

Computing Progression Overview

2020-2021

EYFS Year A

The same skills are covered in both year A and Year B, the children are assessed and previous skills built upon.

Autumn	Spring	Summer
Knows how to operate simple equipment, e.g. turns on CD player and uses remote control. Shows an interest in technological toys with knobs or pulleys, or real objects such as cameras or mobile phones. Shows skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images. Knows that information can be retrieved from computers	Completes a simple program on a computer. Uses ICT hardware to interact with age-appropriate computer software.	Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes. Children find out about and use a range of everyday technology. They select appropriate applications that support an identified need - for example in deciding how best to make a record of a special event in their lives, such as a journey on a steam train.

Key Stage 1 Year A

Autumn	Spring	Summer
Computer Science <i>Computing Unplugged 101</i>	Computer Science <i>Algorithm of Awesome 102</i>	E-Safety <i>My Life Online 103</i>
Define the word 'instruction'. Give, follow, rearrange, and correct instructions. Program a simple, real-world algorithm. Find a bug in code. Create a multi-step algorithm to complete a real-world task.	Program a simple algorithm. Follow a debugging strategy. Create a multi-step algorithm to a brief.	From previous scheme - waiting on coverage from Technola <i>Using Technology Safely</i> <i>understand where to go for help and support when he/she has concerns about content or contact on the internet or other online technologies</i>

Lower KS2 Year A

Autumn	Spring	Summer
Computer Science <i>Hello World 301</i>	Robotics <i>Go Robot 302</i>	E-Safety <i>My Life Online 303</i>
Recognise different types of computers and what they can be used for. Program a simple algorithm. Create a multi-step algorithm with a specific audience in mind. Use one event to control more than one object. Convert human stories into code and vice versa.	Recognise differences between computers and robots. Program inputs using a draw canvas to control a robot's movement. Program inputs using block code to control a robot's movement. Display use of sequencing by combining lights, movements and sounds to create a multi-step algorithm Follow a specific brief and create an algorithm capable of guiding a robot through a course.	Explain how my identity overlaps with my offline identity. Describe positive ways for someone to interact with others online and understand how this will impact on how others perceive them. Explain ways in which someone might change their identity depending on what they are doing online and why.

Upper KS2 Year A

Autumn	Spring	Summer
Computer Science <i>Hello World 501</i>	Robotics <i>Go Robot 502</i>	E-Safety <i>My Life Online 503</i>
Recognise real-world examples of choice and how computers can be programmed to respond to change. Explain the similarities and differences between human choice and machine conditional response. Program an algorithm that caters to changing circumstances Identify the most suitable conditional for a given task. Create a none-code logic tree to plan for change before coding an algorithm. Predict the outcome of a multi-branch algorithm without running it.	Identify the most suitable event (or conditional) to deal with a potential encounter. Name multiple types of sensors available to my robot. Program an algorithm that caters to changing circumstances Accurately predict the outcome of a multi-branch algorithm without running it.	Explain how identity online can be copied, modified, or altered. Make responsible choices about having an online identity depending on context.

EYFS Year B

The same skills are covered in both year A and Year B, the children are assessed and previous skills built upon.

Autumn	Spring	Summer
Knows how to operate simple equipment, e.g. turns on CD player and uses remote control. Shows an interest in technological toys with knobs or pulleys, or real objects such as cameras or mobile phones. Shows skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images. Knows that information can be retrieved from computers	Completes a simple program on a computer. Uses ICT hardware to interact with age-appropriate computer software.	Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes. Children find out about and use a range of everyday technology. They select appropriate applications that support an identified need - for example in deciding how best to make a record of a special event in their lives, such as a journey on a steam train.

Key Stage 1 Year B

Autumn	Spring	Summer
Computer Science <i>Computing Unplugged 201</i>	Computer Science <i>Algorithm of Awesome 202</i>	E-Safety <i>My Life Online 203</i>
Program a simple, real-world algorithm. Find a bug in a code. Program a multi-step algorithm. Use sequencing within my algorithm. Explain how events enable us to solve more complex problems with code.	Program a moderately complex algorithm to a brief. Follow a debugging strategy. Identify the most suitable loop for a given task.	From previous scheme - waiting on coverage from Technola <i>Using Technology Safely</i> <i>understand where to go for help and support when he/she has concerns about content or contact on the internet or other online technologies</i>

Lower KS2 Year B

Autumn	Spring	Summer
Computer Science <i>Hello World 401</i>	Robotics <i>Go Robot 402</i>	E-Safety <i>My Life Online 403</i>
<p>Recognise real-world examples of repetition and how computers can be used to automate solutions.</p> <p>Recognise the benefits and the potential drawbacks of automation upon society.</p> <p>Program an algorithm that caters to repetition efficiently.</p> <p>Identify the most suitable loop for a given task.</p> <p>Incorporate functions into my algorithm to accommodate for unpredictable repetition.</p> <p>Predict the outcome of an algorithm without running it.</p>	<p>Name, call, and define a function within my program.</p> <p>Incorporate functions into my algorithm to accommodate unpredictable repetition.</p> <p>Recognise the benefits and the potential drawbacks of automation upon society.</p> <p>Program an algorithm that caters to repetition efficiently.</p> <p>Identify the need for a function over a loop.</p> <p>Predict the outcome of an algorithm without running it</p>	<p>Explain how my online identity can be different to my offline identity.</p> <p>Describe positive ways for someone to interact with others online and understand how this will positively impact on how others perceive them.</p> <p>Explain that others online can pretend to be someone else, including my friends, and can suggest reasons why they might do this.</p>

Upper KS2 Year B

Autumn	Spring	Summer
Computer Science <i>Hello World 601</i>	Robotics <i>Go Robot 602</i>	E-Safety <i>My Life Online 603</i>
<p>Create a simple algorithm.</p> <p>Create multiple algorithms of moderate complexity that are triggered by separate events.</p> <p>Correctly identify the X and Y axis.</p> <p>Use coordinate to code multi-directional movement into my algorithm.</p> <p>Code instruction that repeat in my algorithm.</p> <p>Identify the correct loop to use for my specific purpose.</p>	<p>Define the word 'variable' and give examples for its use in programming</p> <p>Create and name a variable.</p> <p>Implement a system using variables which will replicate the process of counting upwards using integers.</p> <p>Use conditional in a program to trigger code when a specific physical movement is made.</p> <p>Identify the correct loop to use for my specific purpose</p>	<p>Identify and critically evaluate online content relating to gender, race, religion, disability, culture, and other groups, and explain why it is important to challenge and reject inappropriate representations online.</p> <p>Describe issues online that could make anyone feel sad, worried, uncomfortable, or frightened.</p> <p>Know and give examples of how to get help, both on and offline.</p> <p>Explain the importance of asking repeatedly until I get the help needed.</p>