Delph Primary School – Yearly Objectives and Progression Grid Subject: Computing

Year	National Curriculum - Assessment Criteria	Progression of Key Skills (including procedural knowledge)
Rec	I can turn basic devices on and off. I can learn how to play simple online games. I can use a computer by controlling a mouse. I can play on a touch screen game and use computers/keyboards/mouse in role play. I can type letters with increasing confidence using a keyboard and tablet.	Computer Science • Take a simple picture on a device. • Operate simple electronic devices. • Discuss devices used both at home and at school Information Technology • Type simple words on a word document. Digital Literacy • Start to identify some forms of technology at home and in school.
Year 1	Computer Science I can create a series of instructions. I can plan a journey for a programmable toy. Information Technology I can create digital content. I can store digital content. I can retrieve digital content. I can use a website. I can use a camera. I can record sound and play back. Digital Literacy I can use technology safely. I can keep personal information private.	Computer Science • Understand what an algorithm is. • Identify when simple algorithm steps are out of order. • Read a simple code and make predictions e.g. turtle. Information Technology • Create a series of instructions, planning a journey for a programmable toy. • Name, save and retrieve their work. • Navigate simple online resources to find information. Digital Literacy • Begin to understand what is meant by technology. • Identify a range of technology in and out of school. • Understand the importance of keeping information safe e.g. username and password and actively demonstrate this in lessons e.g. Google Classroom. • Save own work in correct folder with some support.
Year 2	Computer Science I can use a range of instructions (e.g. direction, angles, turns). I can test and amend a range of instructions. I can find errors and amend (debug). I can write a simple program and test it. I can predict what the outcome of a simple program will be (logical reasoning). I understand that algorithms are used on digital devices. I understand that programs require precise instructions. Information Technology I can organise digital content.	Computer Science • Explain what an algorithm is and show an awareness of the need to be precise. • Create a simple program. • Have an awareness of the need for logical steps of instructions. • Correctly identify and correct some errors. • Write a cause and effect sentence of what will happen in a program. Information Technology • Organise and retrieve simple data. • Make simple searches using online platforms. • Confidently create, name, save and retrieve content. • Use a range of media in their content, including photos, text and sound.

	I can retrieve and manipulate digital content. I can navigate the web to complete simple searches. <u>Digital Literacy</u> I use technology respectfully. I know where to go for help if I am concerned. I know how technology is used in school and outside of school.	<u>Digital Literacy</u> • Retrieve digital content • Use a search engine to find relevant, purposeful information. • Demonstrate how to use a search engine to others. • Make links between different types of technology. • Understand the implications of inappropriate online searches. • Begin to understand how things are shared electronically. • Know ways of reporting inappropriate behaviours and content to a trusted adult. • Begin to develop an understanding of email safety.
Year 3	<u>Computer Science</u> I can design a sequence of instruction, including directional instructions. I can write programs that accomplish specific goals. I can work with various forms of input. I can work with various forms of output. <u>Information Technology</u> I can use a range of software for similar purposes. I can collect information. I can design and create content. I can present information. I can search for information on the web in different ways. I can manipulate and improve digital images. <u>Digital Literacy</u> I use technology respectfully and responsibly. I know different ways I can get help if I am concerned. I understand what computer networks do and how they provide multiple services. I can discern where it is best to use technology and where it adds little or no value.	<u>Computer Science</u> • Turn a real life situation into an algorithm for a program by deconstructing it into manageable parts. • Structure their program in logical, achievable steps. • Start to absorb some new knowledge of coding structures. • Attempt to sort through more complex codes. • List a range of ways that the internet can be used to communicate. • Use some methods of communication, e.g. open and respond to emails. • Describe appropriate email conversations. • Predict the outcomes of programs that have several steps. • Correctly identify and correct errors in their own program. <u>Information Technology</u> • Carry out simple searches to retrieve digital content. • Understand when they are connected to the internet. • Collect, analyse, evaluate and present data and information using a selection of software. • Consider what software is most appropriate for the given task. • Create purposeful content. <u>Digital Literacy</u> • Demonstrate the importance of having a secure password. • Understand the importance of not sharing their passwords with others. • Explain the negative implications of failing to keep passwords safe and secure. • Understand the importance of staying safe when using familiar communication tools. • Know more than one way to report unacceptable content and contact.
Year 4	<u>Computer Science</u> I can experiment with variables to control models. I can give an on-screen robot specific instructions that takes them from A to B. I can make an accurate prediction and explain why I believe something will happen (linked to programming). I can de-bug a program. <u>Information Technology</u> I can select and use software to accomplish given goals. I can collect and present data.	<u>Computer Science</u> • When creating an algorithm, designs show that they are thinking of the required task and how to accomplish this. • Use coding structures for selection and repetition. • Use timers to achieve repetition effects, becoming more logical and integrated into their program designs. • Understand 'if' statements and attempt to combine these with other coding structures. • Trace code and use step-through methods to identify errors in code. • Make logical attempts to correct errors. • Read programs with several steps.

	I can produce and upload a pod cast. Digital Literacy I recognise acceptable and unacceptable behaviour using technology.	• Predict the outcomes on programs accurately. • Recognise the main component parts of hardware which allow computers to join and form a network. • Improve their ability to understand the online safety implications associated with different communication methods. Information Technology • Understand the function, features and layout of a search engine. • Appraise selected webpages for credibility and information at a basic level. • Make improvements to digital solutions based on feedback. • Make informed software choices when presenting information and data. • Create linked content using a range of software. • Share digital content within their community. Digital Literacy • Explore key concepts relating to online safety using concept mapping. • Help others to understand the importance of online safety. • Know a range of ways of reporting inappropriate content and contact.
Year 5	Computer Science I can combine sequences of instructions and procedures to turn devices on and off. I can use technology to control an external device. I can design algorithms that use repetition & 2-way selection. Information Technology I can analyse information. I can evaluate information. I understand how search results are selected and ranked. I can edit a film. Digital Literacy I understand that you have to make choices when using technology and that not everything is true and/or safe.	Computer Science • Attempt to turn more complex real-life situations into algorithms. • Test and debug their program as they go. • Use logical methods to identify the approximate cause of any bug but may need some support identifying the specific line of code. • Translate algorithms that include sequence, selection and repetition into code with increasing ease. • Combining sequence, selection and repetition with other coding structures to achieve their algorithm design. • Understand the value of computer networks and are aware of the main dangers. • Recognise what personal information is and can explain how this can be kept safe. • Select the most appropriate form of online communications dependent on audience and digital content. Information Technology • Search with greater complexity for digital content when using a search engine. • Explain in some detail how credible a webpage is and the information in contains. • Make appropriate improvements to digital solutions based of feedback received. • Confidently comment on the success of their work. • Objectively review solutions from others. • Collaboratively create content and solutions using digital features within software. • Use several ways of sharing digital content. Digital Literacy • Have a secure knowledge of common online safety rules and can apply this by demonstrating the safe and respectful use of a few different technologies and online services.

		• Implicitly relate appropriate online behaviour to their right or personal privacy and mental wellbeing of themselves and others.
Year 6	<u>Computer Science</u> I can design a solution by breaking a problem up. I recognise that different solutions can exist for the same problem. I can use logical reasoning to detect errors in algorithms. I can use selection in programs. I can work with variables. I can explain how an algorithm works I can explore 'what if' questions by planning different scenarios for controlled devices. <u>Information Technology</u> I can select, use and combine software on a range of digital devices. I can use a range of technology for a specific project. <u>Digital Literacy</u> I can discuss the risks of online use of technology. I can identify how to minimise risks.	<u>Computer Science</u> • Turn a more complex programming task into an algorithm by identifying the important aspects of the task and decomposing them in a logical way. • Apply skills from previous programs. • Test and debug their program as they go. • Translate algorithms that include sequence, selection and repetition into code. • Coding displays an improving understanding of variables in coding, outputs such as sound and movement. • Children know what WAN and LAN are and can describe how they access the internet in school. <u>Information Technology</u> • Readily apply filters when searching for digital content. • Explain in detail how credible a webpage is and the information it contains. • Compare a range of digital content sources and are able to rate them in terms of content quality and accuracy. • Use critical thinking skills in everyday use of online communication. • Make clear connections to the audience when designing and creating digital content. • Use criteria to evaluate the quality of digital solutions. • Identify, improve and make refinements to digital media. <u>Digital Literacy</u> • Demonstrate the safe and respectful use of a range of different technologies and online services. • Identify more discreet inappropriate behaviours through developing critical thinking. • Recognise the value in preserving their privacy when online for their own and others safety.