St Peter's Brafferton C of E (VA) Primary School

Small school, big heart

As a church school, our vision is for each child to love learning and to have hope, confidence, wisdom and respect for all.

'Life in all its fullness' (John 10:10)

Kindness   **Inclusivity**   **Community**

Computing Long Term Plan

Teach Computing as Scheme of Learning

<mark>*Notes about online safety*</mark> *-Online safety lesson – start of each term, Online safety collective worships (linked with Online safety day), Online safety in Y5/6 – Crucial Crew (bi annual), Annual police visit – online safety talk, PSHE online safety unit taught in every year group, online safety newsletter for parents*

	Computing	Autumn	Spring	Summer
EYFS		*Communication and Language* *Personal Social and Emotional Development* *Understanding the World* *Expressive Arts and Design*		
Year 1		***Computing systems and networks*** Technology around us Recognising technology in school and using it responsibly. ***Creating media*** Digital painting Choosing appropriate tools in a program to create art and making comparisons with working non-digitally.	***Programming A*** Moving a robot Writing short algorithms and programs for floor robots and predicting program outcomes. ***Data and information*** Grouping data Exploring object labels, then using them to sort and group objects by properties.	***Creating media*** Digital writing Using a computer to create and format text, before comparing to writing non-digitally. ***Programming B*** Programming animations Designing and programming the movement of a character on screen to tell stories

	Computing	Autumn	Spring	Summer
Class 2 Year 2/ Year 3	Year A	*Computing systems and networks* Information technology around us Identifying IT and how its responsible use improves our world in school and beyond. *Creating media* Stop-frame animation Capturing and editing digital still images to produce a stop-frame animation that tells a story.	*Programming A* Robot algorithms Creating and debugging programs, and using logical reasoning to make predictions *Data and information* Branching databases Building and using branching databases to group objects using yes/no questions.	*Creating media* Making music Using a computer as a tool to explore rhythms and melodies, before creating a musical composition. *Programming B* Events and actions in programs Writing algorithms and programs that use a range of events to trigger sequences of actions.
	Year B	*Computing systems and networks* Connecting computers Identifying that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks *Creating media* Digital photography Capturing and changing digital photographs for different purposes.	*Data and information* Pictograms Collecting data in tally charts and using attributes to organise and present data on a computer. *Programming A* Sequencing sounds Creating sequences in a block-based programming language to make music.	*Programming B* Programming quizzes Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz. *Creating media* Desktop publishing Creating documents by modifying text, images, and page layouts for a specified purpose.

	Computing	Autumn	Spring	Summer
Class 3 Year 4/5/6	Year A	*Computing systems and networks* The internet Recognising the internet as a network of networks including the WWW, and why we should evaluate online content. *Creating media*	*Creating media* 3D modelling Planning, developing, and evaluating 3D computer models of physical objects. *Programming A* Selection in physical computing	*Programming A* Repetition in shapes Using a text-based programming language to explore count-controlled loops when drawing shapes *Data and information* Flat-file databases

		Video production Planning, capturing, and editing video to produce a short film.	Exploring conditions and selection using a programmable microcontroller	Using a database to order data and create charts to answer questions.
	Year B	**Computing systems and networks** Systems and searching Recognising IT systems around us and how they allow us to search the internet. *Data and information* Introduction to spreadsheets Answering questions by using spreadsheets to organise and calculate data.	*Creating media* Photo editing Manipulating digital images, and reflecting on the impact of changes and whether the required purpose is fulfilled. *Programming B* Selection in quizzes Exploring selection in programming to design and code an interactive quiz.	*Programming B* Repetition in games Using a block-based programming language to explore count-controlled and infinite loops when creating a game *Creating media* Vector drawing Creating images in a drawing program by using layers and groups of objects.
	Year C	*Computing systems and networks* Communication and collaboration Identifying and exploring how data is transferred and information is shared online. *Data and information* Data logging Recognising how and why data is collected over time, before using data loggers to carry out an investigation.	*Programming A* Variables in games Exploring variables when designing and coding a game. *Creating media* Audio production Capturing and editing audio to produce a podcast, ensuring that copyright is considered.	*Creating media* Webpage creation Designing and creating webpages, giving consideration to copyright, aesthetics, and navigation. *Programming B* Sensing Designing and coding a project that captures inputs from a physical device.

National curriculum.

Key stage 1

Pupils should be taught to:

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

use technology purposefully to create, organise, store, manipulate and retrieve digital content

recognise common uses of information technology beyond school

Key stage 2

Pupils should be taught to:

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

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

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, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information

use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Purple – Computing objectives.

Blue – ICT/digital literacy objectives

Grey – E-safety objectives.

Not highlighted – digital networks