Subject Intent – Computing

At Godley Primary, we believe that it is vital for all our pupils to learn from and about Computing and Technology, so that they can understand the world around them. Through teaching our computing curriculum, we aim to equip our children to participate in a rapidly changing world where work and leisure activities are increasingly transformed by technology. It is our intention to enable children to find, explore, analyse, exchange and present information as well as having the skills to manipulate, develop and interpret different forms of technology in an ever-changing world.

In such a fast-moving curriculum, we are constantly looking at new ways of delivering relevant and exciting activities, while still delivering the fundamental skills needed for computing. Using technology safely and responsibly is a main priority and ensuring all pupils are able to use the internet and equipment appropriately is of paramount importance. We encourage our pupils to make links across the curriculum, the world and our local community, to reflect on their own experiences, which are designed in our curriculum, allowing horizontal and vertical links with previous year groups.

The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

Our ambitious computing curriculum is now structured in 3 areas that allow all pupils from EY to year 6 to progress through different categories of knowledge. These are:

Substantive knowledge

Windows and software
Word, powerpoint, photos, teams

Systems and set up
Adobe, Tynker, sharepoint

I pad apps
Pic collage, MIT app inventor

Disciplinary knowledge

Digital literacy
Knowledge of mechanics, searching and selecting information and E-safety.

Information technology
Knowledge of digital artefacts and computing contexts.

Computer Science
Knowledge of algorithms, programming, data and systems.

Subject Implementation

The Enquire Learning Trust bespoke computing curriculum offers a cross curricular scheme of work for EYFS, Key Stage 1 and Key Stage 2 which matches the expectations of the National Curriculum. The curriculum looks at the progression needed for all pupils to develop and embed skills and knowledge within the strands of: computer science, information technology and digital literacy. The curriculum is designed to support teaching and learning and the acquisition of subject knowledge in all areas. Children will have the opportunity to explore and respond to key issues such as digital communication, cyber-bullying, online safety, security and social media.

Subject Impact

The impact this curriculum will have shows that:

- *Children will be confident users of technology, able to use it to accomplish a wide variety of goals, both in school and at home.*
- *Children will have a secure and comprehensive knowledge of the implications of technology and digital systems which is important in our ever-evolving society.*
- *Children will be able to apply the British Values of democracy, tolerance, mutual respect, rule of law and liberty when using digital systems.*
- *Solve problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems*
- *Can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems*
- *Are responsible, competent, confident and creative users of information and communication technology.*

Godley Primary Computing Learning Journey
Disciplinary Knowledge

EXCELLENCE – HAPPINESS AND NURTURE – POWERFUL LEARNING

EYFS

Personal information.
Parental consent.
Stranger danger.
Through role play and stories eg. Little Red Riding Hood wolf in Granny's clothing.

Interfacing with devices (laptops and tablets).
Using a mouse to move and click on laptops.
Turn off and on, and finding the home button on a tablet.

Following algorithms unplugged and with Beebots/ Coderpillars.

Year 1

A1
Digital Literacy - Using the internet safely
Information Technology – typing training
A2
Computer Science – coding with Tynker JR
Digital Literacy Using the internet safely-Keep it private

S1
Digital literacy – using a device

S2
Information Technology – finding, saving and presenting

SU1
Information technology – ebook- digital art

SU2
Computer science – scratch Jnr

Year 2

A1
Digital Literacy- Staying safe on the internet-Jessie and friends.

A2
Computer Science – Scratch Jnr

S1
Digital literacy – using search and typing training

S2
Information technology – Word, powerpoint, pages

SU1
Information technology – taking and using photos and iOS presentations

SU2
Computer Science – Scratch Jnr

Year 3

SU1
Information Technology – stop motion animation

SU2
Computer Science – Scratch

S1
Information technology – word process, Powerpoint and photo editing

S2
Computer Science – algorithms (Tynker)

A1
E- Safety – Google Don't fall for fake

A2
Computer Science – networks
Information Technology - email

Year 4

SU1
Digital Literacy-Google-Be internet brave
Computer Science – loops and debugging (Tynker) Scratch desktop

SU2
Computer Science – Scratch

S1
Digital Literacy – Google be internet brave
Computer science – algorithms (lightbot)

S2
Computer science – animations (tynker)

A1
Digital Literacy- Google Share with care

A2
Information Technology – research and develop a topic (link to theme)apple maps

Year 5

A1
Digital Literacy – Google Secure your secrets
Information technology – using shared cloud documents

A2
Computer Science – spreadsheets

S1
Digital Literacy
E-safety – cyberbullying
Computer Science – algorithms and debugging (lightbot)

S2
Computer Science – game creating (Scratch)

SU1
Information technology – animation (varied apps) and website creation

SU2
Computer Science – game creation (Kodu)

Year 6

A1
Digital Literacy E-safety - Google It's cool to be kind

A2
Information Technology – 3D modelling- Sketch Up

S1
Digital Literacy-E-safety – social media and fake news
Information Tecnology
Green Screen, making videos
S2
Computer Science – App development-MIT app inventor

SU1
Digital Literacy-E-Safety
Computer Science-Mozilla X ray Goggles
Information Tecnology
Photo editing-video creation
SU 2
Computer Science – conditional code (Swift playground)

Year 7

EXCELLENCE – HAPPINESS AND NURTURE – POWERFUL LEARNING

Substantive Knowledge- windows software

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Chrome / Edge	Chrome / Edge	Chrome / Edge	Chrome / Edge	Chrome / Edge	Chrome / Edge
	Microsoft Word	Paint.net	Microsoft Word	Microsoft Word	Microsoft Word / Microsoft Excel	Microsoft Teams
	Microsoft PowerPoint		Microsoft PowerPoint	Microsoft PowerPoint	Microsoft PowerPoint / Microsoft Publisher	Windows Photos
	Paint (Windows)		Scratch desktop (or online)	Paint.net	Microsoft Teams	Mozilla X-Ray
				Scratch desktop (or online)	Scratch desktop (or online)	Scratch desktop (or online)
					Pivot Animator	
					Microsoft Kodu	

EXCELLENCE – HAPPINESS AND NURTURE – POWERFUL LEARNING

Substantive Knowledge- systems and set up

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Online Services requiring account creation (Free) 	Adobe Account for Spark 		The Tynker app will need a classroom account setting up to unlock levels 4 -10  Creating Class accounts for the Tynker App	The Tynker app will need a classroom account setting up to unlock levels 4 -10  Creating Class accounts for the Tynker App	MIT app inventor.  Will need pupils to copy their own save code to log in every week,	Swift playground will require an Apple ID. These can be made via Apple School Manager. 
Online services needing Office 365 login (Pupil and teacher) 			Tynker Online requires Office 365 account (login with the windows logo icon) Tynker Online also needs a class set up and a class code shared to the pupils. 	Tynker Online requires Office 365 account (login with the windows logo icon) Tynker Online also needs a class set up and a class code shared to the pupils. 	Microsoft SharePoint  Microsoft Word online  Microsoft Excel online  Microsoft Publisher 	SketchUp – Login with Microsoft account 

EXCELLENCE – HAPPINESS AND NURTURE – POWERFUL LEARNING

Substantive Knowledge- I pad apps

	Year 1		Year 2		Year 3		Year 4	Year 5	Year 6
iOS	Scratch Jr	Microsoft PowerPoint	Scratch Jr	Microsoft PowerPoint	Tynker	iMovie	Keynote	Keynote	Swift Playground
	Pages	Piccollage	Lightbot Hour	Snapseed	Keynote	iOS Camera	iMovie	Lightbot Hour	iMovie
	Tynker JR	Tavasui Sketches School	Piccollage App		Google Earth	Google Arts and Culture	Pages		Kahoot
	iOS Camera	Apple Photos	Photo Editor – Autodesk Sketchbook		Tavasui Sketches School		iMotion		MIT app inventor QR test app.
	Adobe Spark						Photo Editor – Autodesk Sketchbook		
	Safari						Tynker		

EXCELLENCE – HAPPINESS AND NURTURE – POWERFUL LEARNING

Godley Primary – Approach to teaching - Computing

E – Safety

Flash back 4

Prior Learning

Flash back 4

Investigate

Practise

Apply

Record

Present

Key Threshold Concepts
Connect – Communicate – Collect - Code

Teacher documents

EXCELLENCE – HAPPINESS AND NURTURE – POWERFUL LEARNING

Disciplinary Knowledge

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Coding							
Understand what algorithms are. **Use logical reasoning to explain how some simple algorithms work.**	Use of Beebot Use of Botley Understanding that some toys need batteries to work. Remote control toys Use of Tynker Junior app (early levels) Use of Beebot app. learning to give instructions to a programme. (algorithms)	The child can understand **algorithms** as **sequences** of instructions in everyday contexts The child can take real-world problems and then plan a **sequence** of steps to solve these. The problems could be moving a Bee Bot from one point to another, or making some simple food items like a sandwich, smoothie or pizza.	The child can understand **algorithms** as **sequences** of instructions or sets of rules in everyday contexts. The child can recognise that common **sequences** of instructions or sets of rules can be thought of as **algorithms**. Examples could include recipes but might also be procedures or rules in class, spelling rules, simple arithmetic operations or number patterns.	The child can explain a simple, sequence-based **algorithm** in their own words. The child can give an explanation for a simple **algorithm** based on a **sequence** of instructions. The **algorithm** could be one of their own, or a simple one with which they have been provided. The **algorithms** could be recorded graphically, e.g. as a storyboard.	The child can write a **program** that accepts keyboard **input** and produces on-screen **output**. In Tynker (or similar), the child can write a **program** that displays a question, accepts typed **input** and responds in an appropriate way to what is typed. This might be used as the basis for a dialogue **program** or a simple maths game.	The child can explain a rule-based **algorithm** in their own words. When provided with a rule-based **algorithm** (e.g. for a computer game), the child should be able to explain what it does and how it works, in their own words.	The child can give clear and precise logical explanations of a number of **algorithms**. Given an **algorithm**, the child can describe what it does and, using logical reasoning, give precise explanations of how it works. **Algorithms** could be linked to programming projects but might include a key **algorithm** such as binary search.
Understand how algorithms are implemented as programs on digital devices; and that programs execute by following		The child can program Bee Bots or the Bee Bot app using **sequences** of instructions to implement an **algorithm**.	The child can program on screen using **sequences** of instructions to implement an **algorithm**. The child can create **programs** as	The child can use **sequence** in **program** In on-screen programming, the child's **program** should include a **sequence**	The child's program, typically written in Scratch, or similar, should include **sequences** of **commands** or **blocks** and some **repetition. Repetition** would	The child can use **sequence, selection** and **repetition** in **programs**. The child's program, typically written in Swift Playgrounds, or similar, should	The child can use sequence, selection, repetition and variables in programs. The child's program should include sequences of

Disciplinary Knowledge

precise and unambiguous instructions. **Use sequence, selection and repetition in programs; work with variables.**		The child can create a Bee Bot (or similar) **program** using a number of steps in order before pressing the Go button.	**sequences** of instructions when programming on screen. Their **program** could be written using simple programming apps (such as Blue Bot or Lightbot), Scratch Jr or Scratch, perhaps using pre-prepared **blocks** and **sprites** in this case.	of **commands** or **blocks** in an appropriate order. A typical program could be a simple **scripted** animation, e.g. telling a joke, a story or explaining an idea taken from elsewhere on the curriculum. The child's **program** might include multiple **sprites**; instructions could include movement, on-screen text, sound and/or costume changes.	typically be for a fixed number of times but might also include exit conditions (e.g. repeat...until...). **Programs** might include turtle graphics, simple music or a simple game.	include **sequences** of **commands** or **blocks,** some **repetition** and **selection.** **Repetition** might include exit conditions (e.g. repeat...until...). Selection would normally be of an if...then or if...then...else type. At this level, expect the child to be able to combine **repetition** with **selection**.	commands or blocks, repetition, selection and variables.
Create and debug simple programs. **Design, write and debug programs that accomplish specific goals**		The child can give a **sequence** of instructions to a floor turtle. The child can create a Bee Bot **program** using a **sequence** of instructions before running it using the Go button. The length of the child's **programs** might be expected to increase over the course of the year.	The child can create a simple **program** on screen, correcting any errors. The child can create a simple **program** on screen (e.g. using the Blue Bot app, Scratch Jr or with prepared **sprites** and **blocks** in Scratch) with a particular goal or purpose in mind (e.g. drawing a shape or moving a	The child can design and write a **program** using a **block language**, without user interaction. A typical program might be a **scripted** animation for a joke, part of a story, or linked to another area of the curriculum. **Programs** could use pre-built **sprites** or ones designed by the child. Expect	The child can design and write a **program** using a **block language** to a given brief, including simple interaction. The child can write a **program** in Tynker (or similar) in which the user has to provide some **input**, perhaps as an answer to a question on screen, or by using key presses or the	The child can design, write and **debug** a **program** using code **language** based on their own ideas. The child can design a **program** of their own and write this in a **coding** language such as Swift Playgrounds or Tynker. The child can test and **debug** their code, explain what bugs they found and how they	

Disciplinary Knowledge

			sprite from one place to another). The child can **debug** any errors in their own code.	**programs** to include movement and dialogue; they may also include sound effects and some use of costumes to allow for animated movement. There may be more than one **sprite** in the animation.	mouse. The **program** could be a simple game or a set of questions and typed responses	fixed them. The **program** need not be complex, but it should be accomplished with a degree of independent working.	
Use logical reasoning to predict the behaviour of simple programs. **Use logical reasoning to detect and correct errors in algorithms and programs.**		The child can give explanations for what they think a **program** will do. The child can explain to the teacher, and to peers, what they think a **program** will do. This could be a **program** they or their peers have written, or it could be a familiar piece of **software** (including computer games). The child could use an audio recorder or video camera to capture their explanations.	The child can give logical explanations for what they think a **program** will do The child can give logical explanations of what a **program** will do under given circumstances, including some attempt at explaining why it does what it does. The **program** could be one they themselves have written or it could be a computer game or a familiar piece of **software**. The child could use an audio recorder or a video camera to record their explanations.	The child can use logical reasoning to detect errors in programs The child can give well-thought-through reasons for errors they find in **programs**. Typically, the child can find errors by reasoning logically about the **program** code, but they might also be able to use logical reasoning to identify errors in **programs** when they are executed. The **programs** do not have to be written originally by the child.	The child can use logical reasoning to detect and correct errors in programs. The child can give well-thought-through reasons for errors they find in **programs** and explain how they have fixed these. The child can find and correct errors by reasoning logically about the **program** code; they might also be able to use logical reasoning to identify errors in **programs** when executed and confirm that they have fixed these by testing the new version of their **program**. The programs do not have to be written	The child can use logical reasoning to detect errors in **algorithms**. When given an **algorithm** for a particular purpose, e.g. a rule-based **algorithm** for a computer game or a **sequence** of steps to draw a geometric pattern, the child can use logical reasoning to identify possible errors in the **algorithm**, explaining why they believe the **algorithm** is incorrect.	The child can use logical reasoning to detect and correct errors in **algorithms** (and **programs**). When given an **algorithm** for a particular purpose, e.g. a rule-based **algorithm** for a smartphone app, the child can use logical reasoning to identify possible errors in the **algorithm**, explaining why they believe the **algorithm** is incorrect. The child can use logical reasoning to suggest possible corrections to the **algorithm**, explaining why these would correct

					originally by the child.		the bug they identified.
Controlling or simulating physical systems.				The child can explore **simulations** of physical systems on screen. The child can experiment with some on-screen **simulations** of physical systems, perhaps linked to topics from other curriculum areas, e.g. a ball bouncing on a bat or a car moving around a track. Many computer games include elements of computer **simulations**. The child can discuss what they have learned from using the **simulation**.	The child can work with others to plan a project. Given a particular project, the child can work as part of a team to plan how to accomplish their goal, breaking the project down into a set of tasks. Examples of projects could include creating an educational game or monitoring the weather.		
Solve problems by decomposing them into smaller parts.						The child can plan a solution to a problem using decomposition. The child can take a complex problem, identify component parts, use decomposition to break this problem down and then plan how they can solve the problem by working through the elements they have identified. Projects could include developing a computer game.	The child can solve problems using decomposition, tackling each part separately. The child can take a complex problem, identify component parts, use decomposition to break this problem down and then plan how they can solve the problem by working through the elements they have identified, they can then use their plan to solve the original problem.

EXCELLENCE – HAPPINESS AND NURTURE – POWERFUL LEARNING

Disciplinary Knowledge

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Digital Literacy							
Use technology purposefully to organise, store and retrieve digital content.	Create firework pictures using paint apps /Programmes. Use creative programmes to explore colours and mark making. Use colours to relate to feelings showing emotions and how they are feeling use of emoji's. Tool selection within the creative apps, size of brush etc. ELG - Simple photo editing of photos they have taken independently on the ipad. Continuation of pattern, possible tracing of pattern using the editing tools on photos.	The child can use digital technology to store and retrieve content. The child can use a range of digital technologies to store and access digital content.	The child can store, organise and retrieve content on **digital devices** for a given purpose. With a given purpose, the child can use a range of digital technologies to retrieve, organise and store digital content.		The child can use and combine a range of **programs** on a computer The child can use multiple **programs** on laptop or tablet computers to achieve particular goals. E.g. They might record audio and then use this as samples in a composition, analyse **data** in a spreadsheet and then create a presentation to show the results of their analysis.	The child can use and combine a range of **programs** on multiple devices. The child can use multiple **digital devices** (such as tablets and laptops or digital cameras and laptops) to achieve particular goals. The devices might include web **servers,** allowing them to use cloud-based applications. E.g. They might use local media in conjunction with a cloud-based programming **platform**, such as Scratch; digital cameras and video cameras to capture content to use on an externally hosted website or blog; a digital camera to take photos they could import into design **software** on a laptop.	The child can design and create systems in response to a given goal. The child can plan, design and implement a system with multiple, interrelated components with a given goal in mind

EXCELLENCE – HAPPINESS AND NURTURE – POWERFUL LEARNING

Disciplinary Knowledge

Use technology purposefully to create and manipulate digital content		The child can create original content using digital technology. The child can create their own original digital content using a range of technologies. Look for some indication of the child's creativity in this work.	The child can create and edit original content for a given purpose using digital technology.	The child can plan a project in their topic work Working with the teacher and, perhaps, other children, the child can develop an outline plan for a project in computing, involving multiple steps and resources, e.g. creating an animation, filming a video or conducting a survey. In video work, the plan might include identifying a subject; storyboarding the video; sourcing media; recording video; filming; editing; exporting	The child can design and create content on a computer in response to a given goal. With a given goal, the child can plan and execute a project in which they use **software** on a laptop or tablet to create digital content with some degree of independence. E.g. They could plan, research and develop a topic. plan how they could contribute to a shared collaboration and then do so; plan and create a presentation about the weather. They should evaluate how effectively they have met the requirements of the original goal.	The child can analyse and evaluate information. Working with text, audio, images or video, the child can analyse information, perhaps summarising this. They should evaluate the quality of the information, looking for bias or questioning assumptions that have been made. E.g. They could work with still and creative animations evaluating its quality and providing a clear and coherent summary	
Understand the opportunities networks offer for communication and collaboration				The child can use email and videoconferencing in class.			The child can understand that computer **networks** transmit information in a

Disciplinary Knowledge

				When working as part of the class, the child can use email effectively and participate in a whole-class videoconference.			digital (binary) format. The child can explain that any information has to be converted to numbers before it can travel through computer **networks**. The child should understand that this conversion happens according to an agreed system or code.
Use search technologies effectively.				The child can search for information within a single site. The child can use browser-specific tools (e.g. the Find **command)** and site-specific tools (such as the search tools for Wikipedia or YouTube) to locate particular information on a web page or within a website.	The child can use a standard search engine to find information. The child can use a common search engine (such as Google with **safe search mode** locked in place) effectively, to search for particular information on the **web**, such as answers to questions they identify in a research project.		

Disciplinary Knowledge

Appreciate how search results are selected and ranked.				The child can understand that search engines select pages according to keywords found in the content. When using search engines, the child should demonstrate their understanding that the pages shown include the keywords they have specified. The child can use this knowledge by thinking of good keywords appropriate for what they are searching.	The child can understand that search engines rank pages according to relevance. The child can demonstrate their understanding that search engine results are ranked according to relevance, and that normally the top results on the first page are likely to be those most relevant to their query. If the child is unable to find good results on the first page, expect them to reconsider their keywords rather than looking at further pages of results.		
Select, use and combine a variety of software (including internet services) on a range of digital devices				The child can use a range of **programs** on a computer. The child can use a range of **software** on laptop or tablet computers with some degree of independence. **Software** might	The child can use and combine a range of **programs** on a computer The child can use multiple **programs** on laptop or tablet computers to achieve particular goals. E.g. They		The child can select, use and combine a range of **programs** on multiple devices. The child can choose for themselves from a range of available **programs** on laptops, tablets or cloud-based services

Disciplinary Knowledge

				include video editing, diagnostic tools, email clients and Apple and Microsoft office apps.	might record audio and then use this as samples in a composition, analyse **data** in a spreadsheet and then create a presentation to show the results of their analysis.		to achieve particular goals. E.g. They might choose which image editors and presentation **software** to use when making a presentation; which image and audio editors to use when creating media content for an app; which DTP, video editor and website tools to use when developing marking materials for an app.
Design and create a range of programs, systems and content that accomplish given goals.				The child can design and create content on a computer. The child can plan and execute a project in which they use **software** on a laptop or tablet to create digital content with some degree of independence. E.g. They could plan and shoot a video, plan and create a presentation on a given topic or plan and then create an online survey.	The child can design and create content on a computer in response to a given goal. With a given goal, the child can plan and execute a project in which they use **software** on a laptop or tablet to create digital content with some degree of independence. E.g. They could plan, research and develop a topic. plan how they could contribute to a shared collaboration		

Disciplinary Knowledge

					and then do so; plan and create a presentation about the weather. They should evaluate how effectively they have met the requirements of the original goal.		
Collecting, analysing, evaluating and presenting data and information				The child can collect and present information. The child can use computers to collect information and present this to an audience. E.g. They could shoot and then show a video, read and respond to an email or conduct an online survey and present the results. They should be able to do this with a degree of independence.		The child can analyse and evaluate information. Working with text, audio, images or video, the child can analyse information, perhaps summarising this. They should evaluate the quality of the information, looking for bias or questioning assumptions that have been made. E.g. They could work with still and creative animations	

EXCELLENCE – HAPPINESS AND NURTURE – POWERFUL LEARNING

Disciplinary Knowledge

	Knowledge	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Digital Literacy	Using technology safely	Internet safety rules and keeping safe.	Avatar and profile safety online.	To understand how different activities and responses online affect our feelings	Know the implications of when we post anything online.	To understand how Pop ups work.	To understand Password safety and how complexity keeps your accounts safe.	To understand cyberbullying and how to respond.
	Keeping Personal information private	Understanding what information should and should not be online.	Knowing how to respond to personal questions online and having the right to say no!	To understand what could happen if photos/pictures are shared.	Investigating different levels of privacy. What information should we protect? Public or private?	To understand about catfishing and scams online	To understand how much you share online exposes your safety	To understand Password safety and different layers of security such as 2 factor authentication. To understand email scams.
	Identify where to go for help and support if they have concerns over content.	Understanding who our trusted adults are.	Children know what to do if something is concerning them – trusted adults at home and in school.	Identifying 4 trusted adults. Looking at what is and what is not acceptable to post online.	To know there are different ways to take actions. To know they don't have to deal with concerns alone.	To recognise if online information is credible. Fake news and disinformation.	To understand what to do if your personal information is leaked.	To understand how to report cyberbullying.
	Using IT beyond school	Understanding of only talking online to people we know	Putting media stories into context and look at sites that help us like Childline and CEOP Using technology outside of school.	Understand that not everyone online is telling the truth.	To understand what a positive online presence looks like.	Google Interland – putting learning into practice – e-Safety class assembly	To introduce the CV and what it is used for.	To understand why social media sites don't charge to be used. To understand bias and fake news. To code an app that is useful outside of school
	Using devices effectively – mechanics **Automaticity**	**Using a mouse** and starting to learn key letters on a keyboard.	**Log in** practice Developing keyboard and mouse skills. **To understand what cut, copy and paste does.**	Developing **touch typing skills.** To understand how the internet works and how computers help us learn.	Topic related word processing and presentation skills. **Saving and retrieval.**	To use keyboard shortcuts for **Cut, copy and paste** **Ctrl C, V**	To use **copy, paste in spreadsheet** to automate formula.	To use different types of mouse and keyboard combination such as **drag and drop and two finger scrolling.**
	Searching and selecting	Selecting the correct app	Using safe search and understanding why.	Identifying websites that are appropriate to my age. Using search engines and rating favourite websites	Selecting credible sources for digital artefacts. Saving to a folder for easy access.	To understand how search engines display information. How to get better search results.	Searching for templates to build your own work on.	Learn about advanced search algorithms such as linear, binary and hashing, using a battleship game.
Information	**Knowledge**	**EYFS**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
	Use technology purposefully to organise,		Learn how to find, save, show, and send images on iPad devices.	Using a computer to edit saved images.	Create and save documents to do with topic.	To use Word and PowerPoint to display work/projects	Create a website using SharePoint to advertise a business. Understand the use of copyright.	How to save video/picture files to cloud storage (iCloud, OneDrive) for later use.

EXCELLENCE – HAPPINESS AND NURTURE – POWERFUL LEARNING

Disciplinary Knowledge

	store and retrieve digital content.							
	Use technology purposefully to create and manipulate digital content.	Using PicCollage to manipulate photos (Shrink, expand, turn)		To use photo editing software to discover different layers in images.	To import images into documents and manipulate size and wrapping.	To use more advanced photo editing functions	Create and understand animation principles and use software to create animations	Use Computer Aided Design (CAD) software to create and manipulate 3D shapes
	Select, use and combine a variety of software (including internet services) on a range of digital devices. KS2			Use book creation apps to create eBooks.	Use browsers and apps/programs to import and display work	To use different apps/programs to photo edit to see how skills are transferable.	To use different software and platforms to create animations.	To use video creation tools and programs t created layers and effects for a video project. Use Apple and Windows devices to sync and transfer content.
	Design and create a range of programs, systems and content that accomplish given goals.			To use a range of applications to save and edit work to produce a newly created image.	To collect and organise topic work digitally to produce a display piece.	Use different programs to create videos using a range of techniques such as green screen and stop motion animation.	Using spreadsheets, we create formula that automatically completes the tasks at hand.	Video creation and effects. 3D modelling.
Computer Science	**Knowledge**	**EYFS**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
	Understand what algorithms are	Introduction to the word Algorithm and what it means	Using a list of instructions to complete coding tasks.	Using instructions in the right order to achieve desired results	To understand how different platforms have different but similar instructions	To use algorithms to make aspects of a game work.	To use a list of instructions to create a 3D game world.	To use algorithms to create an app that links to the pupils secondary schools website
	Create and debug simple programs (that accomplish specific goals – KS2)	Following instructions and looking at order.	Learning that debugging is fixing wrong code – Tynker Jnr – directional problem solving. Up/down/left/right Getting code in the right order	Fixing the wrong code – Scratch Jnr Getting the right amount of code to solve the problem.	Presented with code problems and children must detect the error and debug the programme.	Create a maze game that others will play. Debug the ways others will try and cheat.	Create own controllable game that includes score, timer and lives. The game will need debugging in order to word correctly.	Developing an app to share with others – pupils must debug problems for app to work successfully.
	Use logical reasoning to predict the behaviour of simple programs (and to detect and correct errors – KS2)			introduce the idea of how to predict the behaviour of code before it has run.	Predicting code using questions and showing errors to allow pupils to correct the code.	Use prediction to plan how someone might cheat in a maze game and patch any issues.	Predict the path of sprites that have been coded.	Predict how functions will act when coding an app.
	Use sequence, selection and repetition in programs; work with variables.		To introduce the term REPEAT and how programs can loop an action	To repeat a sequence of events and predict the behaviour.	To use repeat blocks to code a looped solution to problems.	To code forever a sequence that helps our maze game run without errors or cheating.	Introducing Variables and how they are used to code a scoreboard, timer and life counter.	Using Logic to code loops of code when needed.

EXCELLENCE – HAPPINESS AND NURTURE – POWERFUL LEARNING

Disciplinary Knowledge

	Controlling or simulating physical systems	Using simple commands to control a sprite's direction	Using simple commands to reach a specified destination.	Using commands to create a range of motion. Using 1 sprite to control another.	Using commands to create a simple game.	Creating a simple game from scratch using a variety of control methods.	Advancing from 2D to 3D control within a game building environment.	Designing an app - control hyperlink and website destination.
	Solve problems by decomposing them into smaller parts	One direction at a time.	Phrase "What do I need to do next?" to be used to draw out the next step.	Code one aspect at a time.	Code one solution at a time.	Code one sprite until it works, then move onto the next.	Code the game until It works, add variables and other decorations after.	Code one app button at a time. Copy and edit code later.
	Work with various forms of input and output	Taping the screen. Using 2 fingers to zoom and twist.	Using the screen keyboard.	Drag and drop.	Using a keyboard and mouse	Using multiple keys at the same time.	Using cloud sync to output to different devices.	Using QR codes to output app updates. To use different platforms for coding.
	Understand how networks can provide multiple services, such as the world wide web.					To understand how a network used physical infrastructure to connect devices. How local devices communicate What an IP address it and how it is used on the world wide web	Now networks search internally to return results. Using cloud networks to share documents.	
	Collecting, analysing, evaluating, and presenting data and information.		Create an eBook	Using Word to collect and save topic work.	Using PowerPoint to present work.	Using a website/Microsoft Sway to present information.	To understand spreadsheet formula. Data is collected, entered and presented in spreadsheets shared via Teams.	Creating at mobile device app to display information

Disciplinary Knowledge

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
E-Safety							
Use technology safely and respectfully.	Using the equipment safely – computing rules and the importance of them. Where to use the iPad and how to hold it correctly.	The child can keep themselves safe while using digital technology. The child can understand that they need to keep safe when using digital technology. E.g. They should know to use filtered SafeSearch when looking for images on the **web** and that they should close the lid of a laptop (or similar action) if they find inappropriate images.	The child can keep safe and show respect to others while using digital technology. The child should know that they need to keep themselves safe when using digital technology. E.g. They should know to use filtered SafeSearch when looking for images on the **web** and that they should close the lid of a laptop (or similar action) if they find inappropriate images. They should know to respect others' rights, including privacy and intellectual property when using computers, so should not look at someone else's work or copy it without permission and acknowledgement. They should observe age	The child can use digital technology safely and show respect for others when working online. The child should know that they need to keep themselves safe when using digital technology. E.g. They should show respect for others when filming and should not normally post videos online. If responding to online surveys, they should do so anonymously, thinking carefully about information they give out.	The child can demonstrate that they can act responsibly when using computers. The child can act responsibly when using computers. E.g. They should act responsibly when developing computer games or prototype products. They should behave responsibly when using sampled music or creating a composition. They should show responsibility when creating or remixing online content, including observing copyright and any terms and conditions.	The child can demonstrate that they can act responsibly when using the internet. The child can act responsibly when using the internet. E.g. They should act responsibly when participating in an online community, such as the Scratch community, if permitted to do so. They should demonstrate that they understand the importance of **encrypted** (**HTTPS**) connections when browsing the **web** and of using strong passwords to protect their identity online. They should act responsibly when creating, editing or commenting on web pages or blog posts.	The child can show that they can think through the consequences of their actions when using digital technology. The child can discuss likely and potential consequences of their actions when using digital technology in a range of contexts. Contexts might include developing smartphone apps; using online project management tools; collecting information for market research; posting original content online

Disciplinary Knowledge

			restrictions on computer games.				
Keeping personal information private. **Recognise acceptable/unacceptable behaviour.**	Explore traditional tales with moral dilemmas e.g. Little red riding hood, Goldilocks , Jack and the Beanstalk etc. – circle time discussion of right and wrong choices in the stories.	The child can understand that information on the internet can be seen by others. The child should be aware that information stored on the **web** or transmitted via the internet is available to other people. E.g. They should know that the images they find online can be found by others too, and that the queries they type in can be seen by those who run the search engine they use and the school's **network**.	The child can understand what to do if they have concerns about content or contact online. The child should know to close the laptop lid or turn the tablet over if they find content, such as inappropriate images, which might disturb them or other children; if someone they don't trust contacts them online; if someone makes inappropriate contact online. They should know to tell their teacher or their parents if this happens and be aware that they could talk to another trusted adult or to ChildLine about this.	The child can recognise unacceptable behaviour when using digital technology. The child can identify what would be unacceptable or inappropriate behaviour when using digital technology in a range of contexts. E.g. They should know what would be unacceptable when using online communities, such as the Scratch website, or when shooting or publishing video.	The child can understand the difference between acceptable and unacceptable behaviours when using digital technology. The child can discuss the difference between acceptable and unacceptable behaviours when using digital technology in a range of contexts. Contexts could include the Scratch website, or other online communities; the use of others' original content, such as music samples or web pages; wikis, including Wikipedia	The child can discuss the consequences of particular behaviours when using digital technology. The child can discuss the likely or possible consequences of particular behaviours when using digital technology in a range of contexts. Contexts could include the Scratch website, or other online communities; using cryptography and passwords; creating websites or writing blog posts.	The child can identify principles underpinning acceptable use of digital technologies. The child can identify some principles underpinning acceptable behaviour when using technologies in a range of contexts. Contexts could include smartphone or tablet use; the use of online project management tools; online surveys and recording of interviews; creating and sharing digital content.
Identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.	ELG- To explain understanding of Digi duck or Smarties the	The child can understand what to do if they see disturbing content online at home or at school.	The child can understand what to do if they have concerns about content or contact online.	Know who to talk to about concerns and inappropriate behaviour in school.	Know who to talk to about concerns and inappropriate behaviour at home or in school.	Know how to report concerns and inappropriate behaviour in a range of contexts.	Know how to report concerns and inappropriate behaviour in a range of contexts.

Disciplinary Knowledge

	penguin stories through recording of a sentence.	The child should know to close the laptop lid or turn the tablet over if they find content, such as inappropriate images, which might disturb them or other children. They should know to tell their teacher or their parents if this happens.	The child should know to close the laptop lid or turn the tablet over if they find content, such as inappropriate images, which might disturb them or other children; if someone they don't trust contacts them online; if someone makes inappropriate contact online. They should know to tell their teacher or their parents if this happens and be aware that they could talk to another trusted adult or to ChildLine about this.	Pupils should know to report inappropriate behaviour when using technology in school to their teacher or another trusted adult, and that they can discuss any concerns they have about technology at home with their parents or teacher.	Pupils should know to report inappropriate behaviour when using technology in school to their teacher, the **IT lead** or another trusted adult, and that they can discuss any concerns they have with their teacher or other trusted adults in school. They should also know that any concerns over, or inappropriate behaviour with, digital technology at home can be discussed with their parents, with you or with another trusted adult.	Pupils should know how to report inappropriate behaviour when using technology in school: preferably this will be to their teacher or another trusted adult. They should know how to report any concerns over inappropriate behaviour, such as cyber bullying with digital technology at home. Preferably this would be through discussion with their parents, with you or with another trusted adult. Pupils should also know how to report inappropriate behaviour to those running websites which they regularly use, and to ChildLine, CEOP or to the police.	Pupils should know how to report inappropriate behaviour when using technology in school: preferably this will be to their teacher or another trusted adult. They should know how to report any concerns over inappropriate behaviour, such as cyber bullying with digital technology at home. Preferably this would be through discussion with their parents, with you or with another trusted adult. Pupils should also know how to report inappropriate behaviour to those running websites which they regularly use, and to ChildLine, CEOP or to the police.
Recognise common uses of information technology beyond school.		The child can show an awareness of how IT is used for communication beyond school.	The child can show an awareness of how IT is used for a range of purposes beyond school.	The child can decide whether a web page is relevant for a given	The child can decide whether digital content is relevant for a given	The child can decide whether digital content is reliable and unbiased.	The child can form an opinion about the effectiveness of digital content.

EXCELLENCE – HAPPINESS AND NURTURE – POWERFUL LEARNING

Disciplinary Knowledge

Be discerning about evaluating digital content.		The child can mention some of the ways in which IT is used to communicate beyond school. E.g. They might know that some people use social media such as Facebook, email, video calls or online greetings to say happy birthday to their friends	The child can name a number of purposes for which IT is used beyond school. The child might know that adults can share work and discuss ideas in online communities; that photos can be taken, edited and shared easily using digital technology; that the **web** is made up of information shared by people and organisations; that people use email for a range of purposes and in a variety of contexts; that scientists use computers when collecting and analysing **data**.	purpose or question. The child can form a judgement about whether a web page is appropriate for finding out the answer to a question they have or for a given purpose.	purpose or question. The child can form a judgement about whether a web page, such as a Wikipedia article, or other digital content is appropriate for finding out the answer to a question they have or for a given purpose	The child can discuss whether particular content (such as a web page, other children's pages or blog posts) is reliable and whether it has been written from a neutral point of view. They should be able to spot some examples of bias in digital content.	Taking into account the intended audience and purpose of the content, the child can form a judgement as to, and provide reasons for, the extent to which they consider digital content to be effective. The content might be an app, media resources or marketing materials.

Computing – Key Threshold Concepts – EYFS

	Basic	Advancing	Deep
To code	Children can follow simple instructions unplugged.	Children can follow algorithms unplugged or using beebots/coderpillar.	Children complete a simple program on a computer.
To communicate	Knows how to operate simple equipment, e.g. turns on CD player and uses remote control. Shows an interest in technological toys with knobs or pulleys, or real objects. . Shows skill in making toys work by pressing parts or lifting flaps to achieve effects, such as sound, movements or new images. Knows that information can be retrieved from computers	Interacts with age-appropriate computer software. Uses a range of technology in a familiar environment.	Children find out about and use a range of everyday technology. Children can turn a device on and off. Children can find the home button on a device. They select appropriate applications that support an identified need – for example in deciding how best to make a record of a special event in their lives, such as a journey on a steam train.
To connect	Children listen to stranger danger concepts online through stories.	Children listen and explore stranger danger concepts online through stories and role play.	Children discuss stranger danger concepts online through stories and role play.

Computing – Key Threshold Concepts – Year 1 & Year 2

	Basic	Advancing	Deep
To code	Children can test simple algorithms using unplugged resources.	With support of a teacher, children can predict and debug simple algorithms on Apps.	There is a growing confidence in predicting and debugging simple algorithms on Apps.
To communicate	Online activity is closely monitored by a teacher. With guidance, a range of devices and apps are used to communicate with others. With the support of a teacher, children can log on and log off on a device. With support of a teacher, children can experiment with manipulating text on a Microsoft Office program.	There is some awareness of some online risks. There is a growing awareness of a range of devices and apps that are used to communicate with others. Children can log on and log off on a device. There is a growing confidence with manipulating text and typing on the keyboard within a Microsoft Office program. With support of a teacher, children can save and retrieve personal files.	There is a growing awareness of some of the rules in place to minimise online risks. There is a good understanding of a wide range of devices and apps that can be used to communicate with others. Proficient at manipulating text and growing in confidence in typing, using full stops and commas within a Microsoft Office program. children can save and retrieve personal files.
To collect	With the support of a teacher, simple databases are used.	There is a growing awareness of how databases are used.	Many good examples of using databases across the curriculum are developing.
To connect	With the support of a teacher, some of the risks posed by online sites are explored.	There is a growing awareness that sites have age restrictions and some of the reasons for this are understood.	Age rules for sites are understood and good examples of some online risks are given

Computing – Key Threshold Concepts – Year 3 & Year 4 - Part One

	Basic	Advancing	Deep
To code (Using Scratch Junior)	There is some awareness that movement may be controlled around specified screen coordinates. There is some awareness of how to alter the appearance of objects and create sequences of changes. There is some awareness of how to create and edit sounds There is some awareness that the shape of tools may be altered. There is some awareness of triggers for events. There is some awareness that IF-THEN conditions may be set. There is some awareness that actions may be controlled by proximity or user input. There is some awareness of the term 'variable' and that variables may be set to store a value. There is some awareness of the use of functions to control variables. Some calculations are performed using basic reporter operations. There are some attempts to create appropriate formats for communicating ideas. There are some attempts to devise databases.	There is some experimentation with controlling movement around specified screen coordinates. There is some experimentation with setting the appearance of objects and sequences of changes. There is some experimentation with the creation and editing of sounds. There is some experimentation with altering the shape of tools. There is some experimentation with various triggers for events. There is some experimentation with IF-THEN conditions. There is some experimentation with sensing proximity or user input to trigger actions. There is some experimentation with using variables to store a value. There is some experimentation with controlling variables. Calculations using basic reporter operations are generally accurate. There is some interesting experimentation with formats and styles for communicating ideas. There are some good examples of database creations across the curriculum.	There is a good understanding that screen coordinates may be used to control movement. There is a good understanding of how to set the appearance of objects and in creating sequences of changes. There is a good understanding of how to create and edit sounds. There is a good understanding of how to alter the shape of tools to create different effects. There is a good understanding of how to specify triggers for events. There is a good understanding of how to use IF-THEN conditions. There is a good understanding that proximity and user inputs may be used to trigger actions. The term variable is understood, and used to store a value. There is a good understanding of how and when to use functions to control variables. Accurate and well applied calculations are performed using basic reporter operations. There is a good understanding that ideas need to be presented in interesting and easy-to-understand formats. There are many good examples of well-planned databases that have been created across the curriculum.

Computing – Key Threshold Concepts – Year 3 & Year 4 – Part Two

	Basic	Advancing	Deep
To communicate	There are some attempts to create appropriate formats for communicating ideas. With support of a teacher, children can experiment with two-handed touch typing. With guidance, children can use shift key to type different grammatical marks. With guidance children, can copy and paste from the internet.	There is some interesting experimentation with formats and styles for communicating ideas. Children are growing in confidence with two-handed touch typing and using shift key to type different grammatical marks in an email. There is a good understanding of how to perform an appropriate internet search, then copy and paste from the internet.	There is a good understanding that ideas need to be presented in interesting and easy-to-understand formats. There is a good understanding of using shift key when typing a formal and informal email.
To collect	There are some attempts to devise databases.	There are some good examples of database creations across the curriculum.	There are many good examples of well-planned databases that have been created across the curriculum.
To connect	Some examples of online risks are offered, when questioned. There is some awareness that hurt and offence may be caused online. There is some awareness of how online services work.	Whilst online, there is a growing awareness of how to keep safe. In discussion, some good examples of how to behave respectfully towards others online are provided. There is a growing understanding of how familiar online services work.	Many good examples of how to keep safe whilst online are provided. There is a good understanding of how to behave respectfully towards others online. Many good examples of how online services work are provided.

Computing – Key Threshold Concepts – Year 5 & Year 6 - Part One

	Basic	Advancing	Deep
To code (Using Scratch)	There is some awareness of how to create a set of variables. There is some understanding of the use of Boolean operators to define conditions. There is some understanding of the use of operators to perform calculations and to refine the reporting of results.	There are some good examples of sets of variables in a range of situations. There are some good examples of the use of Boolean operators to define conditions. There are some good examples of the use of operators to perform calculations and to refine the reporting of results.	There is a thorough understanding of how to create and use sets of variables. There is a thorough understanding of how and when to use Boolean operators. There is a thorough understanding of the use of operators to perform calculations and to refine the reporting of results.
To communicate	Some choices are made in selecting and using apps and devices for communicating ideas. Children are becoming increasingly proficient at touch typing and using Shift key for a variety of functions. Some high-quality work is produced and with guidance can use Spelling and Grammar check.	Good choices are made in selecting and using apps and devices for communicating ideas. Children are becoming increasingly proficient at touch typing and using Shift key for a variety of functions. There are many examples of high-quality work using editing tools and Spelling and Grammar check.	Excellent choices are made in selecting and using apps and devices for communicating ideas. There are widespread and very good examples of high-quality work using a variety of editing tools.

Computing – Key Threshold Concepts – Year 5 & Year 6 – Part Two

	Basic	Advancing	Deep
To collect	There is some awareness of how to devise, construct and manipulate data.	The manipulation of data is efficient and its presentation is becoming professional.	The manipulation of data is very well thought out and reasoned well. There is a high degree of professional presentation of data.
To connect	Some examples of the risks of online communities and the measures to take to minimise risks are given. There is an awareness that copyright theft is illegal. Online comments are responsible and sensitive. There is an awareness of how simple networks are set up and used.	There is a good understanding of the risks of online communities and the measures to take to minimise risks. There is a good understanding that copyright theft is illegal. There is a good awareness of the effect of online comments. Comments made online are responsible and sensitive. There is a good understanding of how simple networks are set up and used.	There is a thorough understanding of the risks of online communities and the measures to take to minimise risks. There is a thorough understanding that copyright theft is illegal. Explanations show an in-depth understanding of the effect of irresponsible online comments. Comments made are responsible and sensitive. There is a thorough understanding of how networks are set up and used.

Subject Vocabulary: Computing

	Autumn Term	Spring Term	Summer Term
Year N	• Begin to play and explore • Start engaging and creating • Begin to think critically • Being willing to 'have a go' • Motivation • Become involved and concentrating • Enjoying achieving what they set out to do • Having their own ideas • Begin to make links • Choosing ways to do things	• Turn on /turn off • Louder/quieter • CD/ CD player • Skip • Remote control • Camera • Mobile phone	• Computer/ mouse /keyboard • Torches • Knobs • Programme • Google
Year R	• Play • Explore • Engage • Create • Think critically • Being willing to 'have a go' • Motivation • Being involved and concentrating • Enjoying achieving what they set out to do • Having their own ideas • Making links • Choosing ways to do things	• Computers • Information • Turn on /turn off • Louder/quieter • Skip • Camera • Mobile phone • iPad/tablet	• Computer/ mouse /keyboard • Bee-bot • Torches • Knobs • Pulleys • Programme • Software • Google • Technology

Subject Vocabulary:

Year 1	**A1 –digital literacy** Rules Online Private information Off/on Username Password login Space bar Enter/return Caps lock Backspace **A2 – computer science - coding** Instructions Buttons Robots Patterns Program Algorithm Debug Code	**S1 – digital literacy** Off/on Username Password login Space bar Enter/return Caps lock Backspace **S2 – information technology** File Desktop Save as Open document present	**SU 1 – information technology** Digital art Paint effects Brush size Edit E-book **SU2** **Computer Science** Sprite Program Repeat Loop Motion
Year 2	**A1 – Digital Literacy** Appropriate/inappropriate sites Cyber-bullying Digital footprint **A2 – Computer science – coding** Sprite Right-angle turn Algorithm Sequence Debug Predict Animation	**S1 – digital literacy** Keyword-searching Search engine Browser Results Icon Finger placement Touch Type **S2- Word processing** Keyboard Qwerty Touch type Transition Font	**SU1 – information** technology – photos Crop Edit Brightness Filter Multimedia Air drop Layers Transparent **SU2 - Computer Science – coding** Sprite Stage Repeat If sequence Predict

Subject Vocabulary:

Year 3	**A1 – Digital Literacy** Secure passwords Private Personal Share Social media platform **A2 – Information Technology -online research** Browser Web page Search results Reliable Fact check Synonym Key search word Credibility Copyright Data	**S1 – Digital Literacy** Report Abuse Troll Comment Responsible Algorithmn Debug **S2 – computer science algorithms** Animations Sequence instructions Sequence debugging Test + improve Sequence Loop programming	**SU1 – computer science** – loops Debugging **SU2 –Computer Science** App HTML Code
Year 4	**A1 – Digital Literacy** Fake news Bias Unreliable Disinformation **A2 – Computer Science – networks** Different networks Information collection Reliability Owners School network Devices Computer parts Component Website IP address e.Mail	**S1 – information technology – word, photo editing** Powerpoint Word Microsoft Copy paste Edit, short –cut, transition Cite **S2 – Computer Science – coding** Commands- conditional statements Interface Sensors- nested loop Open-ended problems Bugs in programs Complex programming Algorithm Decomposition Abstraction Functions	**SU1 – Information Technology** – Photography Manipulation Green screen **SU2- Computer Science** Traverse Sensing Broadcast

Subject Vocabulary:

Year 5	**A1- Digital Literacy** Privacy Security Digital footprint Reputation Hacker Password/passcode Settings Two-step verification **A2- Spreadsheet** Spreadsheet Formulae Cell Cell reference Sum Linear Binary Hash tag	**S1- Digital Literacy/ Computer Science** Algorithm Debug Describe Demonstrate Internet assets Variables Import Export Procedures Functions Loops **S2- Computer Science** Custom assets Save Coding variables	**S1- Information Technology- Animation** Webpage Layout Hyperlink Publish 3D Smart Tools **S2- Computer Science** **Re-cap previously learnt through computer Science**
Year 6	**A1- Digital Literacy** Empathy Caption Conflict Bullying Cyberbullying Harassment Block Mute Context **A2- Information Technology** Manipulate Offset Copy Push pull	**S1- Digital Literacy/ information Technology** Bias Fake news Mock up App Development Green screen **S2- Computer Science** Text box Re-visit code Image Insert Transfer Re-size Cloud location QR code Export	**S1- Digital Literacy/computer Science** Scam Authentications Identity theft HTML Tags Remix webpage Artifacts **S2-** **Computer Science** Describe Demonstrate Function Loops Conditional code

iPad Apps

	Year 1		Year 2		Year 3		Year 4	Year 5	Year 6
iOS	Scratch Jr 	Microsoft PowerPoint 	Scratch Jr 	Microsoft PowerPoint 	Tynker 	iMovie 	Keynote 	Keynote 	Swift Playground 
	Pages 	Piccollage 	Lightbot Hour 	Snapseed 	Keynote 	iOS Camera 	iMovie 	Lightbot Hour 	iMovie 
	Tynker JR 	Tayasui Sketches School 	Piccollage App 		Google Earth 	Google Arts and Culture 	Pages 		Kahoot 
	iOS Camera 	Apple Photos 	Photo Editor – Autodesk Sketchbook 		Tayasui Sketches School 		iMotion 		MIT app inventor QR test app. 
	Adobe Spark 						Photo Editor – Autodesk Sketchbook 		
	Safari 						Tynker