



Key Knowledge, Skills and Understanding for Computing

EYFS

Three and Four-Year-Olds	Personal, Social and Emotional Development	<ul style="list-style-type: none"> Remember rules without needing an adult to remind them.
	Physical Development	<ul style="list-style-type: none"> Match their developing physical skills to tasks and activities in the setting.
	Understanding the World	<ul style="list-style-type: none"> Explore how things work.
Reception	Personal, Social and Emotional Development	<ul style="list-style-type: none"> Show resilience and perseverance in the face of a challenge. Know and talk about the different factors that support their overall health and wellbeing: <ul style="list-style-type: none"> - Sensible amounts of 'screen time'.
	Physical Development	<ul style="list-style-type: none"> Develop their small motor skills so that they can use a range of tools competently, safely and confidently.
	Expressive Arts and Design	<ul style="list-style-type: none"> Explore, use and refine a variety of artistic effects to express their ideas and feelings.
ELG	Personal, Social and Emotional Development	<ul style="list-style-type: none"> Be confident to try new activities and show independence, resilience and perseverance in the face of challenge. Explain the reasons for rules, know right from wrong and try to behave accordingly.
	Expressive Arts and Design	<ul style="list-style-type: none"> Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.

Year 1

Key Knowledge

Computer Science (Coding and computational thinking)

- Do they know that an algorithm is a set of specific instructions used to achieve an outcome?
- Do they know that they can move a character using the forwards, backwards, left and right direction keys?

Information Technology (Spreadsheets, Data Bases and Graphing, Writing and Presenting)

- Do they know that they can add pictures, animations and sound to enhance their own story book?
- Do they know that they can input numbers, words and symbols onto a spreadsheet?

Digital Literacy (Online Safety, Internet and Email)

- Do they know that their username and password should be kept private and is for their own personal use?
- Do they know that they should not share their own name, address or school online?

Key Skills and Understanding



Computer Science	Coding and Computational Thinking		
	<ul style="list-style-type: none"> • Children can explain what is meant by coding. • Children can explain what a block of code is. • Children can read through combined blocks of code. • Children know that for the computer to make something happen, it needs to follow clear instructions • Children can use Design Mode to have control over how their game looks. • Children can write a program that controls how a character moves. • Children can explain what is happening and write down/ talk through their code. • Children can write a program that controls how a character moves and stops when clicked. • Children can write a program where objects can stop moving and a sound is played when the objects collide. • Children have sorted items using a range of criteria on the carpet as a class and in pairs, using a variety of criteria. • Children know that to achieve the effect they want when building something, they need to follow accurate instructions. • Children know that by following the instructions correctly, they will get the correct result. • Children know that an algorithm is a precise, step-by step set of instructions used to solve a problem or achieve an objective. • Children can follow instructions in a computer program. 	<ul style="list-style-type: none"> • Children can explain the effect of carrying out a task with no instructions. • Children know that computers need precise instructions to follow. • Children know that an algorithm written for a computer to follow is called a program • Children understand how the order in which the steps of a recipe are presented affects the outcome. • Children can organise instructions for a simple recipe. • Children know that correcting errors in an algorithm or program is called 'debugging'. • Children know how to use the direction keys to move forwards, backwards, left and right. • Children know how to undo their last move. • Children know how to move their character back to the starting point. • Children can use diagonal direction keys to move the characters in the right direction. • Children know how to create a simple algorithm. • Children know how to debug their algorithm. • Children can use the additional direction keys to create a new algorithm. • Children can challenge themselves by using the longer algorithm to complete challenges. • Children can change the background images in their chosen challenge and save their new challenge. 	
Information Technology	Creating Content		
	Spreadsheets	Data Bases and Graphing	Writing and Presenting
	<ul style="list-style-type: none"> • Children can navigate around a spreadsheet. • Children can explain what rows and columns are. • Children can save and open sheets. • Children can enter data into cells. • Children can open the Image toolbox and find and add clipart. • Children can use the 'move cell' tool so that images can be dragged around the spreadsheet. • Children can use the 'lock' tool to prevent changes to cells • Children can give images a value that the spreadsheet can use to count them. • Children can add the count tool to count items. 	<ul style="list-style-type: none"> • Children can discuss and illustrate the transport used to travel to school. • Children can contribute to the collection of class data. • Children have used these illustrations to create a simple pictogram. • Children can contribute to a class pictogram. • Children can discuss what the pictogram shows. • Children can collect data from rolling a die 20 times and recording the results. • Children can represent the results as a pictogram 	<ul style="list-style-type: none"> • Children know the difference between a traditional book and an e-book. • Children can use the different drawing tools to create a picture on the page. • Children can add text to a page and change the colour, font and size of the text. • Children can save their work. • Children can open work that they saved in their last lesson. • Children can add an animation to their picture. • Children can play the pages they have created. • Children can save their changes and overwrite the file. • Children can add a sound to the page.



	<ul style="list-style-type: none"> Children can add the speak tool so that the items are counted out loud. Children can use a spreadsheet to help work out a fair way to share items. 		<ul style="list-style-type: none"> Children can add their own voice recording to the page. Children can create their own music and add it to their page. Children can add a background to the page. Children can copy and paste a page in the book. Children can enhance the features of their story book by adding additional pages and animations. Children can share their story book on a class story book display board.
Digital Literacy	Online Safety - Using IT beyond school – Internet and Email		
	<ul style="list-style-type: none"> Children can login to using their own login. Children have created their own avatar and understand why it is useful. Children can add their name to a picture they created on the computer. Children are beginning to develop an understanding of ownership of work online. Children can save work into the My Work folder and understand that this is a private saving space just for their work. Children can find their saved work. Children can find messages that their teacher has left on Purple Mash. 		<ul style="list-style-type: none"> Children can use a simple search to find information or files. Children will be confident with the functionality of icons. Children will know how to use the different icons and writing cues to add pictures and text to their work. Children understand what is meant by 'technology'. Children have considered types of technology used in school and out of school Children have recorded 4 examples of where technology is used away from school.



BRIDGEWATER
PRIMARY SCHOOL

Key Knowledge, Skills and Understanding for Computing

Year 2

Key Knowledge

Computer Science (Coding and computational thinking)

- Do they know that an algorithm is a set of instructions?
- Do they know that they can create, upload and use their own recorded sound?

Information Technology (Spreadsheets, Data Bases and Graphing, Writing and Presenting)

- Do they know that columns are vertical and rows are horizontal on a spreadsheet?
- Do they know that binary trees are limited to a yes or no answer?

Digital Literacy (Online Safety, Internet and Email)

- Do they know that email is used to communicate between 1 and a group of people?
- Do they know that a website is built from many webpages?



BRIDGEWATER
PRIMARY SCHOOL

Key Skills and Understanding

Coding & Computational Thinking

Computer Science

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| <ul style="list-style-type: none"> Children can explain that an algorithm is a set of instructions. Children can explain that for the computer to make something happen, it needs to follow clear instructions. Children can show their computer program and point out the algorithms they created Children can explain how to use the following terms in a computer program: Command, Repeat, Input, Output, Event, Collision Detection and Timer. Children can create a computer program including at least four of the above new coding vocabulary terms. Children can explain what debug (debugging) means. Children can explain what they did so that their computer program did not work. Children can debug simple programs Children can create a computer program using different objects. Children can predict what the objects in classmates' programs will do, based on their knowledge of the objects' limitations, e.g. a turtle can only move in specific ways. | <ul style="list-style-type: none"> Children can explain how they know that certain objects can only move in certain ways. Children can plan and use algorithms in programs successfully to achieve an end result. Children can code a program using a variety of objects, actions, events, and outputs successfully. Children have used different sounds to create a tune. Children have explored how to speed up and slow down tunes. Children understand what happens to the tune when sounds are moved. Children have added sounds to a tune they've already created to change it. Children have considered how music can be used to express feelings. Children can change the volume of the background sounds. Children have created two tunes which depict two feelings. Children have uploaded and used their own sound chosen from a bank of sounds. Children have created, uploaded and used their own recorded sound. Children have created their own tune using some of the chosen sounds |
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Creating Content

Information Technology

- | Spreadsheets | Data Bases and Graphing | Writing and Presenting |
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| <ul style="list-style-type: none"> Children can explain what rows and columns are in a spreadsheet. Children can open, save and edit a spreadsheet. Children can add images from the image toolbox and allocate them a value. Children can add the count tool to count items Children can use copying and pasting to help make spreadsheets. Children can use tools in a spreadsheet to automatically total rows and columns. Children can use a spreadsheet to solve a mathematical puzzle. Children can use images in a spreadsheet. Children can work out how much they need to pay using coins by using a spreadsheet to help calculate. Children can create a table of data on a spreadsheet. Children can use the data to create a block graph manually | <ul style="list-style-type: none"> Children understand that the information on pictograms cannot be used to answer more complicated questions. Children have used a range of yes/no questions to separate different items. Children understand what is meant by a binary tree. Children have designed a binary tree to sort pictures Children understand that questions are limited to 'yes' and 'no' in a binary tree. Children understand what is meant by a database. Children have used a database to answer simple and more complex search questions | <ul style="list-style-type: none"> Children can explain what is meant by Children can use online programs and apps to create their own art based upon a taught style such as impressionist art, pointillism, Piet Mondrian's Children can use the Collage functions in programs and apps to create their own surrealist art using drawing and clipart. Children know that digital content can be represented in many forms. Children can use a range of programs to publish work such as Quiz programs/apps, Publisher, a mind map, e-book or fact file. Children can talk about their work and make improvements to solutions based on feedback received. Children have added appropriate clipart. Children have added an appropriate photo. |



			<ul style="list-style-type: none"> • Children know that data can be structured in tables to make it useful. • Children can use a variety of software to manipulate and present digital content and information. • Children can collect, organise and present data and information in digital content. • Children can create digital content to achieve a given goal by combining software packages.
Digital Literacy	Online Safety - Using IT beyond school – Internet and Email		
	<ul style="list-style-type: none"> • Children can use the search facility to refine searches. • Children can share the work they have created to an online display board (Purple Mash) • Children understand that the teacher approves work before it is displayed. • Children are beginning to understand how things can be shared electronically for others to see both on Purple Mash and the Internet • Children understand how 2Repond can teach about how to use email. • Children can open and send an email to a 2Respond character. • Children have discussed their own experiences and understanding of what email is used for. 	<ul style="list-style-type: none"> • Children can recall the meaning of key Internet terms. • Children have completed a quiz about the Internet. • Children can identify the basic parts of a web search engine search page. • Children have learnt to read a web search results page. • Children can search for answers to a quiz on the Internet. • Children have created a leaflet to consolidate their knowledge of effective Internet searching. • Children can navigate the web to carry out simple searches using suitable search engines and begin to understand that not everything on the internet is true. 	



Key Knowledge, Skills and Understanding for Computing

Year 3

Key Knowledge

Computer Science (Coding and computational thinking)

- Do they know that they can use the repeat command to tell a character to repeat an action more than once?
- Do they know they can use a timer command to make an action last a specific amount of time?
- Do they know that debug means to fix a problem within their code?

Information Technology (Spreadsheets, Data Bases and Graphing, Writing and presenting)

- Do they know that data in a spreadsheet can be turned into a graph?
- Do they know that a branching database can help them to sort information?
- Do they know what is meant by the home row on the keyboard?

Digital Literacy (Online Safety, Internet and Email)

- Do they know what should and should not be included in a good password? (letters, numbers, symbols, no dates, names)
- Do they know that they should keep their password safe so that no one can access their private information?
- Do they know that when they receive an email from someone they do not know, they should not open it and should tell an adult?

Key Skills and Understanding

Coding & Computational Thinking

Computer Science

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| <ul style="list-style-type: none"> • Children can explain what Object, Action, Output, Control and Event are in computer programming. • Children can explain which commands they included in their program and what they achieve. • Children can explain how their program simulates a physical system, i.e. my vehicles move at different speeds and angles. • Children can describe what they did to make their vehicle change angle. • Children can show that their vehicles move at different speeds • Children can show how their character repeats an action and explain how they caused it to do so. • Children are beginning to understand how the use of the timer differs from the repeat command and can experiment with the different methods of repeating blocks of code. | <ul style="list-style-type: none"> • Children can explain how they made objects repeat actions. • Children can create an 'if' statement in their program. • Children can use a timer and 'if' statement to respond to the actions of a character and change their actions. • Children can explain what steps to follow to debug a program. • Children can explain how they debugged a partner's program. • Children can explain what a variable is in programming. • Children can explain why variables need to be named. • Children can create a variable in a program. • Children can set/change the variable values appropriately to create a timer |
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Creating Content

Information Technology

Spreadsheets

- Children can create a table of data on a spreadsheet.
- Children can use a spreadsheet program to automatically create charts and graphs from data.
- Children can use the 'more than', 'less than' and 'equals' tools to compare different numbers and help to work out solutions to sums.

Data Bases and Graphing

- Children understand how YES / NO questions are structured and answered
- Children have used YES/NO questioning to play a simple game with a friend.
- Children have contributed to a class branching database.
- Children have completed a branching database.

Writing and presenting

- Children understand the names of the fingers
- Children understand what is meant by – top row, home row, bottom row.
- Children develop the ability to touch type the home, bottom and top row keys.
- Children can use two hands to type the letters on the keyboard.



	<ul style="list-style-type: none"> • Children can use the 'spin' tool to count through times tables • Children can describe a cell location in a spreadsheet using the notation of a letter for the column followed by a number for the row. • Children can find specified locations in a spreadsheet. 	<ul style="list-style-type: none"> • Children can choose a suitable topic for a branching database. • Children can select and save appropriate images. • Children can create a branching database. • Children know how to use and debug their own branching database. • Children can set up a graph with a given number of fields. • Children can enter data for a graph. • Children can produce and share graphs made on the computer. • Children have solved a maths investigation. • Children can present the results in a range of graphical formats. 	
Digital Literacy	Online Safety - Using IT beyond school – Internet and Email		
	<ul style="list-style-type: none"> • Children understand what makes a good password for use on the Internet. • Children are beginning to realise the outcomes of not keeping passwords safe. • Children can contribute to a concept map of all the different ways they know that the Internet can help us to communicate. • Children have contributed to a class blog about Internet use • Children understand that some information held on websites may not be accurate or true. • Children have accessed and assessed a 'spoof' website. • Children have created and shared their own 'spoof' webpage mock-up. • Children can list a range of different ways to communicate. • Children can use programs such as 2Connect to highlight strengths and weaknesses of each method. • Children can open an email and respond to it. • Children have sent emails to other children in the class. • Children have written rules about how to stay safe using email. • Children have created a quiz about email safety that explores scenarios that they could come across in the future • Children have developed their search strategies further by refining their use of keywords and starting to use appropriate key phrases and questions. 	<ul style="list-style-type: none"> • Children can attach work to an email. • Children know what CC means and how to use it. • Children can read and respond to a series of email communications. • Children can attach files appropriately and use email communication to explore ideas. • Children can give some examples of simulations used for fun and for work. • Children can give suggestions of advantages and problems of simulations. • Children know that a computer simulation can represent real and imaginary situations • Children can use a simulation to try out different options and to test predictions. • Children can begin to evaluate simulations by comparing them with real situations and considering their usefulness. • Children can recognise patterns within simulations and make and test predictions. • Children can identify the relationships and rules on which the simulations are based and test their predictions. • Children can evaluate a simulation to determine its usefulness for purpose. 	



Key Knowledge, Skills and Understanding for Computing

Year 4

Key Knowledge

Computer Science (Coding and computational thinking)

- Do they know that an algorithm is a procedure to solve a problem?
- Do they know that a variable is a value that can change?

Information Technology (Spreadsheets, Data Bases and Graphing, Writing and presenting)

- Do they know that a formula makes a calculation automatically?
- Do they know that they can change the font type and colour to suit different audiences?
- Do they know what 'stop motion' animation is and how it is created?

Digital Literacy (Online Safety, Internet and Email)

- Do they know that they should never give their password to anyone else?
- Do they know that a padlock symbol protects their identity online?

Key Skills and Understanding

Coding & Computational Thinking

Computer Science

- Children can create an 'if/else' statement.
- Children understand what a variable is in programming.
- Children can set/change the variable values appropriately.
- Children can show how a character repeats an action and explain how they caused it to do so.
- Children can make a character respond to user keyboard input.
- Children can explain what steps I need to follow to debug a program.
- Children can explain what they did so that their computer program would not work.
- Children can explain how they debugged their partner's program.
- Children can explain what a variable is when used in programming.
- Children can create a timer that prints a new number to the screen every second.
- Children can explain how they made their program change the number every second.
- Children can create an algorithm modelling the sequence of a simple event.
- Children can manipulate graphics in the design view to achieve the desired look for the program.

- Children can use an algorithm when making a simulation of an event on the computer.
- Children know what the different instructions are in Logo and how to type them.
- Children can follow simple Logo instructions to create shapes on paper.
- Children can follow simple instructions to create shapes in Logo.
- Children can create Logo instructions to draw letters of increasing complexity.
- Children can write Logo instructions for a word of four letters.
- Children can predict what shapes will be made from Logo instructions.
- Children can create shapes using the Repeat function.
- Children can find the most efficient way to draw shapes.
- Children can use the Build feature.
- Children can create 'flowers' using Logo.
- Children can name the different parts of a desktop computer.
- Children know what the function of the different parts of a computer is
- Children have created a leaflet to show the function of computer parts.

Creating Content

Information Technology

Spreadsheets

- Children can use the number formatting tools to appropriately format numbers.
- Children can add a formula to a cell to automatically make a calculation in that cell.
- Children can use the timer, random number and spin button tools.
- Children can combine tools to make fun ways to explore number.

Writing and Presenting

- Children can use backgrounds and sounds to make more complex and imaginative animations
- Children have put together a simple animation using paper to create a flick book.
- Children have an understanding of animation frames.



	<ul style="list-style-type: none"> • Children can use a series of data in a spreadsheet to create a line graph. • Children can use a line graph to find out a result such as when the temperature in the playground will reach 20°C. • Children can make practical use of a spreadsheet to help them plan actions. • Children can use the currency formatting in a spreadsheet. • Children can allocate values to images and use these to explore place value. • Children can use a spreadsheet to check their understanding of a mathematical concept. 	<ul style="list-style-type: none"> • Children have made a simple animation. • Children know what the Onion Skin tool does in animation. • Children can use the Onion Skin tool to create an animated image. • Children know what 'stop motion' animation is and how it is created. • Children have used ideas from existing 'stop motion' films to recreate their own animation. • Children have shared their animations and commented on each other's work using tools and programs such as display boards and blogs. • Children have looked at and discussed a variety of written material where the font size and type are tailored to the purpose of the text. • Children have used text formatting to make a piece of writing fit for its audience and purpose • Children have interpreted a variety of incoming communications and used these to build up the details of a story. • Children have used the incoming information to write their own newspaper report. • Children have used a program or app to mind-map ideas. • Children have used these ideas to write a persuasive letter or poster as part of the campaign. • Children have assessed their texts using criteria to judge their suitability for the intended audience.
Digital Literacy	Online Safety --Using IT beyond school – Internet and Email	
	<ul style="list-style-type: none"> • Children have contributed ideas about online safety to a class concept map. • Children have planned a range of resources to help parents and children to understand online safety. • Children have decided upon key online safety messages as part of a presentation to parents. • Children have created some online safety materials. • Children have helped to plan a presentation on online safety. 	<ul style="list-style-type: none"> • Children have investigated ways to share this information online. • Children can structure search queries to locate specific information. • Children have used search to answer a series of questions. • Children have written search questions for a friend to solve • Children can analyse the contents of a web page for clues about the credibility of the information. • Children understand how search operation (e.g. Boolean Operators) and modifiers can change searches and select appropriate information for their tasks.



Key Knowledge, Skills and Understanding for Computing

Year 5

Key Knowledge

Computer Science (Coding and computational thinking)

- Do they know that a variable is a value that can change or alter instructions included in a programme?
- Do they know what Object, Action, Output, Control and Event are in computer programming?

Information Technology (Spreadsheets, Data Bases and Graphing, Writing and presenting)

- Do they know that a spreadsheet can be used to self-calculate mathematical data?
- Do they know that a database field is a single piece of information from the database record?
- Do they know that a theme, a setting, images, characters and sounds make up the key elements to writing and presenting a game?

Digital Literacy (Online Safety, Internet and Email)

- Do they know that they must not use their identity for online names and profiles?
- Do they know that teachers in school are there to support, in the event of issues being encountered online (both in and out of school)?

Key Skills and Understanding

Coding & Computational Thinking

Computer Science

- Children can explain what Object, Action, Output, Control and Event are in computer programming.
- Children can explain which commands they included in their program and what they achieve.
- Children can explain how their program simulates a physical system, i.e. objects move at different speeds and angles.
- Children can describe what they did to make their vehicle change angle.
- Children can show that their vehicles move at different speeds.
- Children can explain what a variable is in programming.
- Children can set/change the variable values appropriately.
- Children know some ways that text variables can be used in coding.
- Children can create a game which has a timer and score pad.
- Children can use variables to control the objects in the game.
- Children can create loops using the timer and If/else statements.
- Children can explain what internet safety is.
- Children can include two buttons that launch windows to two separate websites that provide further information in their program.
- Children can use their coding knowledge to create a program that explains internet safety.

Creating Content

Information Technology

Spreadsheets

- Children can create a formula in a spreadsheet to convert m to cm.
- Children can apply this to creating a spreadsheet that converts miles to km and vice versa.
- Children can use a spreadsheet to work out which letters appear most often.

Data Bases and Graphing

- Children understand the different ways to search a database.
- Children can search a database in order to answer questions correctly.
- Children have designed an avatar for a class database.

Writing and Presenting

- Children can review and analyse a computer game.
- Children can describe some of the elements that make a successful game.
- Children can begin the process of designing their own game.
- Children can design the setting for their game so that it fits with the selected theme.



	<ul style="list-style-type: none"> • Children can use the 'how many' tool. • Children can use a spreadsheet to work out the area and perimeter of rectangles. • Children can use these calculations to solve a real-life problem • Children can create simple formulae that use different variables. • Children can create a formula that will work out how many days there are in x number of weeks or years. • Children can use a spreadsheet to model a real-life situation and come up with solutions that can be practically applied 	<ul style="list-style-type: none"> • Children have successfully entered information into a class database. • Children can create their own database on a chosen topic. • Children can add records to their database. • Children know what a database field is and can correctly add field information. • Children understand how to word questions so that they can be effectively answered using a search of their database. 	<ul style="list-style-type: none"> • Children can upload images or use the drawing tools to create the walls, floor and roof. • Children can design characters for their game. • Children can decide upon, and change, the animations and sounds that the characters make. • Children can make their game more unique by selecting the appropriate options to maximise the playability. • Children can write informative instructions for their game so that other people can play it • Children can evaluate their own and peers' games to help improve their design for the future. • Children know what the 2Design and Make tool is for. • Children have explored the different viewpoints in 2Design and Make whilst designing a building. • Children have adapted one of the vehicle models by moving the points to alter the shape of the vehicle while still maintaining its form • Children have explored how to edit the polygon 3D models to design a 3D model for a purpose. • Children have refined one of their designs to prepare it for printing. • Children have printed their design as a 2D net and then created a 3D model. • Children have explored the possibilities of 3D printing. • Children can see the importance of recording concept maps visually. • Children understand what is meant by 'concept maps', 'stage', 'nodes' and 'connections'. • Children can create a basic concept map. • Children have used 2Connect Story Mode to create an informative text. • Children have used 2Connect collaboratively to create a concept map. • Children have used Presentation Mode to present their concept maps to an audience.
Digital Literacy	Online Safety & Using IT beyond school		
	<ul style="list-style-type: none"> • Children know what Childnet SMART CREW is and have used their resources to gain an understanding of keeping safe online. • Children know who to tell if they are upset by something that happens online. • Children have made a comic strip to share knowledge about online safety. • Children understand about the use of operators in searching and continue developing their effective search techniques by using different operators in their searches. 		

Key Knowledge

Computer Science (Coding and computational thinking)

- Do they know that functions are used instead of rewriting a block of code and that these can be organised by labelling them?
- Do they know that coding a game can be split into different sections to make it easier to read and debug?

Information Technology (Spreadsheets, Data Bases and Graphing, Writing and presenting)

- Do they know that using a spreadsheet will solve counting problems?
- Do they know that different question types are suited to different questions and topics?
- Do they know that the way they present information will have an impact on the audience (for example on a blog)?

Digital Literacy (Online Safety, Internet and Email)

- Do they know that what they do online leaves a digital footprint, which can have long-term impacts to themselves and others?
- Do they know that the internet and the world wide web are two different things, although they are closely related?
- Do they know that emails being accessible on most devices is one form of major technology change in their teachers' lifetime?

Key Skills and Understanding

Computer Science

Coding and Computational Thinking

- Children can plan a program before coding to anticipate the variables that will be required to achieve the desired effect.
- Children can follow through plans to create the program.
- Children can debug when things do not run as expected.
- Children can explain what functions are and how they can be created and labelled in 2Code.
- Children can explain how to move code from one tab to another in 2Code.
- Children can explain how they organised code in a program into functions to make it easier to read.
- Children are familiar with the vocabulary used throughout 2Code.
- Children can describe coding using the appropriate terms.
- Children can include buttons that launch other programs, including their own.
- Children can include buttons that launch windows to external websites.
- Children can follow through the code of how a text adventure can be programmed in 2Code.
- Children can adapt an existing text adventure to make it unique to their requirements.

- Children can describe what a text adventure is.
- Children can map out a story-based text adventure.
- Children can use 2Connect to record their ideas.
- Children can split their adventure-game design into appropriate sections to facilitate coding it.
- Children can code, test and debug the sections, using 2Code.
- Children can use the 'launch' command in 2Code to bring all the sections of their game together into a playable adventure game.
- Children can map out an existing text adventure.
- Children can contrast a map-based game with a sequential story-based game.
- Children can create their own text-based adventure based upon a map.
- Children can use coding concepts of functions, two-way selection (if/else statements) and repetition in conjunction with one another to code their game.
- Children make logical attempts to debug their code when it does not work correctly.

Information Technology

Creating content

Spreadsheets

Writing and Presenting

	<ul style="list-style-type: none"> • Children can create a spreadsheet to answer a mathematical question relating to probability. • Children can take copy and paste shortcuts. • Children can problem solve using the count tool. • Children can create a machine to help work out the price of different items in a sale. • Children can use the formula wizard to create formulae. • Children can use a spreadsheet to solve a problem. • Children can use a spreadsheet to model a real-life situation and come up with solutions. • Children can make practical use of a spreadsheet to help plan actions. • Children can use a spreadsheet to model a real-life situation and come up with solutions that can be applied to real life. 	<ul style="list-style-type: none"> • Children understand how a blog can be used as an informative text. • Children understand the key features of a blog. • Children can work collaboratively to plan a blog. • Children can create a blog with a specific purpose. • Children understand that the way in which information is presented has an impact upon the audience. • Children understand that blogs need to be updated regularly to maintain the audience’s interest and engagement. • Children can post comments and blog posts to an existing class blog. • Children understand the approval process that their posts go through and demonstrate an awareness of the issues surrounding inappropriate posts and cyberbullying. • Children can comment on and respond to other blogs. • Children can assess the effectiveness and impact of a blog. • Children have used the 2DIY activities to create a picture-based quiz. • Children have considered the audience’s ability level and interests when setting the quiz. • Children have shared their quiz and responded to feedback. • Children understand the different question types within 2Quiz. • Children have ideas about what sort of questions are best suited to the different question types. • Children have used 2Quiz to make and share a science quiz. • Children have considered the audience’s ability level and interests when setting the quiz. • Children have shared their quiz with peers. • Children have given and responded to feedback. • As a class, children have collaborated on a quiz. • Children have tried out the different types of Text Toolkit grammar games. • Children have chosen an appropriate Text Toolkit tool to make their own grammar game. • Children have used a 2Investigate quiz to answer quiz questions. • Children have designed their own quiz based on one of the 2Investigate example databases. • Children have used their knowledge of quiz types to create a quiz show quiz based on a curriculum area.
Digital Literacy	Online Safety - Using IT beyond school – Internet and Email – Communication and Networks	
	<ul style="list-style-type: none"> • Children have a good understanding of the various areas of online safety that they have studied throughout school. • Children can apply their computing skills and knowledge to plan a game to teach online safety rules. • Children understand safety aspects of blogging and how blogs like 2Blog can protect them from online safety issues that blogs on the Internet do not. 	<ul style="list-style-type: none"> • Children know the difference between the World Wide Web and the internet. • Children know about their school network. • Children have researched and found out about Tim Berners-Lee. • Children have considered some of the major changes in technology which have taken place during their lifetime and the lifetime of their teacher/another adult. • Children use advanced searches including the use of operators.