St Patrick's RC Primary School
Computing Curriculum Overview

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Reception	Little Computers Activity explaining what is a computer and its peripherals. Children will make their own computer using junk and develop basic computer skills through playing a variety of games.	Junior Explorers Children will learn to give sequences of instructions to control Bee-Bots (floor robot). Children will understand that instructions need to be given in a correct order.	A is for Algorithm This unplugged activity will demonstrate to children the importance of sequencing by breaking down popular stories into individual elements so children can see the importance of following a sequence. Children will gain an understanding of the term Algorithm.	Art Attack Children will experiment with different drawing apps and software across a range of devices whilst being introduced to different styles of digital art. This activity will show children how to find images using the web.	Fantastic Tales This is a cross curricula activity with links to both Literacy and Art. Children will learn a popular tale and then re-tell the story by producing their own animation.	Let's Celebrate Children will learn about sending their first email and the rules that they should be aware of when communicating digitally.
Year 1	Walking with Dinosaurs By the end of this project, children will fully understand the term algorithm and will be able to use a simple app on an iPad to reinforce this learning.	Pictures Tell a Thousand Words This project will teach children about the main functions and buttons of a digital camera as well as about different shots. Children will see how important images can be by looking at well-known picture books such as The Snowman.	App Attack – Games Design The aim of this apptivity is to introduce children to the simple concepts of games design as well as notions of sequencing, computational thinking, directional language and problem solving.	Crazy Creatures Throughout this project, children will further develop their understanding of control, directional language and programming, by programming a Bee-Bot and using appropriate control apps.	Young Investigators In this apptivity, children will learn how to search on the internet in relation to a specific topic to develop basic web skills. The children will use Thinglink to produce and publish an interactive image.	We are all Connected The aim of this apptivity is to show children how the web works. The children will produce a simple eBook or presentation incorporating the key terminology they learn from this session.

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Year 2	**You've got Mail** The aim of this apptivity is to help children explore how they can use email to communicate with real people within their schools, families, and communities.	**Super Sci-Fi** This space inspired project starts by children creating a simple space invader game to then creating a game using advanced settings. The children will also learn about mnemonics and create their own interactive quiz as well as bring Neil Armstrong to life retelling his story.	**Whatever the Weather** This apptivity will get children looking at data, how it can be presented and interpreted. Children will have to gather the data and then select the most appropriate method to display the data they have captured.	**Code-tastic** Introduction to the language of code. Children will use a variety of programming apps/software to give them a practical understanding of how computer programs actually run.	**Young Authors** This apptivity will take the children on a technological journey and show them how technology has advanced over the years. This project will culminate in the children creating their own eBook.	**Let's Fix It** Using Scratch, this apptivity will challenge children to analyse simple computer programs and by identifying any errors within the code, they can find a solution.
Year 3	**Get Blogging** Children will develop an understanding of how wikis work and will create their own wiki in small groups encouraging collaborative writing. Children will also review examples of blogs online, learn the basic elements of creating a blog and will then create their very own.	**We are Publishers** Children will create an eBook retelling the story of a famous book including illustrations that they will create themselves using Brushes.	**Class Democracy** Children will be introduced to the concept of democracy. Children will create their own bill for proposed legislation and create an animation and an endorsement to support their bill.	**We Love Games** In this apptivity children will use gaming apps to develop computational thinking skills and develop a simple program as a final project.	**Big Robots** The project will reinforce an understanding of directional language and programming. The final lesson will provide children with the opportunity to write their own algorithm by creating a flowchart.	**My First Program** Children create their very first computer game in Scratch.

Year 4	<u>We Built this City</u> This Apptivity will encourage children to create their own 3D world using Minecraft.	<u>Final Score</u> Working in groups, the children will create their own sports news report which they will share and work on together online using iWork or Google Docs.	<u>Back to the Future</u> In this project, children will create their own blog detailing what they learn from researching about different technologies, inventors and the different components of a computer.	<u>Making Games</u> Children create their very first computer game in Scratch.	<u>Hurray for Hollywood</u> The children will devise their own characters, plot and storyboard before filming a short movie which they will then edit in iMovie.	<u>Interface Designer</u> HTML is the language used to create files which can be read by internet browsers to display web pages on the internet. In this lesson, children will build a basic web page using tags and elements to change the design and the colour of the web page.
Year 5	<u>Cars</u> Children create a detailed 2 player game that includes racing cars around a track.	<u>Website Designers</u> Children create their own website using free templates from WordPress.	<u>Newsround</u> Children create their own news report using a range of apps.	<u>Interactive Art Exhibition</u> The aim of this apptivity is to introduce children to the amazing world of Augmented Reality (AR. AR is a technology that superimposes a computer-generated image or video on a user's view of the real world.	<u>Code Breakers</u> A computer uses binary codes to function, it is the fundamental language of a computer. This apptivity has been developed to introduce children to this concept and how codes can be deciphered.	<u>Let's Change the World: Inventors</u> This project will culminate with children creating their own animation using I Can Animate. The children will create their own props and sets and will also learn how to edit their final piece in iMovie.

Year 6	Young Authors	Stocks and Shares	Let's Learn a Language	Appy Times Pt 1	Appy Times Pt 2	Heroes and Villains: Graphics
	During this project, children will develop a story idea in small groups to create a storyboard. The children will then use Book Creator and Brushes to create their own eBook including text, illustrations and audio.	This apptivity is designed to give children an understanding of the stock market but more importantly engage them in a task that makes them analyse data, make informed choices, present and critique their decisions.	The aim of this apptivity is to introduce the children to the world of programming languages, of which there are many. They will experiment with learning some basic Python code using either iPads, PC or Macs.	The children's task is to design a piece of wearable technology that links in with a smart phone app. In this session, the children will also create an advert "selling" their product.	In this apptivity we will give children the chance to experiment with the basics of programming and app development using a variety of development platforms and styles of code.	This project will take children through the steps to create their own Heroes and Villains style game using the program Scratch.

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Area	Key Stage 1 Aims	Key Stage 2 Aims
Computer Science (CS)	1. Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions 2. Create and debug simple programs 3. Use logical reasoning to predict the behaviour of simple programs	4. Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts 5. Use sequence, selection, and repetition in programs; work with variables and various forms of input and output 6. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs 7. Understand computer networks including the internet; how they can provide multiple services, such as the World Wide Web 8. Appreciate how [search] results are selected and ranked
Information Technology (IT)	1. Use technology purposefully to create, organise, store, manipulate and retrieve digital content	2. Use search technologies effectively 3. 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
Digital Literacy (DL)	1. Recognise common uses of information technology beyond school 2. Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies	3. Understand the opportunities [networks] offer for communication and collaboration 4. Be discerning in evaluating digital content 5. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

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