Computing Coverage Termly Overview

HYTHE BAY
Church of England Primary School and Children's Centre

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Reception	Allowing children the opportunity to explore technology in this carefree and often child-led way, means that not only will they develop a familiarity with equipment and vocabulary but they will have a strong start in Key Stage 1 Computing and all that it demands. Technology in the Early Years can mean: taking a photograph with a camera or tablet searching for information on the internet playing games on the interactive whiteboard exploring an old typewriter or other mechanical toys using a Beebot watching a video clip listening to music					
Yr 1/2 Cycle A Topic	**A Knight's Tale**	**Hythe , Our wonderful town**	**Here come the aliens**	**Fur, feather and scales**	**Name a piece of Art**	**Lighthouses**
	Technology Around Us	**Digital Painting**	**Moving a Robot**	**Grouping Data**	**Digital Writing**	**Programming Animations**
Key Outcomes	• To identify technology • To identify a computer and its main parts • To use a mouse in different ways • To use a keyboard to type • To use the keyboard to edit text • To create rules for using technology responsibly	• To describe what different freehand tools do • To use the shape tool and the line tools • To make careful choices when painting a digital picture • To explain why I chose the tools I used • To use a computer on my own to paint a picture • To compare painting a picture on a computer and on paper	• To explain what a given command will do • To act out a given word • To combine forwards and backwards commands to make a sequence • To combine four direction commands to make sequences • To plan a simple program • To find more than one solution to a problem	• To label objects • To identify that objects can be counted • To describe objects in different ways • To count objects with the same properties • To compare groups of objects • To answer questions about groups of objects	• To use a computer to write • To add and remove text on a computer • To identify that the look of text can be changed on a computer • To make careful choices when changing text • To explain why I used the tools that I chose • To compare writing on a computer with writing on paper	• To choose a command for a given purpose • To show that a series of commands can be joined together • To identify the effect of changing a value • To explain that each sprite has its own instructions • To design the parts of a project • To use my algorithm to create a program

Skills & Knowledge Links to the National Curriculum:	• Recognise common uses of information technology beyond school • Use technology purposefully to create, organise, store, manipulate, and retrieve digital content • 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.	• Use technology purposefully to create, organise, store, manipulate, and retrieve digital content	• 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 • Recognise common uses of information technology beyond school	• Use technology purposefully to create, organise, store, manipulate, and retrieve digital content • Use technology safely and respectfully	• Use technology purposefully to create, organise, store, manipulate, and retrieve digital content • Use technology safely and respectfully, keeping personal information private	• 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
Yr 1/2 – Cycle B	**People who help us**	**Once upon a tale….**	**Curiosity and Exploration**	**Animals**	**Growing**	**'Oh I do like to be beside the Seaside'**
	Information Technology Around Us	**Digital Photography**	**Robot Algorithms**	**Pictograms**	**Making Music**	**Introduction to Quizzes**
Key Outcomes	• To recognise the uses and features of information technology • To identify information technology in the home • To identify information technology beyond school • To explain how information technology benefits us	• To know what devices can be used to take photographs • To use a digital device to take a photograph • To describe what makes a good photograph • To decide how photographs can be improved	• To describe a series of instructions as a sequence • To explain what happens when we change the order of instructions • To use logical reasoning to predict the outcome of a program (series of commands) • To explain that programming	• To recognise that we can count and compare objects using tally charts • To recognise that objects can be represented as pictures • To create a pictogram • To select objects by attribute and make comparisons	• To say how music can make us feel • To identify that there are patterns in music • To describe how music can be used in different ways • To show how music is made from a series of notes • To create music for a purpose	• To explain that a sequence of commands has a start • To explain that a sequence of commands has an outcome • To create a program using a given design

	• To show how to use information technology safely • To recognise that choices are made when using information technology	• To use tools to change an image • To recognise that images can be changed	projects can have code and artwork • To design an algorithm • To create and debug a program that I have written	• To recognise that people can be described by attributes • To explain that we can present information using a computer	• To review and refine our computer work	• To change a given design • To create a program using my own design • To decide how my project can be improved
Skills & Knowledge Links to National Curriculum:	• Use technology purposefully to create, organise, store, manipulate, and retrieve digital content • Recognise common uses of information technology beyond school • 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	• Use technology purposefully to create, organise, store, manipulate, and retrieve digital content • Recognise common uses of information technology beyond school • 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	• 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 • 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	• Use technology purposefully to create, organise, store, manipulate, and retrieve digital content	• 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
Yr 3/4 Cycle A	Term 1 Body Works	Term 2 Smashing Saxons	Term 3 Dragonology Shang Dynasty	Term 4 Vikings	Term 5 Rainforest Riches	Term 6 Our Ever changing world!
	Connecting Computers	Stop-Frame Animation	Sequencing in Music	Branching Databases	Desktop Publishing	Events and Actions
Key Outcomes	1. To explain how digital devices function	1. To explain that animation is a sequence	1. To explore a new programming environment	1. To create questions with yes/no answers	1. To recognise how text and images convey information	1. To explain how a sprite moves in an existing project

	2. To identify input and output devices 3. To recognise how digital devices can change the way we work 4. To explain how a computer network can be used to share information 5. To explore how digital devices can be connected 6. To recognise the physical components of a network	of drawings or photographs 2. To relate animated movement with a sequence of images 3. To plan an animation 4. To identify the need to work consistently and carefully 5. To review and improve an animation 6. To evaluate the impact of adding other media to an animation	2. I can identify that each sprite is controlled by the commands I choose 3. To explain that a program has a start 4. To recognise that a sequence of commands can have an order 5. To change the appearance of my project 6. To create a project from a task description	2. To identify the object attributes needed to collect relevant data 3. To create a branching database 4. To identify objects using a branching database 5. To explain why it is helpful for a database to be well structured 6. To compare the information shown in a pictogram with a branching database	2. To recognise that text and layout can be edited 3. To choose appropriate page settings 4. To add content to a desktop publishing publication 5. To consider how different layouts can suit different purposes 6. To consider the benefits of desktop publishing	2. To create a program to move a sprite in four directions 3. To adapt a program to a new context 4. To develop my program by adding features 5. To identify and fix bugs in a program 6. To design and create a maze-based challenge
Skills and Knowledge	• Use sequence, selection, and repetition in programs; work with variables and various forms of input and output • 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 • 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,	• 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.	• 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	• 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	• 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	• 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

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Yr 3/4 Cycle B	Term 1 The Romans	Term 2 Stone Age to Iron Age	Term 3 Around the World	Term 4 Shake, Rock and Roll	Term 5 Shakespeare	Term 6 Migration
	The Internet	**Audio Editing**	**Repetition in Shapes**	**Data Logging**	**Photo Editing**	**Repetition in Games**
Key Outcomes	1. To describe how networks physically connect to other networks 2. To recognise how networked devices make up the internet 3. To outline how websites can be shared via the World Wide Web 4. To describe how content can be added	1. To identify that sound can be digitally recorded: 2. To use a digital device to record sound 3. To explain that a digital recording is stored as a file 4. To explain that audio can be changed through editing 5. To show that different types of audio can be	1. To identify that accuracy in programming is important 2. To create a program in a text-based language 3. To explain what 'repeat' means 4. To modify a count-controlled loop to produce a given outcome	1. To explain that data gathered over time can be used to answer questions 2. To use a digital device to collect data automatically 3. To explain that a data logger collects 'data points' from sensors over time	1. To explain that digital images can be changed 2. To change the composition of an image 3. To describe how images can be changed for different uses 4. To make good choices when selecting different tools	1. To develop the use of count-controlled loops in a different programming environment 2. To explain that in programming there are infinite loops and count controlled loops 3. To develop a design which includes two or

	and accessed on the World Wide Web 5. To recognise how the content of the WWW is created by people 6. To evaluate the consequences of unreliable content	combined and played together 6. To evaluate editing choices made	5. To decompose a program into parts 6. To create a program that uses count-controlled loops to produce a given outcome	4. To use data collected over a long duration to find information 5. To identify the data needed to answer questions 6. To use collected data to answer questions	5. To recognise that not all images are real 6. To evaluate how changes can improve an image	more loops which run at the same time 4. To modify an infinite loop in a given program 5. To design a project that includes repetition 6. To create a project that includes repetition
Skills and Knowledge	• 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	• 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/unacceptabl e behaviour; identify a range of ways to report	• 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 • Select, use and combine a variety of software (including	• Use sequence, selection, and repetition in programs; work with variables and various forms of input and output • 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	• 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/unaccep table behaviour; identify a range of ways to report concerns about content and contact	• 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

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Year 5/6 Cycle A	Term 1 Mayan Civilisation	Term 2 'Twas the night before Christmas	Term 3 Out of this World	Term 4 Conservation	Term 5 Great Inventions Greeks	Term 6 Survival
	Sharing Information	Video Editing	Selection in Physical Computing	Flat File Databases	Vector Drawing	Selection in Quizzes
Key Outcomes	1. To explain that computers can be connected together to form systems 2. To recognise the role of computer systems in our lives 3. To recognise how information is transferred over the internet 4. To explain how sharing information online lets people in different places work together 5. To contribute to a shared project online	1. To recognise video as moving pictures, which can include audio 2. To identify digital devices that can record video 3. To capture video using a digital device 4. To recognise the features of an effective video 5. To identify that video can be improved through reshooting and editing To consider the impact of the choices made	1. To control a simple circuit connected to a computer 2. To write a program that includes count-controlled loops 3. To explain that a loop can stop when a condition is met, eg number of times 4. To conclude that a loop can be used to repeatedly check whether a condition has been met 5. To design a physical project that includes selection	1. To use a form to record information 2. To compare paper and computer-based databases 3. To outline how grouping and then sorting data allows us to answer questions 4. To explain that tools can be used to select specific data 5. To explain that computer programs can be	1. To identify that drawing tools can be used to produce different outcomes 2. To create a vector drawing by combining shapes 3. To use tools to achieve a desired effect 4. To recognise that vector drawings consist of layers 5. To group objects to make them easier to work with 6. To evaluate my vector drawing	1. To explain how selection is used in computer programs 2. To relate that a conditional statement connects a condition to an outcome 3. To explain how selection directs the flow of a program 4. To design a program which uses selection

	6. To evaluate different ways of working together online	when making and sharing a video	6. To create a controllable system that includes selection	used to compare data visually 6. To apply my knowledge of a database to ask and answer real-world questions		5. To create a program which uses selection 6. To evaluate my program
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Year 5/ 6 Cycle B	Term 1 Ancient Egypt	Term 2 What on Earth	Term 3 Have you tried turning it on and off?	Term 4 Who dun it?	Term 5 WWII	Term 6 What will your future hold?
	Communication	**Web Page Creation**	**Variables in Games**	**Spreadsheets**	**3D Modelling**	**Sensing**
Key Outcomes	1. To identify how to use a search engine 2. To describe how search engines select results 3. To explain how search results are ranked 4. To recognise why the order of results is important, and to whom 5. To recognise how we communicate using technology 6. To evaluate different methods of online communication	1. To review an existing website and consider its structure 2. To plan the features of a web page 3. To consider the ownership and use of images (copyright) 4. To recognise the need to preview pages 5. To outline the need for a navigation path 6. To recognise the implications of linking to content owned by other people	1. To define a 'variable' as something that is changeable 2. To explain why a variable is used in a program 3. To choose how to improve a game by using variables 4. To design a project that builds on a given example 5. To use my design to create a project 6. To evaluate my project	1. To identify questions which can be answered using data 2. To explain that objects can be described using data 3. To explain that formula can be used to produce calculated data 4. To apply formulas to data, including duplicating 5. To create a spreadsheet to plan an event 6. To choose suitable ways to present data	1. To use a computer to create and manipulate three-dimensional (3D) digital objects 2. To compare working digitally with 2D and 3D graphics 3. To construct a digital 3D model of a physical object 4. To identify that physical objects can be broken down into a collection of 3D shapes 5. To design a digital model by combining 3D objects 6. To develop and improve a digital 3D model	1. To create a program to run on a controllable device 2. To explain that selection can control the flow of a program 3. To update a variable with a user input 4. To use an conditional statement to compare a variable to a value 5. To design a project that uses inputs and outputs on a controllable device 6. To develop a program to use

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