Computing Curriculum Overview

Reception Long Term Plan 21-22

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
General Themes	All About me!	Lets celebrate!	Take one picture!	Growing!	Amazing animals!	Our Wonderful world!
COMPUTING Our aim is that children leave Chapel End: - having had their lessons brought to life through computers - as responsible digital citizens who are able to make the most of opportunities presented by the changing digital world - thinking about the safe use of the internet before accessing online material and know who to turn to for help when needed - being able to confidently debug and solve problems	Identify everyday technology: links to technology at home Make marks on a digital device to communicate their ideas To screenshot using the home and lock buttons interact with simulation software - use a package to produce a picture on screen - understand that 'output' is the result of a trigger (pressing the play button) - control a programmable toy - talk about how everyday technology is controlled SMART RULES: to tell an adult if they see something on a digital device that upsets them to know not to give out any information about themselves to know that not everything they see on the internet is true	To know that computers may be used to communicate information electronically To know that digital devices can present information in a variety of ways To navigate their way around an iPad and operate several apps confidently To understand the basic functions of an iPad (home button, lock button and volume buttons SMART RULES to tell an adult if they see something on a digital device that upsets them to know not to give out any information about themselves to know that not everything they see on the internet is true	Use a range of devices to record information in a range of formats (text, image, sound) Interact with multimedia software: children to send a video to parents on Class dojo SMART RULES to tell an adult if they see something on a digital device that upsets them to know not to give out any information about themselves to know that not everything they see on the internet is true	Identify how technology is used to share information (Google Maps) SMART RULES to tell an adult if they see something on a digital device that upsets them to know not to give out any information about themselves to know that not everything they see on the internet is true	To know the difference between computer based activities (painting changes can easily be made, text can be deleted etc): use Active Inspire to represent an animal of their choice SMART RULES to tell an adult if they see something on a digital device that upsets them to know not to give out any information about themselves to know that not everything they see on the internet is true	To know that information may be stored on a digital device - explore a website - collect and sort information using computers - produce a simple program SMART RULES to tell an adult if they see something on a digital device that upsets them to know not to give out any information about themselves to know that not everything they see on the internet is true

Computing Curriculum Overview

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Autumn 1 Computing systems and networks	**Everyday technology.** Use software on laptops and ipads (Class dojo etc) Understand how to keep safe	**Technology around us** Recognising technology in school and using it responsibly and using **Paintz.app**	***Information technology around us*** *Identifying IT and how its responsible use improves our world in school and beyond and using Microsoft Powerpoint*	**Connecting computers** Identifying that digital devices have inputs, processes and outputs and how they can be connected to make networks and using any Paint program	**The internet** Recognising the internet as a network of networks including the WWW and why we should evaluate online content on various websites	**Systems and searching** Recognising IT systems around us and how they allow us to search the internet using Google slides	**Communication and collaboration** Identifying and exploring how data is transferred and information is shared online using Google slides
Autumn 2 Creating media	**Digital pictures** Mark making and drawing on interactive board	**Digital painting** Choosing appropriate program tools on Paint to create art and make comparisons with working non-digitally	**Digital photography** Capturing and changing digital photographs for different purposes Digital camera or ipad	**Stop frame animation** Capturing and editing digital still images to produce a stop frame animation in iMotion (app for iOs) that tells a story	**Audio production** Capturing and editing audio on Audacity to produce a podcast, ensuring that copyright is considered.	**Video production** Planning, capturing and editing video to produce a short film in Microsoft photos or iMovie	**Webpage creation** Designing and creating webpages using Google sites giving consideration to copyright, aesthetics and navigation.
Spring 1 Programming A	**Algorithms** Create simple algorithms using pre-coding penguin stones & cards	**Moving a robot** Writing short algorithms and programs for Bee-bot or blue-bot and predicting outcomes	**Robot algorithms** Creating a debugging program using logical reasoning to make predictions Bee-bot or blue-bot	**Sequencing sounds** Creating sequences in block based programming language Scratch to make music	**Repetition in shapes** Using text-based programming language FMSLogo to explore count-controlled loops when drawing shapes	**Selection in physical computing** Exploring conditions and selection using a programmable micro:bit	**Variables in games** Exploring variables when designing and coding a game in Scratch
Spring 2 Data & Information	**Recording data** Use devices to record and present information (pictograms, talking labels etc)	**Grouping data** Exploring object labels in Microsoft Powerpoint then using them to sort and group objects by properties	**Pictograms** Collecting data in tally charts on J2data Pictogram and using attributes to organise and present data on a computer	**Branching databases** Building and using branching databases in J2data Branch and Pictogram to group objects using yes/no questions	**Data logging** Recognising how and why data is collected over time, before using data loggers or programmed micro:bits to carry out an investigation	**Flat file databases** Using a J2data database to order and create charts to answer questions	**Introduction to spreadsheets** Answering questions by using spreadsheets to organise and calculate data in Microsoft Excel
Summer 1 Creating Media	**Creating media** Create videos, simple stories and maps using ipad or laptop	**Digital writing** Using a computer to create and format text in Microsoft Word before comparing to writing non-digitally	**Making music** Using a computer as a tool to explore rhythms and melodies before creating a musical composition on Chrome music lab	**Desktop publishing** Creating documents by modifying text, images and page layouts in Adobe Spark for a specified purpose	**Photo editing** Manipulating digital images in Paint.NET and reflecting on the impact of changes and whether the required purpose is fulfilled	**Vector drawing** Creating images in a Google drawings using layers and groups of objects	**3d modelling** Planning, developing and evaluating 3d computer models of physical objects in Tinkercad
Summer 2 Programming B	**Programming toys** Bee-bots and codapillar	**Programming animations** Designing and programming the movement of a character in ScratchJr to tell stories	**Programming quizzes** Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz in ScratchJr	**Events and actions in programs** Writing algorithms and programs that use a range of events to trigger sequences of actions in Scratch	**Repetition in games** Using block based programming language Scratch to explore count-controlled infinite loops when creating a game	**Selection in quizzes** Exploring selection in programming to design and code an interactive quiz in Scratch	**Sensing** Designing and coding a project that captures inputs from a physical device with micro:bit and Microsoft MakeCode