

Computing – Progression of Skills and Knowledge

Pearl Class (EYFS)

Term 1
Computational Thinking

Term 2
Computational Thinking

Term 3
Computational Thinking

Term 4
Computational Thinking

Term 5
Computational Thinking

Term 6
Computational Thinking

‘Computational Thinking’ is a set of problem-solving skills that we can use in everyday life.

The problem solving of Computational Thinking closely aligns with the Characteristics of Effective Learning. So, by aligning EYFS provision to Computational Thinking, we use the same vocabulary as used in our KS1 class, and ensure progression.

Computing in EYFS gives children a broad range of knowledge and skills that provide the right foundation for good future progress through school and life. The children in EYFS will be ‘ready’ for the Computing Curriculum in Year 1.

EYFS Computational Thinking Skills	Simple definitions
Tinkering	Playing and exploring
Creating	Creating, checking and fixing things
Collaboration	Playing and working collaboratively
Persevering	Not giving up
Logic	Anticipating and explaining is logical reasoning
Pattern	Grouping things, comparing, spotting similarities and differences, working out rules
Abstraction	Naming and labelling, working out what is important, sticking to the main theme, ignoring what is not important, creating a summary
Algorithms and Decomposition	Responding to instructions, ordering things, sequencing things, introducing storylines, working out different ways to do things, breaking problems down into steps

Computing – Progression of Skills and Knowledge

Ruby Class – Year 1 & 2

Computational Thinking

Year 1 <i>Computing systems and networks</i>	Year 2 <i>Computing systems and networks</i>	Year 1 <i>Creating Media</i>	Year 2 <i>Creating Media</i>	Year 1 <i>Programming</i>	Year 1 <i>Programming</i>	Term 1 <i>Data and Information</i>	Term 2 <i>Data and Information</i>
<ul style="list-style-type: none"> • I can locate examples of technology in the classroom • I can explain technology as something that helps us • I can identify rules to keep us safe and healthy when we are using technology in and beyond the home • I can identify that a computer is a part of information technology • I can open a file • I can move and resize images • I can explain how information technology helps people • I can recognise that information technology can be connected 	<ul style="list-style-type: none"> • I can identify that a computer is a part of information technology • I can explain the purpose of information technology in the home • I can explain that pictures can be made in lots of different ways • I can compare types of information technology • I can find examples of information technology • I can recognise that information technology can be connected 	<ul style="list-style-type: none"> • I can draw lines on a screen and explain which tools I used • I can choose appropriate paint tools and colours to recreate the work of an artist • I can explain that pictures can be made in lots of different ways • I can change the font • I can write a message on a computer and on paper • I can compare using a computer with using a pencil and paper 	<ul style="list-style-type: none"> • I can capture digital photos and talk about my experience • I can experiment with different light sources • I can focus on an object • I can identify which images are real and which have been changed • I can use a computer to create a musical pattern using three notes • I can connect images with sounds • I can use a computer to experiment with pitch and duration 	<ul style="list-style-type: none"> • I can experiment with turn and move commands to move a robot • I can start a sequence from the same place • I can predict the outcome of a sequence of commands • I can follow an instruction • I can give directions • I can use commands to move a sprite • I can plan algorithms for different parts of a task • I can predict the outcome of a sequence of commands • I can build sequences of blocks to match my design 	<ul style="list-style-type: none"> • I can plan algorithms for different parts of a task • I can predict the outcome of a sequence of commands • I can test and debug each part of the program • I can use commands to move a sprite • I can plan algorithms for different parts of a task • I can predict the outcome of a sequence of commands I can build sequences of blocks to match my design 	<ul style="list-style-type: none"> • I can group objects in more than one way • I can decide how to group objects to answer a question • I can record and share what I have found 	<ul style="list-style-type: none"> • I can enter data onto a computer • I can use a tally chart to create a pictogram • I can give simple examples of why information should not be shared

Computing – Progression of Skills and Knowledge

Sapphire Class – Year 3 & 4

Computational Thinking

Year 3 <i>Computing systems and networks</i>	Year 4 <i>Computing systems and networks</i>	Year 3 <i>Creating Media</i>	Year 4 <i>Creating Media</i>	Year 3 <i>Programming</i>	Year 4 <i>Programming</i>	Term 3 <i>Data and Information</i>	Term 4 <i>Data and Information</i>
<ul style="list-style-type: none"> • I can suggest differences between using digital devices and non-digital tools • I can explain the role of a switch, server, and wireless access point in a network • I can suggest differences between using digital devices and non-digital tools 	<ul style="list-style-type: none"> • I can explain why I need to think carefully before I share or reshare content • I can describe how to access websites on the WWW • I can create media which can be found on websites • I can explain why some information I find online may not be honest, accurate, or legal 	<ul style="list-style-type: none"> • I can create an effective stop frame animation • I can create a storyboard • I can add other media to my animation • I can compare work made on desktop publishing to work created by hand • I can identify the uses of desktop publishing in the real world • I can explain the difference between text and images 	<ul style="list-style-type: none"> • I can edit sections of an audio recording • I can suggest improvements to a digital recording • I can change the composition of an image by selecting parts of it • I can identify how an image has been retouched • I can combine parts of images to create new images 	<ul style="list-style-type: none"> • I can create a program following a design • I can build a sequence of commands • I can program movement • I can match a piece of code to an outcome 	<ul style="list-style-type: none"> • I can explain the effect of changing a value of a command • I can use a procedure in a program • I can modify loops to produce a given outcome • I can refine the algorithm in my design 	<ul style="list-style-type: none"> • I can create two groups of objects separated by one attribute • I can compare two branching database structures • I can explain what a pictogram tells me 	<ul style="list-style-type: none"> • I can suggest questions that can be answered using a given data set • I can use a data logger to collect data

Computing – Progression of Skills and Knowledge

Emerald Class – Year 5 & 6

Computational Thinking

Year 5 <i>Computing systems and networks</i>	Year 6 <i>Computing systems and networks</i>	Year 5 <i>Creating Media</i>	Year 6 <i>Creating Media</i>	Year 5 <i>Programming</i>	Year 6 <i>Programming</i>	Term 5 <i>Data and Information</i>	Term 6 <i>Data and Information</i>
<ul style="list-style-type: none"> I can explain that data is transferred over networks in packets I can recognise that working together on the internet can be public or private I can explain that the internet allows different media to be shared 	<ul style="list-style-type: none"> I can complete a web search to find specific information I can compare different methods of communicating on the internet I can describe some of the ways that search results can be influenced I can recognise some of the limitations of search engines 	<ul style="list-style-type: none"> I can plan a video project using a storyboard I can select a suitable device and software to capture my video I can select the correct tools to make edits to my video I can demonstrate suitable methods of using a digital device to capture my video I can demonstrate the safe use and handling of devices I can change the order of layers in a vector drawing I can identify the main drawing tools 	<ul style="list-style-type: none"> I can create digital 3D objects of an appropriate size I can identify the 3D shapes needed to create a model of a real-world object I can explore a website I can create hyperlinks to link to people's work I can evaluate the user experience of a website I can add content to my own web page I can describe what is meant by the term 'fair use' I can find copyright-free images 	<ul style="list-style-type: none"> I can build a simple circuit to connect a microcontroller to a computer I can create a detailed drawing of my project I can create a program with different outcomes using selection I can design the flow of a program which contains 'if... then... else...' 	<ul style="list-style-type: none"> I can make use of an event in a program to set a variable I can create algorithms for my project I can modify a program to achieve a different outcome I can use a variable in an if... then... else... statement to select the flow of a program 	<ul style="list-style-type: none"> I can choose which field to sort data by to answer a given question I can refine a chart by selecting a particular filter 	<ul style="list-style-type: none"> I can build a data set in a spreadsheet application I can construct a formula in a spreadsheet I can produce a graph