Progression of skills and knowledge for Computing

Skills and Processes 1. Computer Science 2. Information Technology 3. Digital Literacy	Each skill needs to be visited at least once across the key stage so progression can be measured. These skills can be measured through use of ICT in your other lessons. For example, using crumble software and equipment in DT.

EYFS – Progression of skills

Personal, Social and Emotional Development	Physical Development	Understanding the World	Expressive Arts and Design
Remember rules without needing an adult to remind them. Show resilience and perseverance in the face of a challenge. Know and talk about the different factors that support their overall health and wellbeing. Sensible amounts of 'screen time'. **Be confident to try new activities and show independence, resilience and perseverance in the face of challenge.** **Explain the reasons for rules, know right from wrong and try to behave accordingly.**	Match their developing physical skills to tasks and activities in the setting. Develop their small motor skills so that they can use a range of tools competently, safely and confidently.	Explore how things work.	Explore, use and refine a variety of artistic effects to express their ideas and feelings. **Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.**

Computer Science

KS1- Year 1 and 2	KS2- Year 3 and 4	Year 5 and 6
• Understand what algorithms are and that they are implemented as programs on digital devices. • Program on screen using sequences of instructions to implement an algorithm. • Create programs as sequences of instructions when programming on screen, correcting any errors. • Use logical reasoning to predict the behaviour of own and others' programs.	• Use sequence and repetition in programs. • Design and write a program using a block language to a given brief, including simple interaction (programs to include variables, stages, artificial intelligence and a scoring system). • Use logical reasoning to detect and correct errors in programs and algorithms, explain how some simple algorithms work. Solve problems by decomposing them into smaller parts. • Write a program that accepts keyboard input and produces on-screen output.	• Use sequence, selection, repetition and variables in programs. • Design, write and debug a program using a block language based on their own ideas (programs to include multiple sprites, multiple variables, sensors and conditional statements) • Design, write and debug their own computer control application. Solve problems using decomposition, tackling each part separately.

	• Use and explain how search engines work. • Explain how the internet makes the web possible.	• Write a program that accepts inputs other than keyboard and mouse and produces outputs other than screen or speakers. • Appreciate and understand how search results are selected and ranked • Understand how computer networks can provide multiple services, such as the world wide web. • Understand computer networks, including the internet.
Information Technology		
KS1- Year 1 and 2	**KS2- Year 3 and 4**	**Year 5 and 6**
• Store, organise and retrieve content on digital devices for a given purpose. • Create and edit original content for a given purpose using digital technology. • Present findings using software and interpret the data. • Use a mouse to navigate around the computer screen.	• Use a standard search engine to find information using a range of strategies to be more successful in finding reliable information. • Collect, analyse and present data. • Appreciate how search results are selected and ranked. • Use and combine a range of programs on a computer.	• Use search technologies effectively and be discerning in evaluating digital content. • Collect, analyse, evaluate and present data and information. • Use filters to make more effective use of a standard search engine. • Select, use and combine a range of programs on multiple devices. • Design and create content and systems.
Digital Literacy		
KS1- Year 1 and 2	**KS2- Year 3 and 4**	**Year 5 and 6**
• Explain what personal information is and develop awareness of why it is special and should not be shared. • Identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. • Recognise common uses of information technology at home and outdoors. • Use technology safely and respectfully.	• Demonstrate that they can act responsibly when using computers. • Identify and explain the differences between acceptable and unacceptable behaviours when using digital technology. • Understand the opportunities computer networks offer for communication and collaboration • Be discerning in evaluating digital content • Know who to talk to about concerns and inappropriate behaviour at home or in school.	• Show that they can think through the consequences of their actions when using digital technology. • Identify principles underpinning acceptable use of digital technologies. • Know a range of ways to report concerns and inappropriate behaviour in a variety of contexts. • Articulate an opinion about the effectiveness of digital content. • Use online tools to plan and carry out a collaborative project successfully.