



Nacton C of E Primary School

Progression of Skills - **Computing**

	EYFS	KS1	LKS2	UKS2
Computational thinking (coding)	• Use a range of control toys and devices. • Understand that goals can be achieved by following a sequence of steps. • Follow symbol sequence algorithms (PE Cards, jump, step etc)	• understand that a program is a set of commands a computer can run • create a sequence of commands that can be run as a program on a device (e.g. beebot) • use logical reasoning to predict the outcome of a sequence of commands and test it • create and debug a program that I have written •	• build a sequence of commands, knowing that the order of the commands can affect the outcome. • create a sequence of commands to produce a given outcome. • know that repetition in programming is known as looping • understand how loops work including indefinite loops and count-controlled loops. • plan a program that includes appropriate loops to produce a given outcome. • predict the outcome of programmes containing loops.	• know that a conditional statement links a condition to an outcome • use a condition in an “ if...then.... else....statement to produce a given outcome. • use a loop to repeatedly check that a condition has been met. • explain that a loop can be stopped when a condition is met • know what variables are and identify them in existing programmes • decide where in a program to set a variable • use a variable in a conditional statement to control the flow of a program

Digital literacy	• Use technology for a particular purpose. • Access and use simple activities using touch technology with increasing control. • Use a touch screen device to create marks on the screen. • Use a device to take a simple picture. • Record audio into a device. • combine pictures and audio to create a story with support.	use a computer to paint a picture: • digitally make marks on a computer screen • use basic tools to create an image • use a wider variety of tools to create an image • recognise that tools can be changed to produce different outcomes use a computer to write: • use a keyboard to enter text into a computer • change the appearance of text on the computer e.g. font use a computer to create a piece of music. • Create music for a purpose use a digital device to capture a photograph: • capture a digital image • improve the quality of the images taken • apply processes to improve images e.g. cropping Data handling: • group objects by a chosen attribute • group objects to answer a question • add data to a table or simple graph using a given format • use a tally chart to collect data, recording counting on the computer • use a pictogram to answer single attribute questions • use a computer to answer comparison questions (graphs, tables) • recognise that information can be presented in different ways	use a computer to create an animation: • recognise that animation is made of a sequence of images • capture a series of images using stop frame photos and edit them into a film, adding text and sound effects. Use a computer for desktop publishing: • recognise how text and images can be used together to convey information • combine text and graphics to share a message Use a computer for audio: • recognise that sound can be digitally recorded • record sound and save it • retrieve recorded audio files and edit them use a digital device to capture a photograph: • Recognise that digital images can be manipulated. • Use a computer to further manipulate digital images: • change the composition of an image • make global changes e.g. adjust colour • make local changes e.g. retouch • make additions to the image e.g. add text Data handling: • create a branching database by deciding what data needs collecting and creating yes/no questions • retrieve information from different levels of a branching database. • Use a digital data logger to collect data to answer a question.	create graphical objects on a computer screen: • add or remove objects • modify an object • combine objects create 3D graphical objects on a computer screen: • add or remove objects • modify an object • combine objects create a webpage: • add and edit text on a webpage • add and edit images • add additional pages and hyperlinks to own pages and other sites • embed content use a computer to make a video: • capture a video • playback a video • edit a video e.g. apply special effects Data handling: • use and design a structure for a flat-file database • choose different ways to view data • sort data in different ways including using multiple criteria • choose a suitable way to present information to others • propose simple relevant questions that can be answered by data on a spreadsheet • explain that formulas can be used to produce calculated data and apply formulas, including duplicating • choose suitable ways to represent data
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Digital technologies	• Select and use technology for a particular purpose. • identify technology in the home and school.	• recognise common uses of information technology beyond school • recognise how digital devices can change the way we work • recognise choices are made when using technology • recognise the uses and features of information technology • explain how technology benefits us	• explain how digital devices function • identify input and output devices • explore how digital devices are connected • explain how a computer network can be used to share information and recognise the physical components of a network. • describe how networks connect to other networks • Understand what the internet and the world wide web are and how they work. (internet is interconnected networks and allows us to access the world wide web) • describe the types of content/media that can be added, created and shared on the world wide web and explain how the content is shared and owned by people • explain the benefits and limitations of the world wide web including evaluating the reliability of content	• Understand what a computer system is and their role in our lives. • recognise how information is transferred and shared across the internet and computer systems and the benefits of this. • explain that different ways the internet lets people in different places work together and evaluate the benefits of this. • explain what a search engine is and how it works, including use of indexes and ranking. • know that there are different search engines and what the differences between them are. • understand different ways to communicate online and evaluate the advantages and disadvantages of these.

Digital wisdom	• tell a trusted adult if you feel unsafe or worried online.	• understand what personal information is and the risks associated with sharing it. • communicate safely and respectfully online • understand how to manage friendships and conflicts in a digital environment • identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. • understand the legal issues pertaining to IT and its use in society e.g. age ratings • Develop an understanding of the need for health and safety practises when using IT.	• recognise the risks associated with sharing personal information • communicate and collaborate safely and respectfully online, identifying some of the risks and acting to minimise them • understand how to manage friendships and conflicts in a digital environment • Identify a range of ways to report concerns about content or contact. • understand the legal issues pertaining to IT and its use in society e.g. age ratings • Develop an understanding of the need for health and safety practises when using IT. • Evaluate the reliability of information seen on the internet and know that not everything is true/real.	• recognise and minimise the risks associated with sharing personal information • communicate and collaborate safely and respectfully online, identifying the risks and acting to minimise them • understand how to manage friendships and conflicts in a digital environment • Identify a range of ways to report concerns about content or contact. • understand the legal issues pertaining to IT and its use in society e.g. age ratings/PEGI • Develop an understanding of the need for health and safety practises when using IT. • Analyse and evaluate the validity of information seen on the internet and begin to understand how information is manipulated for different reasons.
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