

Progression of National Curriculum statements

EYFS & Key Stage 1

EYFS (Understanding the world) - The early learning goals below most closely link to the Computing National Curriculum.

30-50 Months	40-60 Months	ELG
<ul style="list-style-type: none"> To know how to operate simple toys/devices. To show an interest in technological toys or real objects with knobs or pulley. To show skill in making toys work by pressing or lifting to achieve effects such as sound, movements or new images. To know that information can be retrieved from computers. 	<ul style="list-style-type: none"> To complete a simple program on a computer. To interact with age appropriate computer software 	<ul style="list-style-type: none"> To recognise that a range of technology is used in places such as homes, work places and schools. To select and use technology for particular purposes.

Key Stage 1

NC Statement	EYFS	Year 1	Year 2
1.1 understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions	Skills covered	Insight statement I know an algorithm is a precise set of instructions I can act out a set of instructions Scheme Coverage 1.3 Moving a robot 1.6 Programming animations	Insight statement I can describe an algorithm as a series of instructions in a sequence I can act out a set sequence of instructions I can give clear instructions Scheme Coverage 2.3 Robot algorithms 2.6 Programming quizzes
1.2 create and debug simple programs	Skills covered	Insight statement I can explain what my program should do I can select an appropriate command I can explain that changing a value changes the outcome of the program I can program a moving robot I can create a simple animation I can debug my programs I can find 2 solutions to a problem Scheme Coverage 1.3 Moving a robot 1.6 Programming animations	Insight statement I can design an algorithm to achieve a simple goal I can debug my programs I can explain that programming projects can contain other assets, not just code I can find different solutions to the same problem I can plan algorithms for different parts of a task I can add new features to my project Scheme Coverage 2.3 Robot algorithms 2.6 Programming quizzes
1.3 use logical reasoning to predict the behaviour of simple programs	Skills covered	Insight statement I can match a command to an outcome I can predict the outcome of a program with 4 commands Scheme Coverage 1.3 Moving a robot 1.6 Programming animations	Insight statement I can describe what will happen if the order of the instruction changes I can predict the outcome of a program Scheme Coverage 2.3 Robot algorithms 2.6 Programming quizzes
1.4 use technology purposefully to create, organise, store, manipulate and retrieve digital content	Skills covered	Insight statement I can use a keyboard and mouse I can edit text and text formatting I can draw shapes and lines I can change the size and colour of brush tools I can group objects by different properties I can save and load my content Scheme Coverage 1.1 Technology around us 1.2 Digital painting 1.4 Grouping data 1.5 Digital writing 1.6 Programming animations	Insight statement I can use a keyboard and mouse with increasing speed and accuracy I can use a digital camera and retrieve its content I can use tools to add to or manipulate an image I can create simple rhythms and melodies I can enter data and compare data sets I can create simple graphs I can save and load my content Scheme Coverage 2.1 Information technology around us 2.2 Digital photography 2.4 Pictograms 2.5 Making music 2.6 Programming quizzes
1.5 recognise common uses of information technology beyond school	Skills covered	Insight statement I can name different technology around school and explain how it is used I can name different places IT would be found Scheme Coverage 1.1 Technology around us 1.3 Moving a robot 1.4 Grouping data	Insight statement I can identify main parts of a computer I can explain some uses for computers I can name different examples of computers I can explain why IT is used in my named settings Scheme Coverage 2.1 Information technology around us 2.2 Digital photography
1.6 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.	Skills covered	Insight statement I can discuss rules around using technology safely I can give rules for keeping me safe and healthy when using technology in school, at home and beyond Scheme Coverage 1.1 Technology around us 1.5 Digital writing 1.6 Programming animations	Insight statement I can say how rules keep me safe when using technology I can give simple examples of why information should not be shared I know who to talk to in school and at home if something in appropriate is accessed in any way I ca Scheme Coverage 2.1 Information technology around us 2.4 Pictograms

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Key Stage 2

NC Statement	Year 3	Year 4	Year 5	Year 6
2.1 design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts	Insight statement I can find all the tools and blocks I will need in Scratch I know that code in Scratch is represented by blocks I can create a program that follows my design I consider the real world when making design choices I can describe the action of each sprite in a program I can implement my algorithm as code I can start code in a variety of ways I understand the difference between an event and an action I can modify a program I can make design choices and justify them	Insight statement I can decompose task into smaller steps I can create a code snippet for a given task I can program a computer my typing commands I can debug my text-based algorithms I can build programs that follow my design I can debug my program I can recognise the some programming languages allow more than one process to be run at once I know the different between program, algorithm and process I can explain that data can be collected over time and identify data to be collected in my project	Insight statement I can program microcontrollers to respond to an input I can create a program with different outcomes I can use 'if...the...' statements in my program I can design and describe what my program should do I can extend my program further I can decompose my program into smaller tasks	Insight statement I can design a program I can extend my game further by making more use of variables I can identify ways in which my game can be improved I can apply my knowledge of programming to a new environment I can test my program on an emulator I can design the algorithms and program flow for my project I can use a range of approaches to find and fix bugs
	Scheme Coverage 3.3 Sequencing sounds 3.6 Events and actions in programs	Scheme Coverage 4.3 Repetition in shapes 4.6 Repetition in games	Scheme Coverage 5.1 Sharing information 5.3 Selection in physical computing 5.6 Selection in quizzes	Scheme Coverage 6.1 Internet communication 6.3 Variables in games 6.6 Sensing
2.2 use sequence, selection, and repetition in programs; work with variables and various forms of input and output	Insight statement I can sequence connected commands I can control my sprite using key presses I can select suitable inputs to control and add features to my program I can choose suitable keys to turn on additional features	Insight statement I can design a program that includes count-controlled loops I can identify everyday tasks that include repetition as part of a sequence I can collect data from a sensor	Insight statement I can design a conditional loop I can identify and modify conditions I can design a program that will respond to user inputs and affect the output	Insight statement I can design a program that uses an event to set the value of a variable I can decide where in a program to change a variable I can store letters or numbers in a variable I can use a variable in an 'if...then..., else...'. Statement I can use conditions to change the value of a variable I can use a range of operands in an 'if...then... statement
	Scheme Coverage 3.1 Connecting Computers 3.3 Sequencing sounds 3.6 Events and actions in programs	Scheme Coverage 4.3 Repetition in shapes 4.4 Data logging 4.6 Repetition in games	Scheme Coverage 5.1 Sharing information 5.3 Selection in physical computing 5.6 Selection in quizzes	Scheme Coverage 6.3 Variables in games 6.6 Sensing
2.3 use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	Insight statement I can match a piece of code to an outcome I know that objects in programming environments can have attributes I know that an object in my project will respond EXACTLY to the code	Insight statement I can explain how changing the number of repetitions changes the outcome I can explain what the outcome of a repeated action will be I can identify patterns in a sequence	Insight statement I can explain what an infinite loop does I can explain that a condition is either true or false I can explain that a condition being 'meet' can start an action I can identify the output of a user input in an algorithm	Insight statement I can explain that a variable changes can be defined I can identify examples of information that are variables I can explain that a variable has a name and its value I can identify conditions in the real world
	Scheme Coverage 3.3 Sequencing sounds 3.6 Events and actions in programs	Scheme Coverage 4.3 Repetition in shapes 4.6 Repetition in games	Scheme Coverage 5.3 Selection in physical computing 5.6 Selection in quizzes	Scheme Coverage 6.3 Variables in games 6.6 Sensing
2.4 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	Insight statement I can explain that digital devices accept inputs and produce outputs I can describe a simple process I can suggest and explain similarities and differences between digital and non-digital devices I can demonstrate how information can be passed between devices through different connections I can explain the role of a switch, server and wireless access point in a network I can recognise that a now different devices connect together to make a network	Insight statement I can demonstrate how information is shared across the internet and describe the internet as a network of networks I can describe how to access websites and webpages on WWW I can describe where websites are stored when uploaded to the WWW I can explain how various types of media can be found and access on WWW and what rules are in place to protect content I can describe the importance of a secure network	Insight statement I can explain that a computer system features inputs, processes and outputs. I can explain that systems are built using a number of different parts. I can identify tasks that are managed by computer systems - I can explain that data is transferred over networks in packets - I can explain that networked digital devices have unique addresses - I can recognise that data is transferred using agreed methods I can compare working online to offline I can describe ways the internet enables effective collaboration I can explain that working together on the internet can be public or private.	Insight statement I can refine my search using search engines and compare the results from different search engines. I can recognise the role of I can explain the different forms of communication on the internet and compare how they are used. I can explain how some communication on the internet is not private. I can decide when I should and should not share I know that a website is written in HTML I can add content to
	Scheme Coverage 3.1 Connecting Computers	Scheme Coverage 4.1 The Internet	Scheme Coverage 5.1 Sharing information	Scheme Coverage 6.1 Internet communication
2.5 use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content	Insight statement	Insight statement I can explain the rules to protect digital content I can explain that not everything on the internet is true	Insight statement - I can explain how information can be recorded - I can order, sort, and group my data cards - I can explain how information can be grouped	Insight statement - I can compare results from different search engines - I can complete a web search to find specific information search engine's index.

		<p>I can explain why some information found online may not be honest, accurate or legal</p> <p>I understand that not everything on the internet is not true and that I need to think carefully before I reshare content.</p> <p>- I can explore how images can be changed in real life</p> <p>- I can identify changes that we can make to an image</p> <p>- I can sort images into 'fake' or 'real' and explain my choices</p> <p>- I can talk about fake images around me</p> <p>I can evaluate the impact of my publication on others through feedback</p>	<p>- I can refine a search in a real-world context</p> <p>- I can choose which field to sort data by to answer a given question</p>	<p>I can explain that search engines follow rules to rank and order web pages.</p> <p>I can explain some of the criteria search engines check to decide on the order of results</p> <p>I can describe ways in which search engines can be influenced</p> <p>web crawlers in creating an index and explain how a search term relates to a</p> <p>I can describe how search engines make money.</p> <p>I can explain the limitations of search engines</p>
	Scheme Coverage 3.5 Desktop publishing	Scheme Coverage 4.1 The Internet 4.2 Audio editing 4.5 Photo editing	Scheme Coverage 5.2 Video editing 5.4 Flat-file databases	Scheme Coverage 6.1 Internet communication 6.2 Webpage creation
2.6 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	<p>Insight statements</p> <p>I can create an effective stop-frame animation</p> <p>I can onion skinning to help make small changes between frames</p> <p>I can add other media to my animation</p> <p>I can combine sound commands in Scratch</p> <p>I can decide the actions for each sprite in a program</p> <p>I can implement my algorithm as code</p> <p>I can create yes/no questions using given attributes</p> <p>I can use my branching database to answer questions</p> <p>I can create a desktop publishing template</p> <p>I can choose a suitable layout for different purposes when desktop publishing</p> <p>I can use a coding environment to code a maze-based challenge</p>	<p>Insight statements</p> <p>I can record and edit audio in a simple DAW (Digital Audio Workstation)</p> <p>I can combine different audio files to create a podcast</p> <p>I can use repetition in a text-based language (logo – turtle) to create shapes and patterns</p> <p>I can choose what data to collect and at what interval to collect it using a datalogger</p> <p>I can import the data and use a computer program to sort the data</p> <p>I can use a computer to view the data in different ways</p> <p>I can use a photo editor to create a composition</p> <p>I can edit a composition and retouch an image in a photo editor</p> <p>I can combine images to create a new image</p>	<p>Insight statements</p> <p>I can compare a paper database to a digital database</p> <p>I can use a flat-file database to answer questions</p> <p>I can use 'and' and 'or' to refine data selection</p> <p>I can use a range of tools in a vector image program</p> <p>I can modify a composition by changing the order of the layers</p> <p>I can use alignment grids and guides for consistency</p> <p>I can create programs with different outcomes in Scratch</p> <p>I can design the flow of a program with 'if...then...else' condition</p> <p>I can share my program with others</p>	<p>Insight statements</p> <p>I can draw a webpage layout using Google Sites</p> <p>I can add content to my own website</p> <p>I can preview my website</p> <p>I can explain and design a navigation path</p> <p>I can make multiple websites and link them using hyperlinks</p> <p>In Scratch, I can decide where in a program where to change a variable</p> <p>I can make use of an event to change a variable</p> <p>I create a game using variables</p> <p>I can extend my game y using more variables</p>
	Scheme Coverage 3.1 Connecting Computers 3.2 Stop-frame Animation 3.3 Sequencing sounds 3.4 Branching Databases 3.5 Desktop publishing 3.6 Events and actions in programs	Scheme Coverage 4.1 The Internet 4.2 Audio editing 4.3 Repetition in shapes 4.4 Data logging 4.5 Photo editing 4.6 Repetition in games	Scheme Coverage 5.1 Sharing information 5.2 Video editing 5.3 Selection in physical computing 5.4 Flat-file databases 5.5 Vector drawing 5.6 Selection in quizzes	Scheme Coverage 6.1 Internet communication 6.2 Webpage creation 6.3 Variables in games 6.4 Introduction to spreadsheets 6.5 3D modelling 6.6 Sensing
2.7 use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. (Use the Project Evolve eSafety objectives as part of this.)	<p>Insight statement</p>	<p>Insight statement</p> <p>I can discuss why a network needs protecting</p> <p>I can recognise there are rules to protect content</p> <p>I can explain that not everything on the WWW is true</p> <p>I can explain why I need to think carefully before I share or reshare content</p> <p>I can explain why some information I find online may not be honest, accurate or legal</p> <p>I can sort images into real and fake and explain my choices</p> <p>I can talk about fake images around me</p>	<p>Insight statement</p> <p>I can recognise that working together on the internet can be public or private</p>	<p>Insight statement</p> <p>I can decide when I should and should not share</p> <p>I can say why I should use copyright-free images</p> <p>I can explain the implication of linking content owned by others</p>
	Scheme Coverage 3.2 Stop-frame Animation	Scheme Coverage 4.1 The Internet 4.2 Audio editing 4.5 Photo editing	Scheme Coverage 5.1 Sharing information 5.2 Video editing	Scheme Coverage 6.2 Webpage creation 6.3 Variables in games 6.5 3D modelling