> <p>I can talk to an adult when something unexpected happens when using the internet.</p>	<p>I can recognise the ways we use technology in our classroom.</p> <p>I can recognise ways that technology is used in my home and community.</p> <p>I can use links to websites to find information</p> <p>I can begin to identify some of the benefits of using technology.</p> <p>I can keep my password private.</p> <p>I can tell you what personal information is.</p> <p>I can tell an adult when I see something unexpected or worrying online.</p> <p>I can talk about why it's important to be kind and polite.</p>	<p>I can tell you why I use technology in the classroom.</p> <p>I can tell you why I use technology in my home and community.</p> <p>I am starting to understand that other people have created the information I use.</p> <p>I can identify benefits of using technology including finding information, creating and communicating.</p> <p>I can talk about the differences between the Internet and things in the physical world.</p> <p>I can explain why I need to keep my password and personal</p>	<p>I can save and retrieve work on the Internet, the school network or my own device.</p> <p>I can talk about the parts of a computer.</p> <p>I can tell you ways to communicate with others online.</p> <p>I can describe the World Wide Web as the part of the Internet that contains websites.</p> <p>I can use search tools to find and use an appropriate website.</p> <p>I think about whether I can use images that I find online in my own work.</p> <p>I can talk about what makes a secure password and why they are important.</p>	<p>I can tell you whether a resource I am using is on the Internet, the school network or my own device.</p> <p>I can identify key words to use when searching safely on the World Wide Web.</p> <p>I can think about the reliability of information I read on the World Wide Web.</p> <p>I can tell you how to check who owns photos, text and clipart.</p> <p>I can create a hyperlink to a resource on the World Wide Web.</p> <p>I choose a secure password when I am using a website.</p>	<p>I can identify the different parts of computing devices.</p> <p>I can identify different parts of the Internet.</p> <p>I can choose appropriate tools for communication and collaboration and use them responsibly.</p> <p>I can use effective strategies to search with appropriate search engines.</p> <p>I can talk about the different elements on webpages.</p> <p>I can find out who the information presented on a webpage belongs to.</p> <p>I protect my password and</p>	<p>I can describe different services provided by the Internet and how information moves around the Internet.</p> <p>I can describe different parts of a computing device and how it connects to the Internet.</p> <p>I can connect a computing device to a keyboard, mouse or printer.</p> <p>I can identify appropriate forms of online communication for different audiences.</p> <p>I can use search engines as part of an effective research strategy.</p> <p>I can describe how search results are</p>

	<p>I can recognise an age appropriate website. I can agree and follow sensible e-Safety rules.</p>	<p>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's important to be kind and polite online and in real life</p>	<p>I can protect my personal information when I do different things online. I can use the safety features of websites as well as reporting concerns to an adult. I can recognise websites and games appropriate for my age. I can make good choices about how long I spend online. I ask an adult before downloading files and games from the Internet. I can post positive comments online.</p>	<p>I can talk about the ways I can protect myself and my friends from harm online. I use the safety features of websites as well as reporting concerns to an adult. I know that anything I post online can be seen by others. I choose websites and games that are appropriate for my age. I can help my friends make good choices about the time they spend online. I can talk about why I need to ask a trusted adult before downloading files and games from the Internet.</p>	<p>other personal information. I can explain why I need to protect myself and my friends and the best ways to do this, including reporting concerns to an adult. I know that anything I post online can be seen, used and may affect others. I can talk about the dangers of spending too long online or playing a game. I can explain the importance of communicating kindly and respectfully. I can discuss the importance of choosing an age-appropriate website or game. I can explain why I need to protect</p>	<p>selected and ranked. I acknowledge who resources belong to that have been found on the internet. I protect my password and other personal information. I can explain the consequences of sharing too much about myself online. I support my friends to protect themselves and make good choices online, including reporting concerns to an adult. I can explain the consequences of spending too much time online or on a game. I can explain the consequences to myself and others</p>
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				I comment positively and respectfully online.	my computer or device from harm.	of not communicating kindly and respectfully. I can protect my computer or device from harm on the Internet.
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