Whole School Computing Progression Map

Our Computing progression is developed using the Teach Computing units and aligns to the National Curriculum Programme of Study for Computing as detailed below. Pupils build on a range of skills that enhance their computer science, information technology and digital literacy capabilities. Through their Computing journey they will experience algorithms and programming, data, systems, digital artefacts, computing contexts, mechanics, searching and selecting information and online safety.

Access to technology begins in the Early Years through exploratory and adult directed learning and being given the chance to develop skills using devices they will encounter as they transition to KS1 (laptops, iPads and BeeBots).

Across the school, it is good practise for staff to also build these skills into other areas of learning allowing for pupils to transfer their learnt Computing skills to other learning tasks and further develop their confidence and understanding.

Appendix 1 at the end of this progression document gives cross curricular links to support development and assessment in other subject areas.

Computing in the Early Years

The EYFS framework is structured very differently to the national curriculum as it is organised across seven areas of learning rather than subject areas. Technology will be available to our EYFS pupils through discovery and play in the learning areas of Nursery and Reception. They will have access to devices such as iPads and laptops and programmes and apps on the interactive whiteboard to develop their confidence in using and understanding technology.

As there is no specific Computing curriculum for EYFS, outlined below are the statements of the 2020 Development Matters which are prerequisite skills for computing within the National Curriculum. We have taken the most relevant statements from the Early Learning Goals in the EYFS statutory framework and the Development Matters age ranges for three- and four-year-olds and Reception to match the programme of study for Computing.

The most relevant statements for Computing are taken from the following areas of learning: Personal, Social and Emotional Development, Physical Development, Understanding the World and Expressive Arts and Design.

Three and Four-Year-Olds	Personal, Social and Emotional Development		• Remember rules without needing an adult to remind them.
	Physical Development		• Match their developing physical skills to tasks and activities in the setting.
	Understanding the World		• Explore how things work.
Reception	Personal, Social and Emotional Development		• Show resilience and perseverance in the face of a challenge. • Know and talk about the different factors that support their overall health and wellbeing: – sensible amounts of 'screen time'.
	Physical Development		• Develop their small motor skills so that they can use a range of tools competently, safely and confidently.
	Expressive Arts and Design		• Explore, use and refine a variety of artistic effects to express their ideas and feelings.
ELG	Personal, Social and Emotional Development	Managing Self	• 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	Creating with Materials	• Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.

Computing in KS1 and KS2

AL Algorithms CS Computing Systems CM Creating Media DI Data and Information DD Design and Development
ET Effective Use of Tools NW Networks PG Programming SS Safety and Security IT Impact of Technology

	Computing Systems and Networks	Data and Information	Programming		Creating Media	
Year 1	Technology Around Us Technology Around Us CS AL	Digital Painting Digital Painting ET CM	Digital Writing Digital Writing ET CM	Grouping Data Grouping Data DI AL	Moving a Robot Moving a Robot AL PG	Intro to Animation Programming Animations PG DD
Year 2	IT Around Us IT Around Us CS NW	Pictograms Data and Information - Pictograms DI ET	Robot Algorithms Robot Algorithms AL PG	Introduction to Quizzes Programming Quizzes PG DD	Digital Photography Digital Photography ET CM	Making Music Digital Music CM DD
Year 3	Connecting Computers Connecting Computers CS NW	Animation Stop-frame Animation ET CM	Sequencing Sounds Sequencing Sounds PG DD	Branching Databases Branching Databases DI ET	Desktop Publishing Desktop Publishing ET CM	Events and Actions Events and Actions in Programs PG DD
Year 4	The Internet The Internet NW SS	Photo Editing Photo Editing ET CM	Repetition in Shapes Repetition in Shapes AL PG	Repetition in Games Repetition in Games PG DD	Data Logging Data Logging CS DI	Audio Production Audio Production ET CM
Year 5	Sharing Information Systems and Searching NW ET	Flat-file Databases Databases DI ET	Selection in Physical Computing Selection in Physical Computing PG CS	Selection in Quizzes Selection in Quizzes AL PG	Vector Drawing Introduction to Vector Graphics ET CM	Video Production Video Production CM DD
Year 6	Communication Communication and Collaboration NW ET	Variables in Games Variables in Games PG DD	Spreadsheets Introduction to Spreadsheets DI ET	Sensing Sensing Movement PG CS	3D Modelling 3D Modelling ET CM Computing	Web Page Creation Web Page Creation CM DD

Computing Progression Map

Green Oaks Primary Academy

Year 1	Technology Around Us CS AL	Digital Painting ET CM	Digital Writing ET CM	Grouping Data DI AL	Moving a Robot AL PG	Intro to Animation PG DD
National Curriculum Objectives	- Use technology purposefully to create, organise, store, manipulate and retrieve digital content - Recognise common uses of information technology beyond school - Use technology safely and respectfully, keeping personal information private, identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies	- Use technology purposefully to create, organise, store, manipulate and retrieve digital content	- Use technology purposefully to create, organise, store, manipulate and retrieve digital content	- Use technology purposefully to create, organise, store, manipulate and retrieve digital content - Use technology safely and respectfully, keeping personal information private, identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies	- Understand what algorithms are, how they are implemented as programs on digital devices and that programs execute by following precise and unambiguous instructions - Create and debug simple programs - Use logical reasoning to predict the behaviour of simple programs - Recognise common uses of information technology beyond school	- Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content - Select, use, and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems, and content that accomplish given goals, including collecting, analysing, evaluating, and presenting data and information. - Use technology safely, respectfully, and responsibly; recognise acceptable/unacceptable behaviour.
Lesson Objectives	To identify technology To identify a computer and its main parts To use a mouse in different ways To use a keyboard to type on a computer To use a keyboard to edit text To create rules for using technology responsibly	To use a computer to write To add and remove text on a computer To identify that the look of text can be changed on a computer To make careful choices when changing text To explain why I used the tools that I chose To compare typing on a computer to writing on paper	To describe what different freehand tools do To use the shape tool and the line tools To make careful choices when painting a digital picture To explain why I chose the tools I used To use a computer on my own to paint a picture To compare painting a picture on a computer and on paper	To label objects To identify that objects can be counted To describe objects in different ways To count objects with the same properties To compare groups of objects To answer questions about groups of objects	To explain what a given command will do To act out a given word To combine forwards and backwards commands to make a sequence To combine four direction commands to make sequences To plan a simple program To find more than one solution to a problem	To choose a command for a given purpose To show that a series of commands can be joined together To identify the effect of changing a value To explain that ach sprite has its own instruction To design the parts of a project To use my algorithm to create a program
Resources Software/ Hardware	• Paintz app • Laptops	• Microsoft word	• Paint	• J2e pictograms	• Physical and online BeeBots	• Scratchjr

Year 2	IT Around Us CS NW	Pictograms DI ET	Robot Algorithms AL PG	Introduction to Quizzes PG DD	Digital Photography ET CM	Making Music CM DD
National Curriculum Objectives	- Use technology purposefully to create, organise, store, manipulate and retrieve digital content - Recognise common uses of information technology beyond school - Use technology safely and respectfully, keeping personal information private, identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies	- Use technology purposefully to create, organise, store, manipulate and retrieve digital content - Use technology safely and respectfully, keeping personal information private, identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies	- Understand what algorithms are, how they are implemented as programs on digital devices and that programs execute by following precise and unambiguous instructions - Create and debug simple programs - Use logical reasoning to predict the behaviour of simple programs	- Understand what algorithms are, how they are implemented as programs on digital devices and that programs execute by following precise and unambiguous instructions - Create and debug simple programs - Use logical reasoning to predict the behaviour of simple programs - Use technology purposefully to create, organise, store, manipulate and retrieve digital content	- Use technology purposefully to create, organise, store, manipulate and retrieve digital content - Recognise common uses of information technology beyond school - Use technology safely and respectfully, keeping personal information private, identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies	- Use technology purposefully to create, organise, store, manipulate and retrieve digital content
Lesson Objectives	To recognise the uses and features of information technology To identify the uses of information technology in the school To identify information technology beyond the school To explain how to use information technology safely To recognise that choices are made when using information technology	To recognise that we can count and compare objects using tally charts To recognises that objects can be represented by pictures To create a pictogram To select objects by attribute and make comparisons To recognise that people can be described by attributes To explain that we can present information using a computer	To describe a series of instructions as a sequence To explain what happens when we change the order of instructions To use logical reasoning to predict the outcome of a program To explain that programming projects can have code and artwork To design an algorithm To create and debug a program that I have written	To explain that a sequence of commands has a start To explain that a sequence of commands has an outcome To create a program using a given design To change a given design To create a program using my own design To dishonest how my project can be improved	To use a digital device to take a photograph To make choices when taking a photograph To describe what makes a good photograph To decide how photographs can be improved To use tools to change an image To recognise that photos can be changed	To say how music can make us feel To identify that there are patterns in music To experiment with sound using a computer To use the computer to create a musical pattern To create music for a purpose To review and refine our computer work
Resources Software/ Hardware	• Physical devices	• J2epictogams	• Paint	• J2e pictograms	• Photo editor • Pixlr	• Chrome music lab

Year 3	Connecting Computers CS NW	Animation ET CM	Sequencing Sounds PG DD	Branching Databases DI ET	Desktop Publishing ET CM	Events and Actions PG DD
National Curriculum Objectives	- Use sequence, selection, and repetition in programmes, work with variables and various forms of input and output - Understand computer networks including the internet, how they can provide multiple services, such as the worldwide web, and the opportunities they offer for communication and collaboration - Select, use and combine a variety of software (including internet services) on a range of digital devices to design an create a range of programs, systems and content that accomplished given goals, including collecting, analysing, evaluating and presenting data and information	- Select, use and combine a variety of software (including internet services) on a range of digital devices to design an create a range of programs, systems and content that accomplished given goals, including collecting, analysing, evaluating and presenting data and information - Use technology safely, respectfully and responsibly: recognise acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact	- Design, write, and debug programmes that accomplish specific goals, including controlling or simulating physical systems; Solve problems by decomposing them into smaller parts - Use sequence, selection, and repetition in programmes; Work with variables and various forms of input and output - Use logical reasoning to explain how some simple algorithms work, and to detect and correct errors in algorithms and programs - Select, use and combine a variety of software (including internet services) on a range of digital devices to design an create a range of programs, systems and content that accomplished given goals, including collecting, analysing, evaluating and presenting data and information	- Select, use and combine a variety of software (including internet services) on a range of digital devices to design an create a range of programs, systems and content that accomplished given goals, including collecting, analysing, evaluating and presenting data and information - Use technology safely, respectfully and responsibly	- Use such technologies effectively, appreciate how results are selected unranked, and be discerning in valuating digital content - - Select, use and combine a variety of software (including internet services) on a range of digital devices to design an create a range of programs, systems and content that accomplished given goals, including collecting, analysing, evaluating and presenting data and information	- Design, write, and debug programmes that accomplish specific goals, including controlling or simulating physical systems; Solve problems by decomposing them into smaller parts - Use sequence, selection, and repetition in programmes; Work with variables and various forms of input and output - Use logical reasoning to explain how some simple algorithms work, and to detect and correct errors in algorithms and programs - Select, use and combine a variety of software (including internet services) on a range of digital devices to design an create a range of programs, systems and content that accomplished given goals, including collecting, analysing, evaluating and presenting data and information
Lesson Objectives	To explain how digital devices function To identify input and output devices To recognise how digital devices can change the way that we work To explain how a computer network can be used to share information To explore how digital devices can be connected To recognise the physical components of a network	To explain that animation is a sequence of drawings or photographs To relate animated movement with a sequence of images To plan animation To identify the need to work consistently and carefully To review and improve an animation To evaluate the impact of adding other media to an animation	To explore new programming environment To identify that commands have an outcome To explain that programme has a start To recognise that a sequence of commands can have an order To change the appearance of my project To create a project from a task description	To create questions with yes / no answers To identify the attributes needed to collect data about an object To create a branching database To explain why it is helpful for a database to be well structured To plan the structure of a branching database To independently create an identification tool	To recognise how text and images convey information To recognise that text and layout can be edited To choose appropriate page settings To add content to a desktop publisher publication To consider how different layouts can suit different purposes To consider the benefits of desktop publishing	To explain how a Sprite moves in an existing project To create a programme to move a Sprite in four directions To adapt program to a new context To develop my programme by adding features To identify and fix bugs in a program To design and create a maze based challenge
Resources Software/ Hardware	• Online websites • Safari • Google	• iMotion • Stop Motion Studio	• Scratch	• J2e.com data	• Publisher • Adobe Spark	• Scratch

Year 4	The Internet NW SS	Photo Editing ET CM	Repetition in Shapes AL PG	Repetition in Games PG DD	Data Logging CS DI	Audio Production ET CM
National Curriculum Objectives	- Understand computer networks, including the Internet; How they can provide multiple services, such as the worldwide web, and the opportunities they offer for communication and collaboration - Use search technologies effectively, appreciate how results are selected unranked, and be discerning in valuating digital content - Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplished given goals, including collecting, analysing, evaluating and presenting data and information well- Use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact	- Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplished given goals, including collecting, analysing, evaluating and presenting data and information - Use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact	- Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems, solve problems by decomposing them into smaller parts - Use sequence, selection and repetition in programs, work with variables and various forms of input and output - Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs - Select, use and combine a variety of software bracket including Internet services bracket on a range of digital devices to design and create a range of programmes, systems, and content that accomplish given goals, including collecting, analysing, evaluating, and presenting data and information	- Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems, solve problems by decomposing them into smaller parts - Use sequence, selection and repetition in programs, work with variables and various forms of input and output - Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs - Select, use and combine a variety of software bracket including Internet services bracket on a range of digital devices to design and create a range of programmes, systems, and content that accomplish given goals, including collecting, analysing, evaluating, and presenting data and information	- Use sequence, selection and repetition in programs, work with variables and various forms of input and output - Select, use and combine a variety of software (including Internet services) on a range of digital devices to design and create a range of programmes, systems, and content that accomplish given goals, including collecting, analysing, evaluating, and presenting data and information	- Use search technologies effectively, appreciate how results are selected unranked, and be discerning in valuating digital content - Select, use and combine a variety of software (including Internet services) on a range of digital devices to design and create a range of programmes, systems, and content that accomplish given goals, including collecting, analysing, evaluating, and presenting data and information - Use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact
Lesson Objectives	To networks physically connect to other networks To recognise how networked devices make up the Internet To outline how websites can be shared via the worldwide web To describe how content can be added and accessed on the worldwide web To recognise how the content of the worldwide web is created by people To evaluate the consequences of unreliable content	To explain that the composition of digital images can be changed To explain that colours can be changed in digital images To explain how cloning can be used in photo editing To explain that images can be combined To combine images for a purpose To evaluate how changes can improve an image	To identify the accuracy in programming is important To create a programme in a text-based language To explain what repeat means To modify count-controlled loop to produce a given outcome To decompose the task into small steps To create a programme that uses count-controlled loops to produce a given outcome	To develop the use of count-controlled loops in a different programming environment To explain that in programming there are infinite loops and count control loops To develop a design that includes two or more loops which run at the same time To modify an infinite loop in a given programme To design a project that includes repetition To create a project that includes Rep position	To explain that data gathered overtime can be used to answer questions To use a digital device to collect data automatically To explain that a data logger collects data points from sensors overtime To recognise how a computer can help us analyse data To identify the data needed to answer questions To he's data from sensors to answer questions	To identify that sound can be recorded To explain that audio recordings can be edited To recognise the different parts of creating a podcast project To apply audio editing skills in dependently To combine audio to enhance my podcast project To evaluate the effective use of audio
Resources Software/ Hardware	• Online websites • Safari • Google	• Windows Photo Editor • Get Paint	• Logo • Turtle	• Scratch	• Data Loggers	• Audactiy

Year 5	Sharing Information NW ET	Flat-file Databases DI ET	Selection in Physical Computing PG CS	Selection in Quizzes AL PG	Vector Drawing ET CM	Video Production CM DD
National Curriculum Objectives	- Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration - Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content	- Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content - Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	- Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts - Use sequence, selection, and repetition in programs; work with variables and various forms of input and output - Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs - Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	- Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts - Use sequence, selection, and repetition in programs; work with variables and various forms of input and output - Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs - Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	- Select, use, and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems, and content that accomplish given goals, including collecting, analysing, evaluating, and presenting data and information	- Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content - Select, use, and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems, and content that accomplish given goals, including collecting, analysing, evaluating, and presenting data and information. - Use technology safely, respectfully, and responsibly; recognise acceptable/unacceptable behaviour.
Lesson Objectives	To explain that computers can be connected together to form systems To recognise the role of computer systems in our lives To identify how to use a search engine To describe how search engines select results To explain how search results are ranked To recognised by the order of results is important and to whom	To use a form to record information To compare paper and computer based databases To outline how you can answer questions by grouping and then sorting data To explain that tools can be used to select specific data To explain that computer programmes can be used to compare data visually To use a real world database to answer questions	To control a simple circuit connected to a computer To write a programme that includes count controlled loops To explain a loop can stop when a condition is met To explain the unloop can be used to repeatedly cheque whether a condition has been met To design up physical project that includes selection To create a programme that controls the physical computing project	To explain how selection is used in computer programmes To relate their conditional statement connects a condition to an outcome To explain how selection directs the flow of a program To design a program that uses selection To create a program that uses selection To evaluate my program	To identify that drawing tools can be used to produce different outcomes. To create a vector drawing by combining shapes. To choose tools to achieve s desired effect To group objects to make them easier to work with To apply what I have learned about vector drawings	To explain what makes the video effective To use a digital device to record video To capture video using a range of techniques To create a storyboard To identify that video can be improved through re shooting and editing To consider the impact of the choices made when making and sharing a video
Resources Software/ Hardware	• Online Websites	• J2 Data	• Raspberry Pi • Crumbles	• Scratch • Forms	• Microsoft PowerPoint	• Windows 10 Video Editor • iMovie • Microsoft Photo App

Year 6	Communication NW ET Computing systems and networks – Communication	Variables in Games PG DD Programming A – Variables in games	Spreadsheets DI ET Data and information – Spreadsheets	Sensing PG CS Programming B – Sensing	3D Modelling ET CM Creating media – 3D Modelling	Web Page Creation CM DD Creating media – Web page creation
National Curriculum Objectives	- Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration - Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information - Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	- Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts - Use sequence, selection, and repetition in programs; work with variables and various forms of input and output - Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs - Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	- Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	- Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts - Use sequence, selection, and repetition in programs; work with variables and various forms of input and output - Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs - Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	- Select, use, and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems, and content that accomplish given goals, including collecting, analysing, evaluating, and presenting data and information - Use technology safely, respectfully, and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	- Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content - Select, use, and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems, and content that accomplish given goals, including collecting, analysing, evaluating, and presenting data and information. - Use technology safely, respectfully, and responsibly; recognise acceptable/unacceptable behaviour.
Lesson Objectives	To identify how to use a search engine To describe how search engines select results To explain how search results are ranked To recognise why the order of results is important, and to whom To recognise how we communicate using technology To evaluate different methods of online communication	To define a 'variable' as something that is changeable To explain why a variable is used in a program To choose how to improve a game by using variables To design a project that builds on a given example To use my design to create a project To evaluate my project	To identify questions which can be answered using data To explain that objects can be described using data To explain that formulas can be used to produce calculated data To apply formulas to data, including duplicating To create a spreadsheet to plan an event To choose suitable ways to present data	To create a program to run on a controllable device To explain that selection can control the flow of a program To update a variable with a user input To use a conditional statement to compare a variable to a value To design a project that uses inputs and outputs on a controllable device To develop a program to use inputs and outputs on a controllable device	To use a computer to create and manipulate three-dimensional (3D) digital objects To compare working digitally with 2D and 3D graphics To construct a digital 3D model of a physical object To identify that physical objects can be broken down into a collection of 3D shapes To design a digital model by combining 3D objects To develop and improve a digital 3D model	To review an existing website and consider its structure To plan the features of a web page To consider the ownership and use of images (copyright) To recognise the need to preview pages To outline the need for a navigation path To recognise the implications of linking to content owned by other people
Resources Software/ Hardware	• Online Websites	• Scratch	• Microsoft Excel • Numbers App (iPad)	• Microbit • Microbit Emulator	• TinkerCAD	• Sway

Appendix 1.

Cross curricular National Curriculum links to consider when assessing pupils.

Year Group	Computing Strand	Subject	Cross National Curriculum Links
1	Digital writing.	English.	Writing. ● Saying out loud what they are going to write about. ● Composing a sentence or relaying before writing it ● Sequencing sentences to form short narratives ● Rereading what they have written to check that it makes sense
	Digital painting.	Art.	● To develop a wide range of art and design techniques in using colour, pattern, texture, line, shape, form and space. ● To learn about the work of a range of artists, craft makers commerce and designers, describing the differences and similarities between different practises and disciplines and making links to their own work
2	Pictograms.	Maths.	Building on year one number and place value. ● Identify and represent numbers using objects and pictorial representations including the number line and use the language of equal to, more than, less than., most and least Year 2 ● Interpret and construct simple pictograms, tally charts, block diagrams and simple tables ● Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity ● Ask and answer questions about totalling and comparing categorical data
	Digital photography.	Art.	● To develop a wide range of art and design techniques in using colour, pattern, texture, line, shape, form and space.
	Digital music.	Music.	● Play tuned and untuned instruments musically ● Listen with concentration and understanding to a range of high quality live and recorded music ● Experiment with, create, select and combine sounds using the interrelated dimensions of music
3	Networks.	Maths. (Lesson 1)	● Number and place value: solve number problems and practical problems involving these ideas
		Art. (Lesson 3)	● To improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials. For example, pencil, charcoal, paint, and clay.
	Desktop publishing.	English.	● Pupils should be taught to draught and write by: non-narrative materials, using simple organisational devices. For example, headings and subheadings. ● Evaluate and edit by assessing the effectiveness of their own and others writing and suggesting improvements ● Proofread for spelling and punctuation errors

	The Internet.	PSHE (Lesson 6)	• Evaluating content for honesty and accuracy.
	Data Logging.	Science (LKS2)	• Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. • They should learn how to use new equipment, such as data loggers, appropriately. They should collect data from their own observations and measurements, using notes, simple tables and standard units, and helped to make decisions about how to record and analyse this data.
	Audio production.	Science (Lesson 2)	Sound • Find patterns between the volume of a sound and the strength of the vibrations that produced it • Recognised that sounds get fainter as the distance from the sound source increases
		English (Lesson 3)	Writing • Composition. Plan their writing by discussing and recording ideas • Draft and write by.: in non-narrative material, using simple organisational devices. For example, headings and subheadings • Read aloud their own writing., to a group or the whole class, using appropriate intonation and controlling the tone and volume so that meaning is clear
5	Programming- selection in physical computing.	Science.	Year 4 - Construct simple series electrical circuit, identifying a name in its basic parts, including sales, wires, bulbs, switches, and buzzes. *Are any pupils less than expected in this strand? Are they demonstrating an understanding in computing lessons?*
		Design technology.	Design • Generate, develop, model, and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer aided design. Make • Select from and use a wider range of tools and equipment to perform practical tasks. For example, cutting, shape in, joining and finishing accurately. • Select from and use a wider range of materials and components, including construction materials, textiles, and ingredients, according to their functional properties and aesthetic qualities Evaluate • Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. Technical knowledge • Understand and use electrical systems in their products. For example, series circuits incorporating switches, bulbs, buzzer's, and motors. • Apply their understanding of computing to programme, monitor, and control their products.

6	Creating media- web page design.	English.	• Writing composition. Identifying the audience for and purpose of the writing, selecting the appropriate form, and using other similar writing as models for their own.
	Data – spreadsheets.	Maths	Number- addition, subtraction, multiplication and division • Of problems involving addition, subtraction, multiplication, and division. Statistics. • Interpret and construct pie charts and line graphs and use these to solve problems • Calculate and interpret the mean as an average.
	Creating media- 3D modelling.	Art and design.	• To improve their mastery of art and design techniques, including drawing, painting, and sculpture with a range of materials.
		Design technology.	• Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer aided design.
		Maths.	Geometry. • Recognise, describe, and build simple 3D shapes, including making nets.