



The Federation of Middleham (VA) and Spennithorne (VC) CE Primary Schools



Blessed is the one who trusts in the Lord, whose confidence is in him.
They will be like a tree planted by the water that sends out its roots by the stream.
It does not fear when heat comes; its leaves are always green.
It has no worries in a year of drought and never fails to bear fruit.

Jeremiah 17: 7 - 8

A PLACE TO LEARN, LOVE & GROW

Computing Long Term Plan Overview

	Development Matters (Guidance)	ELG (Statutory Framework)	How this achieved in EYFS	Knowledge, skills and vocabulary: By the end of EYFS the children will know...
Understanding the World (Computing)	<p>Reception: Personal, Social and Emotional Development:</p> <ul style="list-style-type: none"> 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' <p>Physical Development:</p> <ul style="list-style-type: none"> Develop their small motor skills so that they can use a range of tools competently, safely and confidently. <p>Expressive Arts and Design:</p> <ul style="list-style-type: none"> Explore, use and refine a variety of artistic effects to express their ideas and feelings. 	<p>Personal, Social and Emotional Development: Managing self:</p> <ul style="list-style-type: none"> 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 <p>Expressive Arts and Design: Creating with Materials:</p> <ul style="list-style-type: none"> Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. <p>Understanding the World: Past and Present:</p> <ul style="list-style-type: none"> Talk about the lives of people around them and their roles in society. Know some differences and similarities between things in the past and now, drawing on their experiences. <p>People, Culture and Communities</p> <ul style="list-style-type: none"> Describe their immediate environment using knowledge from observation, discussion, texts, maps. 	<p>Continuous Provision – available throughout the day for both focussed and self-chosen learning</p> <p>A range of technology is available within the classroom and outside in the outdoor area for the children to access, both independently and with an adult.</p> <ul style="list-style-type: none"> Tablets Computers – games / activities linked to the topic, phonics or maths being covered each week. Remote control toys – cars. Battery operated toys Beebots CD players Interactive white boards – Phonics Play / Topmarks / Google Earth / Digimap. iPads Purple Mash (mini mash) – drawing, sorting, information gathering. Sound buttons – children can listen to a pre-recorded challenge or record their own answers. exploring old typewriters / computers / mechanical toys, phones. 	<p>Knowledge: Personal, Social and Emotional Development</p> <p>To wait a short amount of time for something I want eg: a computer loading / an App to work. Know how to complete a familiar task independently and with support will try new things. Eg: a computer programme / Beebot. To select tools and resources that I need to complete a task of my own choosing. Know how to be safe online. Know that a password is secret.</p> <p>Physical Development</p> <p>Know how to use an iPad or tablet appropriately. Know how to use my fingers on a touch screen, and control a mouse/touchpad on a computer.</p> <p>Understanding the World</p> <p>Know how to use a camera ie: on an iPad. Know how to work a simple programmable toy. To select and use technology for particular purposes. Know how technology is used in my own home. Know that technology has changed since my adults were young.</p> <p>Expressive Art and Design</p> <p>Children can safely use a range of technology for a purpose.</p>
	<p>Online Safety Online safety will be delivered using the 8 strands, in line with KS1 and KS2 from "Education for a Connected World" using ProjectEVOLVE.</p>	<p>Skills:</p> <ul style="list-style-type: none"> Know that some devices have touch screen functionality and some do not. Control devices e.g. using buttons, keys, a mouse, a touch pad. <p>Vocabulary:</p> <ul style="list-style-type: none"> Computer, iPad, tablet, App, button, mouse, screen, keyboard, Google, information, control, instruction, internet, robot, save, sequence, instructions, search, safety, online, password, 		

Cycle A	Year 1/2	Year 3/4	Year 5/6
Autumn	<p>Online safety focus at start of each session: Y1 Online Relationships and Reputation, Copy Write and Ownership (ProjectEVOLVE)</p> <p><u>Online Safety and Key Skills</u> SMART – keeping safe online Introducing IT, examples of IT in and beyond school, identify computer parts, mouse/pad control, logging on/off, saving and opening files with support, open key applications, use arrow keys <i>Software - paintz.app</i></p>	<p>Online safety focus at start of each session: Y3 Online Relationships and Reputation, Copy Write and Ownership (ProjectEVOLVE)</p> <p><u>Online Safety and Key Skills</u> SMART – keeping safe online Save and opening files with appropriate names, use keyboards efficiently including arrows, shift and delete, mouse control/clicks, copy and paste, print screen/snip tool</p> <p><u>Connecting Computers</u> Identifying that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks. <i>Software – digital devices</i></p>	<p>Online safety focus at start of each session: Y5 Online Relationships and Reputation, Copy Write and Ownership (ProjectEVOLVE)</p> <p><u>Online Safety and Key Skills</u> SMART – keeping safe online Use folders to organise, mute and unmute audio, efficient typing, search for applications on computer/tablet, print screen/snip tool</p> <p><u>Sharing Information</u> Recognising IT systems around us and how they allow us to search the internet <i>Software – Scratch, Microsoft Publisher, internet</i></p>
Spring	<p>Online safety focus at start of each session: Y1 Managing Information Online and Health, Well-Being, Lifestyle (ProjectEVOLVE)</p> <p><u>Digital writing</u> Using a computer to create and format text, before comparing to writing non-digitally. <i>Software –Microsoft Word</i></p> <p><u>Pictograms/Grouping Data</u> Collecting data in tally charts and using attributes to organise and present data on a computer. <i>Software - IJTS (i2e.com)</i></p>	<p>Online safety focus at start of each session: Y3 Managing Information Online and Health, Well-Being, Lifestyle (ProjectEVOLVE)</p> <p><u>Data Loggers</u> Learning how input devices called sensors monitor the environment., collecting data. <i>Software – Arduino Science Journal App</i></p> <p><u>Stop-Frame Animation</u> Capturing and editing digital still images to produce a stop-frame animation that tells a story. <i>Software - iMotion, Stop Motion Studio 2animate</i></p>	<p>Online safety focus at start of each session: Y5 Managing Information Online and Health, Well-Being, Lifestyle (ProjectEVOLVE)</p> <p><u>Flat-file Databases</u> Organise data in records and ordering and answering questions about data, creating graphs and charts. <i>Software - IJTS (i2e.com) 2investigate</i></p> <p><u>Vector Drawing</u> Creating images in a drawing program by using layers and groups of objects <i>Software – Google Drawing, https://vectr.com/</i></p>
Summer	<p>Online safety focus at start of each session: Y1 Privacy and Security, Self Image and Security and Online Bullying (ProjectEVOLVE)</p> <p><u>Moving a robot</u> Writing short algorithms and programs for floor robots, and predicting program outcomes. <i>Software – Beebots</i></p> <p><u>Robot algorithms</u> Creating and debugging programs, and using logical reasoning to make predictions. <i>Software - beebots</i></p>	<p>Online safety focus at start of each session: Y3 Privacy and Security, Self Image and Security and Online Bullying (ProjectEVOLVE)</p> <p><u>Sequence In music</u> Creating sequences in a block-based programming language to make music <i>Software – Scratch</i></p> <p><u>Repetition In Shapes</u> Using a text-based programming language to explore count-controlled loops when drawing shapes. <i>Software – Logo</i></p>	<p>Online safety focus at start of each session: Y5 Privacy and Security, Self Image and Security and Online Bullying (ProjectEVOLVE)</p> <p><u>Selection in quizzes</u> Exploring selection in programming to design and code an interactive quiz. <i>Software – Scratch</i></p> <p><u>Sensing</u> Designing and coding a project that captures inputs from a physical device. <i>Software – micro:bits (hire from STEM or online https://makecode.microbit.org/) and batteries</i></p>

Cycle B	Year 1/2	Year 3/4	Year 5/6
Autumn	<p>Online safety focus at start of each session: Y2 Online Relationships and Reputation, Copy Write and Ownership (ProjectEVOLVE)</p> <p><u>Online Safety and Key Skills</u> SMART – keeping safe online Introducing IT, examples of IT in and beyond school, identify computer parts, mouse/pad control, logging on/off, saving and opening files with support, open key applications, use arrow keys <i>Software - paintz.app</i></p>	<p>Online safety focus at start of each session: Y4 Online Relationships and Reputation, Copy Write and Ownership (ProjectEVOLVE)</p> <p><u>Online Safety and Key Skills</u> SMART – keeping safe online Save and opening files with appropriate names, use keyboards efficiently including arrows, shift and delete, mouse control/clicks, copy and paste, print screen</p> <p><u>The Internet</u> Recognising the internet as a network of networks including the WWW, and why we should evaluate online content. <i>Software - https://musiclab.chromeexperiments.com/ (chrome music lab), internet</i></p>	<p>Online safety focus at start of each session: Y6 Online Relationships and Reputation, Copy Write and Ownership (ProjectEVOLVE)</p> <p><u>Online Safety and Key Skills</u> SMART – keeping safe online Use folders to organise, mute and unmute audio, efficient typing, search for applications on computer/tablet, print screen</p> <p><u>Internet Communication and collaboration</u> Identifying and exploring how data is transferred and information is shared online. <i>Software – search engines</i></p>
Spring	<p>Online safety focus at start of each session: Y2 Managing Information Online and Health, Well-Being, Lifestyle (ProjectEVOLVE)</p> <p><u>Digital Painting</u> Explore the world of digital art and its exciting range of creative tools <i>Software - paintz.app, paint software</i></p> <p><u>Digital photography</u> Capturing and changing digital photographs for different purposes <i>Software – cameras/ipads, https://pixlr.com/x/, pixlr app</i></p>	<p>Online safety focus at start of each session: Y4 Managing Information Online and Health, Well-Being, Lifestyle (ProjectEVOLVE)</p> <p><u>Photo Editing</u> Manipulating digital images, and reflecting on the impact of changes and whether the required purpose is fulfilled. <i>Software –getpaint.net</i></p> <p><u>Branching Databases</u> Building and using branching databases to group objects using yes/no questions. <i>Software - JIT5 (i2e.com) 2question</i></p>	<p>Online safety focus at start of each session: Y6 Managing Information Online and Health, Well-Being, Lifestyle (ProjectEVOLVE)</p> <p><u>Introduction to spreadsheets</u> Answering questions by using spreadsheets to organise and calculate data. <i>Software – Microsoft Spreadsheet</i></p> <p><u>3D modelling</u> Planning, developing, and evaluating 3D computer models of physical objects <i>Software - https://www.tinkercad.com</i></p>
Summer	<p>Online safety focus at start of each session: Y2 Privacy and Security, Self Image and Security and Online Bullying (ProjectEVOLVE)</p> <p><u>Programming animations</u> Designing and programming the movement of a character on screen to tell stories. <i>Software – Scratch Junior</i></p> <p><u>Programming quizzes</u> Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz. <i>Software – Scratch Junior</i></p>	<p>Online safety focus at start of each session: Y4 Privacy and Security, Self Image and Security and Online Bullying (ProjectEVOLVE)</p> <p><u>Events and Actions In Programmes</u> Writing algorithms and programs that use a range of events to trigger sequences of actions. <i>Software – Scratch</i></p> <p><u>Repetition In Games</u> Using a block-based programming language to explore count-controlled and infinite loops when creating a game. <i>Software – Scratch</i></p>	<p>Online safety focus at start of each session: Y6 Privacy and Security, Self Image and Security and Online Bullying (ProjectEVOLVE)</p> <p><u>Selection in physical computing</u> Exploring conditions and selection using a programmable microcontroller. <i>Software – Crumbles (hire from STEM) and crocodile clips</i></p> <p><u>Variables in games</u> Exploring variables when designing and coding a game. <i>Software – Scratch</i></p>