

ST MARY'S R. C. PRIMARY COMPUTING SUBJECT OVERVIEW 2022-2023

Our Whole-School Curriculum Intent

Our curriculum will:

- Build children's knowledge through rich, motivational and inspiring learning experiences that provide them with real life skills that enable them to move into the world with integrity and confidence
- Provide knowledge in all subjects that builds sequentially through their time at St. Mary's
- Reflect the need and be specific to our local area and community
- Develop transferrable skills through their growing knowledge of the curriculum
- Be stimulating, fun and memorable for all children, extended into an enhanced extra-curricular school life
- Be ambitious and have high expectations and aspirations inclusively for every individual including academic, artistic, personal and sporting achievements.
- Develop life-long learners who are knowledgeable and aware of their own well-being, social, emotional, physical and spiritual needs.
- Reflect our mission statement that as a family, we pray, play and respect all and we have the capacity, by our actions, to change the world forever.

In computing, we aim to do this through the following curriculum. The documents below show the subject overview, the Statutory Requirements and the milestones the children should achieve at various points in their education at St. Mary's.

PLEASE REFER TO LTP OVERVIEW WHEN COMPLETING SUBJECT OVERVIEW:

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1			Typing skills	Internet searching skills Basic word processing	Programming robots Creating a multimedia e-book	Internet searching skills E-safety: media players Technology uses beyond school
Year 2		E-safety: basic rules Technology uses beyond school Creating a multimedia e-book Internet searching skills Basic photo editing skills			Programming sequences of commands to animate pictures Use Seesaw	
Year 3	Word processor text formatting tools Creating posters using text boxes	Photo collages Programming commands to run at different times	Algorithms Using conditional events in programs	Digital communication methods E-safety: passwords E-safety: gaming safely Exploring digital maps	Uses of technology and their impact	Digital painting Creating an e-book
Year 4	Word processing skills URLS and the topology of the Internet E-safety: child-friendly websites	Photo editing Movie making Online quiz making	LOGO-type programming	Using a variable in a program Using repeat events in a program Debugging	Trifold leaflet design Input and output devices E-safety: Message sharing consequences	Internet e-book Board game design

	Internet searching skills					
Year 5	Internet searching skills Poster design Spreadsheets	Spreadsheets Drawing tools – shape pictures	E-safety: Zip it Block it Flag it History of technology Linear on-screen presentation	Using numbers in a program	Programming – own app E-safety: consent	E-safety: messaging safely, sharing safely and vlogging rules Photo editing Impact of technology on society
Year 6	Internet services Internet searching skills App design	Photo editing Animation presentation E-safety: sharing photos safely	Algorithms and flowcharts Programming complex games	Spreadsheet maths programs Digital maps – route finding E-safety: digital citizen behaviours E-safety: Digital footprints	Binary numbers E-safety: concept cartoons	Stop motion animations Photo Editing

Digital Literacy

Information Technology

Computer Science Theory

Computer Science Programming

PLEASE USE OLD SUBJECT OVERVIEWS, DECEMBER 2019, TO FLOOD WITH STATUTORY REQUIREMENTS FOR YOUR SUBJECT....

<p><u>Key Stage 1 Statutory Requirements</u></p> <p>Pupils should be taught to:</p>

- 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
- 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

Key Stage 2 Statutory Requirements

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

Endpoints:

YEAR 1 and 2

UNIT TITLE: Digital Literacy					
CORE END POINT 1	ADDITIONAL END POINTS	CORE END POINT 2	ADDITIONAL END POINTS	CORE END POINT 3	ADDITIONAL END POINTS
All pupils must know that they can search for information using the internet.	[1] Most pupils should be able to explain that a web browser lets you view websites on the internet. [2] Most pupils should be able to understand how to use icons in a web browser (refresh, back button and history etc.)	All pupils must know that they must be safe when watching videos online and must be able to explain what they can do if they see something that upsets them.	[1] Most pupils should be able to write safety rules to follow when watching videos online. [2] Most pupils should be able to explain why each rule should be followed.	All pupils must know how to stay safe online and what to do if they need help and/or support.	[1] Most pupils should be able to write rules for staying safe online. [2] Most pupils should be able to suggest where to go for help and explain why. [3] Most pupils should be able to explain why the rules must be followed.

	[3] Most pupils should be able to navigate the website to find out facts.				
CORE END POINT 4	ADDITIONAL END POINTS	CORE END POINT 5	ADDITIONAL END POINTS	CORE END POINT 6	ADDITIONAL END POINTS
All pupils must know that they can search for images online and save them.	[1] Most pupils should be able to search for sensible images using key words and filter the results. [2] Most pupils should be able to save the image and view it in Photos. [3] Most pupils should be able to add the image to a new document and rotate and resize it.	All pupils must know that they can edit saved images.	[1] Most pupils should be able to crop the saved image. [2] Most pupils should be able to add a filter to the image. [3] Most pupils should be able to adjust the colour, brightness and sharpness of the saved image.		

YEAR 1 and 2

UNIT TITLE: Information Technology					
CORE END POINT 1	ADDITIONAL END POINTS	CORE END POINT 2	ADDITIONAL END POINTS	CORE END POINT 3	ADDITIONAL END POINTS

<p>All pupils must know that it is important to be able to type quickly and correctly.</p>	<p>[1] Most pupils should be able to type letters quickly using gentle taps. [2] Most pupils should be able to type words quickly. [3] Most pupils should be able to type using two hands.</p>	<p>All pupils must know that they can use a word processor to type words, sentences and paragraphs.</p>	<p>[1] Most pupils should be able to open a blank document. [2] Most pupils should be able to change the size of the font. [3] Most pupils should be able to type words using two hands.</p>	<p>All pupils must know that they can use a word processor to type words, sentences and paragraphs.</p>	<p>[1] Most pupils should be able to use the return button to start a new line. [2] Most pupils should be able to use the backspace button to correct errors. [3] Most pupils should be able to change the text colour.</p>
<p>CORE END POINT 4</p>	<p>ADDITIONAL END POINTS</p>	<p>CORE END POINT 5</p>	<p>ADDITIONAL END POINTS</p>	<p>CORE END POINT 6</p>	<p>ADDITIONAL END POINTS</p>
<p>All pupils must know that they can design a printable document by adding images and words to a word processor.</p>	<p>[1] Most pupils should be able to type quickly and correctly and change the size and colour of the font. [2] Most pupils should be able to insert images and resize them. [3] Most pupils should be able to rotate images with 2 fingers and arrange them neatly.</p>	<p>All pupils must know that they can create a multimedia e-book using an app.</p>	<p>[1] Most pupils should be able to type in text boxes. [2] Most pupils should be able to paint a picture. [3] Most pupils should be able to change the page colour.</p>	<p>All pupils must know that they can create a multimedia e-book using an app.</p>	<p>[1] Most pupils should be able to change the text style. [2] Most pupils should be able to record a narration and add speech bubbles. [3] Most pupils should be able to change the colours of the text boxes.</p>

YEAR 1 and 2

UNIT TITLE: Computer Science Programming					
CORE END POINT 1	ADDITIONAL END POINTS	CORE END POINT 2	ADDITIONAL END POINTS	CORE END POINT 3	ADDITIONAL END POINTS
All pupils must know that they can control robots by giving them a set of instructions (an algorithm).	[1] Most pupils should be able to input a sequence of commands. [2] Most pupils should be able to run the program. [3] Most pupils should be able to debug programs with support so they run correctly.	All pupils must know that they can control robots by giving them a set of instructions (an algorithm).	[1] Most pupils should be able to control the Blue Bot to get to flags. [2] Most pupils should be able to avoid obstacles on the grid and use fewer buttons to get the Blue Bot to flags. [3] Most pupils should be able to follow an algorithm to set the start and end positions.	All pupils must know that they can control objects with keys or button clicks on Discovery Coding.	[1] Most pupils should be able to design a scene. [2] Most pupils should be able to move objects with key presses. [3] Most pupils should be able to debug programs with a little support so they run correctly.
CORE END POINT 4	ADDITIONAL END POINTS	CORE END POINT 5	ADDITIONAL END POINTS	CORE END POINT 6	ADDITIONAL END POINTS
All pupils must know that they can control objects with keys or button clicks on Discovery Coding.	[1] Most pupils should be able to animate objects with a key press. [2] Most pupils should be able to add a few command blocks to an event.	All pupils must know that they can control objects with keys or button clicks on Discovery Coding.	[1] Most pupils should be able to stop and hide objects with button clicks. [2] Most pupils should be able to change object properties. [3] Most pupils should be able to debug		

	[3] Most pupils should be able to debug programs with a little support so they run correctly.		programs with a little support so they run correctly.		
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YEAR 1 and 2

UNIT TITLE: Computer Science Theory					
CORE END POINT 1	ADDITIONAL END POINTS	CORE END POINT 2	ADDITIONAL END POINTS	CORE END POINT 3	ADDITIONAL END POINTS
All pupils must know that technology is important outside of school.	[1] Most pupils should be able to recall different examples of technology. [2] Most pupils should be able to explain what they are used for. [3] Most pupils should be able to explain what technology they use at home.	All pupils must know that technology is used in a supermarket.	[1] Most pupils should be able to label technology in a supermarket. [2] Most pupils should be able to describe the purpose of each technology. [3] Most pupils should be able to explain how stock control works.	All pupils must know that technology is used at an airport.	[1] Most pupils should be able to label technology in an airport. [2] Most pupils should be able to describe the purpose of each technology. [3] Most pupils should be able to explain how air traffic control works.

CORE END POINT 4	ADDITIONAL END POINTS	CORE END POINT 5	ADDITIONAL END POINTS	CORE END POINT 6	ADDITIONAL END POINTS
All pupils must know that	<p>[1] Most pupils should be able to</p> <p>[2] Most pupils should be able to</p> <p>[3] Most pupils should be able to</p>	All pupils must know that technology is invented.	<p>[1] Most pupils should be able to design their own fitness app routine.</p> <p>[2] Most pupils should be able to design an app icon.</p> <p>[3] Most pupils should be able to write instructions of how to use the fitness app.</p>		

YEAR 3

UNIT TITLE: Digital Literacy					
CORE END POINT 1	ADDITIONAL END POINTS	CORE END POINT 2	ADDITIONAL END POINTS	CORE END POINT 3	ADDITIONAL END POINTS
All pupils must know that a strong password is needed to protect their online accounts.	[1] Most pupils should be able to explain why passwords are needed. [2] Most pupils should be able to explain the features of a strong password. [3] Most pupils should know that keeping passwords and codes safe is	All pupils must know that you can communicate online via emails.	[1] Most pupils should be able to explain why emailing is popular. [2] Most pupils should be able to explain how to send and read emails. [3] Most pupils should be able to write rules for staying safe when emailing.	All pupils must know how to search for a place on an online map.	[1] Most pupils should be able to rotate and zoom in and out to make it easier to read the map. [2] Most pupils should be able to title the view to make it easier to read the map. [3] Most pupils should be able to take landscape screenshots of places of interest.

	important in everyday life.				
CORE END POINT 4	ADDITIONAL END POINTS	CORE END POINT 5	ADDITIONAL END POINTS	CORE END POINT 6	ADDITIONAL END POINTS
All pupils must know that that there are rules to help keep them safe when playing games online and what they are.	[1] Most pupils should be able to explain why rules must be followed. [2] Most pupils should be able to explain where to go for help and advice. [3] Most pupils should be able to explain why age restrictions are needed on online games.				

YEAR 3

UNIT TITLE: Information Technology					
CORE END POINT 1	ADDITIONAL END POINTS	CORE END POINT 2	ADDITIONAL END POINTS	CORE END POINT 3	ADDITIONAL END POINTS

<p>All pupils should be able to type simple sentences on a word processor.</p>	<p>[1] Most pupils should be able to change the text size and colour of the font. [2] Most pupils should be able to copy and paste text into their document. [3] Most pupils should be able to change the style of the font.</p>	<p>All pupils should know that apps and programs can be used to create posters.</p>	<p>[1] Most pupils should be able to type in text boxes. [2] Most pupils should be able to insert images and rotate and resize them. [3] Most pupils should be able to change the page background and add borders or effects to images.</p>	<p>All pupils should know that a photo collage is a good way to showcase pictures.</p>	<p>[1] Most pupils should know how to arrange photos neatly on a photo collage app. [2] Most pupils should know how to rotate and resize the images so that they can be seen clearly. [3] Most pupils should know how to add effects to the images to enhance them.</p>
<p>CORE END POINT 4</p>	<p>ADDITIONAL END POINTS</p>	<p>CORE END POINT 5</p>	<p>ADDITIONAL END POINTS</p>	<p>CORE END POINT 6</p>	<p>ADDITIONAL END POINTS</p>
<p>All pupils should know that e-books can be created using technology.</p>	<p>[1] Most pupils should be able to add text and images to their e-book. [2] Most pupils should be able to type in shapes and add drawings to make the e-book visually appealing. [3] Most pupils should be able to choose an appropriate colour scheme for their book which matches</p>	<p>All pupils should be able to take a digital photograph.</p>	<p>[1] Most pupils should be able to use the photos app to crop the photo. [2] Most pupils should be able to adjust the lighting on the photo. [3] Most pupils should be able to add a filter to the photo for effect.</p>	<p>All pupils should know that you can label a map digitally</p>	<p>[1] Most pupils should be able to add text boxes to label specific parts of the map. [2] Most pupils should be able to change the colour of the text and text boxes to make the map easier to read. [3] Most pupils should be able to add lines or arrows to increase the accuracy of their labels.</p>

	the story/ genre and themes.				
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YEAR 3

UNIT TITLE: Computer Science Programming					
CORE END POINT 1	ADDITIONAL END POINTS	CORE END POINT 2	ADDITIONAL END POINTS	CORE END POINT 3	ADDITIONAL END POINTS
All pupils should know that when a code is written, it can move an object on screen	[1] Most pupils should be able to design a scene [2] Most pupils should be able to sequence command blocks to move an object [3] Most pupils should be able to debug programs independently so they run correctly.	All pupils should know that a picture can be programmed to move and hide	[1] Most pupils should be able to write code which causes a picture to move and hide [2] Most pupils should be able to program two pictures to animate together [3] Most pupils should be able to debug programs	All pupils should know that animations can occur at different times using timed events and buttons	[1] Most pupils should be able to design a scene which allows them to include timed events [2] Most pupils should be able to include timed events in their code [3] Most pupils should be able to add buttons so that things happen if they are clicked

			independently so they run correctly.		
CORE END POINT 4	ADDITIONAL END POINTS	CORE END POINT 5	ADDITIONAL END POINTS	CORE END POINT 6	ADDITIONAL END POINTS
All pupils should know that an object can be controlled using key presses	[1] Most pupils should be able to design a suitable scene in order to include key presses [2] Most pupils should be able to write code which controls an object using key presses [3] Most pupils should be able to debug programs independently so they run correctly.	All pupils should know that a conditional events happen only if something else happens	[1] Most pupils should be able use conditional events to control an objects movement [2] Most pupils should be able to use conditional events to make more than one object move [3] Most pupils should be able to debug programs independently so they run correctly.		

YEAR 3

UNIT TITLE: Computer Science Theory					
CORE END POINT 1	ADDITIONAL END POINTS	CORE END POINT 2	ADDITIONAL END POINTS	CORE END POINT 3	ADDITIONAL END POINTS

All pupils should be able to describe what a drone is	[1] Most pupils should be able to explain how drones are used [2] Most pupils should be able to explain why drones are useful but are not always liked	All pupils should be able to explain what a robot is	[1] Most pupils should be able to identify tasks robots are used for [2] Most pupils should be able to explain why robots are used to do tasks	All pupils should be able to explain what a simulation is	[1] Most pupils should be able to describe how simulations copy real events [2] Most pupils should be able to explain how to control computer simulations [3] Most pupils should be able to explain how helpful simulations can be
CORE END POINT 4	ADDITIONAL END POINTS	CORE END POINT 5	ADDITIONAL END POINTS	CORE END POINT 6	ADDITIONAL END POINTS
All pupils should know that data can be stored on computers electronically and on storage media (e.g. USB and online cloud)	[1] Most pupils should be able to name different storage media used to save programs and files [2] Most pupils should be able to identify the typical file sizes of different files [3] Most pupils should be able to explain how data can be lost or damaged and describe what a backup is				



YEAR 4

UNIT TITLE: Digital Literacy					
CORE END POINT 1	ADDITIONAL END POINTS	CORE END POINT 2	ADDITIONAL END POINTS	CORE END POINT 3	ADDITIONAL END POINTS
All pupils must know that a search engine can be used to search the web.	[1] Most pupils should be able to spell search terms correctly. [2] Most pupils should be able to search using 2 or 3 key words. [3] Most pupils should be able to open and close tabs to cross-reference sites and check the	All pupils must know that there are different search engines available.	[1] Most pupils should be able to compare search results from different search engines. [2] Most pupils should be able to rate each search engine's results. [3] Most pupils should be able to explain which search engine's results they prefer and why.	All pupils must know what URL (Uniform Resource Locators) stands for and where you might see them.	[1] Most pupils should be able to label the different parts of a URL. [2] Most pupils should be able to interpret what the different parts of a URL mean. [3] Most pupils should be able to describe what a URL is and explain how it works.

	accuracy of information.				
CORE END POINT 4	ADDITIONAL END POINTS	CORE END POINT 5	ADDITIONAL END POINTS	CORE END POINT 6	ADDITIONAL END POINTS
All pupils must know that they should only join and use child-friendly websites.	<p>[1] Most pupils should be able to give examples of child-friendly websites and what can be done on them.</p> <p>[2] Most pupils should be able to explain why some websites have age restrictions.</p> <p>[3] Most pupils should be able to explain what the possible consequences of using non child-friendly websites could be.</p>	All pupils must know that they should behave respectfully online.	<p>[1] Most pupils should be able to describe bad online behaviours.</p> <p>[2] Most pupils should be able to explain their possible consequences.</p> <p>[3] Most pupils should be able to write rules for behaving responsibly online.</p>		

YEAR 4

UNIT TITLE: Information Technology

CORE END POINT 1	ADDITIONAL END POINTS	CORE END POINT 2	ADDITIONAL END POINTS	CORE END POINT 3	ADDITIONAL END POINTS
All pupils must know that you can create a multiple-choice quiz online.	[1] Most pupils should be able to add multiple choice quiz questions and set correct answers. [2] Most pupils should be able to add sensible images to illustrate questions. [3] Most pupils should be able to add points for correct answers.	All pupils must know that digital photos can be edited using different apps.	[1] Most pupils should be able to edit a photo by applying filters. [2] Most pupils should be able to crop photos. [3] Most pupils should be able to add frames to photos.	All pupils must know that you can create posters digitally.	[1] Most pupils should be able to design an icon to include on the poster. [2] Most pupils should be able to change the background and text style to suit the theme of the poster. [3] Most pupils should be able to search and add sensible images to the poster.
CORE END POINT 4	ADDITIONAL END POINTS	CORE END POINT 5	ADDITIONAL END POINTS	CORE END POINT 6	ADDITIONAL END POINTS
All pupils must know what a word processor can be used for.	[1] Most pupils should be able to explain how to create a document. [2] Most pupils should be able to insert images and use bullet points. [3] Most pupils should be able to use a consistent	All pupils must know what a word collage is.	[1] Most pupils should be able to type sensible word and change the text and style colour. [2] Most pupils should be able to change the shape of the collage. [3] Most pupils should be able to create a design that matches the theme/topic.	All pupils must know what a leaflet is and know that you can create one digitally.	[1] Most pupils should be able to type text, change the text style and align the text in the centre. [2] Most pupils should be able to add objects and change their fill and border colour. [3] Most pupils should be able to use a suitable design and colour scheme.

	design with a nice colour scheme.				
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YEAR 4

UNIT TITLE: Computer Science Programming					
CORE END POINT 1	ADDITIONAL END POINTS	CORE END POINT 2	ADDITIONAL END POINTS	CORE END POINT 3	ADDITIONAL END POINTS
All pupils must know that LOGO is a computer programming language which can be used to control devices (e.g. a turtle).	[1] Most pupils should be able to input commands to move and turn the turtle and draw shapes. [2] Most pupils should be able to draw shapes using the repeat event. [3] Most pupils should be able to create and run	All pupils must know what an algorithm is. <i>Algorithms written to reach an Emoji on a maze.</i>	[1] Most pupils should be able to describe algorithms with 2 or 3 processes in and create a flowchart to show this. [2] Most pupils should be able to describe algorithms with 4 processes in and create a flowchart to show this.	All pupils must know what a variable is when coding.	[1] Most pupils should be able to use a conditional event to increase a score variable, decrease the score variable and re-position a picture. [2] Most pupils should be able to add a time limit on their app. [3] Most pupils should be able to use a button to hide or show pictures.

	procedures to draw patterns.		[3] Most pupils should be able to describe algorithms with a condition in and create a flowchart to show this.		
CORE END POINT 4	ADDITIONAL END POINTS	CORE END POINT 5	ADDITIONAL END POINTS	CORE END POINT 6	ADDITIONAL END POINTS
All pupils must know what a repeat event is when coding.	[1] Most pupils should be able to use two repeat events to move an image. [2] Most pupils should be able to use repeat events to keep changing the position of an image and checking if a variable equals a value. [3] Most pupils should be able to use a repeat event to keep checking if a target score total has been reached.	All pupils must know what a bug is in coding.	[1] Most pupils should be able to run the program and identify bugs (with support). [2] Most pupils should be able to debug their code (with support). [3] Most pupils should be able to improve their program (with support).		

YEAR 4

UNIT TITLE: Computer Science Theory					
CORE END POINT 1	ADDITIONAL END POINTS	CORE END POINT 2	ADDITIONAL END POINTS	CORE END POINT 3	ADDITIONAL END POINTS
All pupils must know what the internet is and what it can be used for.	[1] Most pupils should be able to identify the different features of the internet. [2] Most pupils should be able to explain what each feature is.	All pupils must know what an Emoji is and where they might be used.	[1] Most pupils should be able to recall facts about Emoji. [2] Most pupils should be able to explain the meanings of some Emoji. [3] Most pupils should be able to write Emoji challenges.	All pupils must know what input and output devices are.	[1] Most pupils should be able to explain what hardware is. [2] Most pupils should be able to name, show and explain the function of some input and output devices. [3] Most pupils should be able to describe computer

					systems people rely on at home.
CORE END POINT 4	ADDITIONAL END POINTS	CORE END POINT 5	ADDITIONAL END POINTS	CORE END POINT 6	ADDITIONAL END POINTS
All pupils must know what the internet is and what it can be used for.	<p>[1] Most pupils should be able to describe what an ISP is.</p> <p>[2] Most pupils should be able to explain how a search engine works.</p> <p>[3] Most pupils should be able to explain why the internet is useful and how search results are ranked.</p>				

YEAR 5

UNIT TITLE: Digital Literacy					
CORE END POINT 1	ADDITIONAL END POINTS	CORE END POINT 2	ADDITIONAL END POINTS	CORE END POINT 3	ADDITIONAL END POINTS
All pupils must know what an online encyclopedia is and what it can be used for.	[1] Most pupils should be able to navigate an online encyclopedia to find out facts. [2] Most pupils should be able to label the features of an online encyclopedia. [3] Most pupils should be able to describe 'top tips'	All pupils must know what some online hazards are.	[1] Most pupils should be able to explain how to respond to online hazards safely. [2] Most pupils should be able to recall the Zip it, Block it, Flag it slogan. [3] Most pupils should be able to explain the Zip it, Block it, Flag it slogan.	All pupils must know that they can carry out online research for a range of purposes.	[1] Most pupils should be able to explain why the reliability of a website is important. [2] Most pupils should be able to use different search engines without support/prompting. [3] Most pupils should be able to cross-reference search results to help validate information on them.

	for doing research using an online encyclopedia.				
CORE END POINT 4	ADDITIONAL END POINTS	CORE END POINT 5	ADDITIONAL END POINTS	CORE END POINT 6	ADDITIONAL END POINTS
All pupils must know how to stay safe when messaging.	[1] Most pupils should be able to write rules for staying safe when messaging. [2] Most pupils should be able to explain why the rules must be followed. [3] Most pupils should be able to explain what to do if they receive an abusive message.	All pupils must know that there are additional online hazards (spreading information online, data misuse and unkind sharing).	[1] Most pupils should be able to name some additional online hazards. [2] Most pupils should be able to define the meaning of each online hazard. [3] Most pupils should be able to describe rules to follow so you keep safe from each online hazard.	All pupils must know what a vlog is.	[1] Most pupils should be able to define words associated with online video sharing. [2] Most pupils should be able to describe online hazards for vloggers. [3] Most pupils should be able to explain how vloggers can keep happy and safe.

YEAR 5

UNIT TITLE: Information Technology					
CORE END POINT 1	ADDITIONAL END POINTS	CORE END POINT 2	ADDITIONAL END POINTS	CORE END POINT 3	ADDITIONAL END POINTS

<p>All pupils must know what a <i>GIF</i> is.</p>	<p>[1] Most pupils should be able to use a program or website to create an animated <i>GIF</i>. [2] Most pupils should be able to change the speed of the <i>GIF</i>. [3] Most pupils should be able to edit their <i>GIF</i> in order to improve the animation.</p>	<p>All pupils must know what a database is.</p>	<p>[1] Most pupils should be able to create tables that mimic real databases. [2] Most pupils should be able to describe real uses of databases. [3] Most pupils should be able to use filters to find statistics from databases.</p>	<p>All pupils must know that shapes can be used to create a picture on different programs.</p>	<p>[1] Most pupils should be able to add shapes and rotate and re-seize them. [2] Most pupils should be able to change the fill colours of the shapes and add different colour borders. [3] Most pupils should be able to zoom in to add details to the picture and change the layers.</p>
<p>CORE END POINT 4</p>	<p>ADDITIONAL END POINTS</p>	<p>CORE END POINT 5</p>	<p>ADDITIONAL END POINTS</p>	<p>CORE END POINT 6</p>	<p>ADDITIONAL END POINTS</p>
<p>All pupils must know that a spreadsheet can be used to solve calculations.</p>	<p>[1] Most pupils should be able to enter + - * / formulae. [2] Most pupils should be able to enter formulae to solve decimal calculations. [3] Most pupils should be able to enter formulae with multiple operations.</p>	<p>All pupils must know that a spreadsheet can be used to find totals.</p>	<p>[1] Most pupils should be able to enter the =SUM formula to find totals of a set of given numbers. [2] Most pupils should be able to enter the =SUM formula to find the total of a 'real life' set of numbers e.g. sports day totals. [3] Most pupils should be able to make the table look neat (e.g. use different cell fills, borders, bold</p>	<p>All pupils must know that they can use Keynote to create a multimedia on-screen presentation.</p>	<p>[1] Most pupils should be able to add text and images on slides. [2] Most pupils should be able to add animations. [3] Most pupils should be able to include slide transitions.</p>

			headings and change the font style).		
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YEAR 5

UNIT TITLE: Computer Science Programming					
CORE END POINT 1	ADDITIONAL END POINTS	CORE END POINT 2	ADDITIONAL END POINTS	CORE END POINT 3	ADDITIONAL END POINTS
All pupils must know that they can program actions using numbers.	[1] Most pupils should be able to write code to change the heading of a moving object by pressing buttons. [2] Most pupils should be able to add a time limit. [3] Most pupils should be able to use conditional	All pupils must know that they can program actions using numbers.	[1] Most pupils should be able to write code to change the angle of a moving object by pressing buttons. [2] Most pupils should be able to use a variable to set an object's speed for different levels. [3] Most pupils should be able to explain	All pupils must know that they can program actions using numbers.	[1] Most pupils should be able to move a picture using random numbers and co-ordinates. [2] Most pupils should be able to add commands to make a race between two pictures and use two variables to count their wins. [3] Most pupils should be able to test, debug and

	events to move an object if it hits obstacles.		what their program does and how it uses different commands.		improve programs independently.
CORE END POINT 4	ADDITIONAL END POINTS	CORE END POINT 5	ADDITIONAL END POINTS	CORE END POINT 6	ADDITIONAL END POINTS

YEAR 5

UNIT TITLE: Computer Science Theory					
CORE END POINT 1	ADDITIONAL END POINTS	CORE END POINT 2	ADDITIONAL END POINTS	CORE END POINT 3	ADDITIONAL END POINTS
All pupils must know what GPS is.	[1] Most pupils should be able to find different uses of GPS. [2] Most pupils should be able to explain different uses of GPS in society.	All pupils must know that technology can have an impact on people's lives.	[1] Most pupils should be able to describe advantages of using technology. [2] Most pupils should be able to describe disadvantages of using technology. [3] Most pupils should be able to explain		

	[3] Most pupils should be able to research GPS issues in the news.		what the 'digital divide' is.		
CORE END POINT 4	ADDITIONAL END POINTS	CORE END POINT 5	ADDITIONAL END POINTS	CORE END POINT 6	ADDITIONAL END POINTS

YEAR 6

UNIT TITLE: Digital Literacy					
CORE END POINT 1	ADDITIONAL END POINTS	CORE END POINT 2	ADDITIONAL END POINTS	CORE END POINT 3	ADDITIONAL END POINTS
All pupils must know what e-commerce is	[1] Most pupils should be able to name some online shops and services. [2] Most pupils should be able to describe some advantages and disadvantages of e-commerce.	All pupils must know what a search engine is and what it is used for.	[1] Most pupils should be able to label the parts of a search results page. [2] Most pupils should be able to explain why search results are helpful or not. [3] Most pupils should be able to describe	All pupils must know that you must be sensible when sharing photos or videos online.	[1] Most pupils should be able to think of questions they should consider before sharing a photo or video online. [2] Most pupils should be able to write rules to follow when sharing a photo or video online.

	[3] Most pupils should be able to Explain safety rules for shopping online.		tips for effective searching.		[3] Most pupils should be able to explain why each rule must be followed.
CORE END POINT 4	ADDITIONAL END POINTS	CORE END POINT 5	ADDITIONAL END POINTS	CORE END POINT 6	ADDITIONAL END POINTS
All pupils must understand the importance of online consent.	[1] Most pupils should be able to write safety rules linked to online consent. [2] Most pupils should be able to identify the victim in given scenarios. [3] Most pupils should be able to explain how the situation could be resolved in the given scenarios.	All pupils must know that they can find a location on a virtual map.	[1] Most pupils should be able to find specific locations on a virtual map (E.g. Apple Maps or Google Earth). [2] Most pupils should be able to switch between the different views on the map (3D, aerial and street view) [3] Most pupils should be able to find out journey times and distances.	All pupils must know what a digital footprint is.	[1] Most pupils should be able to explain why a digital footprint is important. [2] Most pupils should be able to describe where a digital footprint is kept. [3] Most pupils should be able to explain how to reduce their digital footprint.

YEAR 6

UNIT TITLE: Information Technology

CORE END POINT 1	ADDITIONAL END POINTS	CORE END POINT 2	ADDITIONAL END POINTS	CORE END POINT 3	ADDITIONAL END POINTS
All pupils must know that different apps can be used to create on-screen presentations.	[1] Most pupils should be able to add advanced animation effects and transitions. [2] Most pupils should be able to group objects so that they move together. [3] Most pupils should be able to add interactive hyperlinks.	All pupils must know that a picture can be created digitally using drawing tools.	[1] Most pupils should be able to add shapes, rotate and resize them and change the fill colour. [2] Most pupils should be able to add a falling snow effect. [3] Most pupils should be able to apply a winter photo frame effect.	All pupils must know that they can design their own information app on a chosen subject.	[1] Most pupils should be able to add subpages from the homepage. [2] Most pupils should be able to add relevant information and images to the different pages. [3] Most pupils should be able to add a quiz.
CORE END POINT 4	ADDITIONAL END POINTS	CORE END POINT 5	ADDITIONAL END POINTS	CORE END POINT 6	ADDITIONAL END POINTS
All pupils must know that they can edit images using layering techniques.	[1] Most pupils should be able to layer a picture on top of another. [2] Most pupils should be able to re-size and mask (cut-out) the foreground image). [3] Most pupils should be able to change the colours in the images.	All pupils must know what stop motion animation is.	[1] Most pupils should be able to shoot the frames of the animation using tiny movements [2] Most pupils should be able to edit the movie by: deleting, copying and re-ordering frames. [3] Most pupils should be able to change the playback speed.		

YEAR 6

UNIT TITLE: <i>Computer Science Programming</i>					
CORE END POINT 1	ADDITIONAL END POINTS	CORE END POINT 2	ADDITIONAL END POINTS	CORE END POINT 3	ADDITIONAL END POINTS
All pupils must know what an algorithm is with an input and a process in (for real systems).	[1] Most pupils should be able to describe algorithms with one decision in and create a flowchart to show this. [2] Most pupils should be able to describe algorithms	All pupils must know that all of the coding which they have learnt so far can be applied to create complex games.	[1] Most pupils should be able to add conditional events to their games. [2] Most pupils should be able to add a score variable and a random number generator to their games.	All pupils must know that their game should be tested and improved.	[1] Most pupils should be able to design their own game for a target audience. [2] Most pupils should be able to test their game regularly in order to debug any mistakes. [3] Most pupils should be able to evaluate their

	with two decisions in and create a flowchart to show this.		[3] Most pupils should be able to add time limits to their games.		game throughout the process and make improvements.
CORE END POINT 4	ADDITIONAL END POINTS	CORE END POINT 5	ADDITIONAL END POINTS	CORE END POINT 6	ADDITIONAL END POINTS
All pupils must know what HTML (Hypertext Mark Up Language) is.	[1] Most pupils should be able to create a web page which included headings and paragraphs. [2] Most pupils should be able to add images of different sizes to their web page. [3] Most pupils should be able to add hyperlinks to other websites, other web pages and different sections within a webpage.	All pupils must know that Python is a text-based programming language.	[1] Most pupils should be able to print lines of text on the screen and get an input from the user and store it. [2] Most pupils should be able to use 'if' commands to make simple quizzes. [3] Most pupils should be able to do calculations with variables.		

YEAR 6

UNIT TITLE: Computer Science Theory					
CORE END POINT 1	ADDITIONAL END POINTS	CORE END POINT 2	ADDITIONAL END POINTS	CORE END POINT 3	ADDITIONAL END POINTS
All pupils must know what internet services are.	[1] Most pupils should be able to sort images of internet services into groups. [2] Most pupils should be able to explain what different Internet services let you do.	All pupils must know what binary numbers are.	[1] Most pupils should be able to convert 6-bit binary numbers to decimal numbers. [2] Most pupils should be able to write and solve calculations using binary numbers. [3] Most pupils should be able to write	All pupils must know that there are possible careers in technology that they could pursue if they wish.	[1] Most pupils should be able to name some possible job roles. [2] Most pupils should be able to learn facts about potential job roles. [3] Most pupils should be able to explain why certain careers do or do not interest them.

	[3] Most pupils should be able to describe safety tips for each type of Internet service.		words in binary numbers.		
CORE END POINT 4	ADDITIONAL END POINTS	CORE END POINT 5	ADDITIONAL END POINTS	CORE END POINT 6	ADDITIONAL END POINTS