



# Coverage Map – Hope Federation - Computing

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	Autumn 1	Autumn 2	Spring 1	Year A Spring 2	Summer 1	Summer 2
*1/2	<p>Y1 Creating media - digital painting <i>-To describe what different freehand tools do</i> <i>-To use the shape tool and the line tools</i> <i>-To make careful choices when painting a digital picture</i> <i>-To explain why I chose the tools I used</i> <i>-To use a computer on my own to paint a picture</i> <i>-To compare painting a picture on a computer and on paper</i> <b>Can you explain whether you prefer painting or using a computer?</b></p>	<p>Y2 Computing Systems and Networks - IT all around us <i>-To recognise the uses and features of information technology</i> <i>-To identify the uses of information technology in the school</i> <i>-To identify information technology beyond school</i> <i>-To explain how information technology helps us</i> <i>-To explain how to use information technology safely</i> <i>-To recognise that choices are made when using information technology</i></p>	<p>Y1 Data and information - grouping data <i>-To label objects</i> <i>-To identify that objects can be counted</i> <i>-To describe objects in different ways</i> <i>-To count objects with the same properties</i> <i>-To compare groups of objects</i> <i>-To answer questions about groups of objects</i> <b>Can you decide how you would group objects so you can answer a question?</b></p>	<p>Y2 - Programming A - Robot algorithms <i>-To describe a series of instructions as a sequence</i> <i>-To explain what happens when we change the order of instructions</i> <i>-To use logical reasoning to predict the outcome of a program</i> <i>-To explain that programming projects can have code and artwork</i> <i>-To design an algorithm</i> <i>-To create and debug a program that I have written</i> <b>My programme isn't working but can you work out where it has gone wrong?</b></p>	<p>Y1 Programming B Introduction to animation <i>-To choose a command for a given purpose</i> <i>-To show that a series of commands can be joined together</i> <i>-To identify the effect of changing a value</i> <i>-To explain that each sprite has its own instructions</i> <i>-To design the parts of a project</i> <i>-To use my algorithm to create a program</i> <b>Can you get your 'sprite' to move in different ways?</b></p>	<p>Y2 Creating media - Making music <i>-To say how music can make us feel</i> <i>-To identify that there are patterns in music</i> <i>-To experiment with sound using a computer</i> <i>-To use a computer to create a musical pattern</i> <i>-To create music for a purpose</i> <i>-To review and refine our computer work</i> <b>Can you create music which matches action in a story?</b></p>



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	<b>Can you explain to a friend how to write their name on a computer and how to stay safe?</b>					
3/4	<b>Y3 Programming A</b> <i>- Sequence in sound</i> <i>-To explore a new programming environment</i> <i>-To identify that commands have an outcome</i> <i>-To explain that a program has a start</i> <i>-To recognise that a sequence of commands can have an order</i> <i>-To change the appearance of my project</i> <i>-To create a project from a task description</i> <b>Can you make the sounds and actions for a sprite</b>	<b>Y4 Programming A - Repetition in shape</b> <i>-To identify that accuracy in programming is important</i> <i>-To create a program in a text-based language</i> <i>-To explain what 'repeat' means</i> <i>-To modify a count-controlled loop to produce a given outcome</i> <i>-To decompose a task into small steps</i> <i>-To create a program that uses count-controlled loops to produce a given outcome</i> <b>Can you program a sequence of repeated</b>	<b>Y3 Computing systems and networks – Connecting computers</b> <i>-To explain how digital devices function</i> <i>-To identify input and output devices</i> <i>-To recognise how digital devices can change the way we work</i> <i>-To explain how a computer network can be used to share information</i> <i>-To explore how digital devices can be connected</i>	<b>Y4 Computing systems and networks – The Internet</b> <i>-To describe how networks physically connect to other networks</i> <i>-To recognise how networked devices make up the internet</i> <i>-To outline how websites can be shared via the World Wide Web (WWW)</i> <i>-To describe how content can be added and accessed on the World Wide Web (WWW)</i> <i>-To recognise how the content of the</i>	<b>Y3 Stop-frame animation</b> <i>-To explain that animation is a sequence of drawings or photographs</i> <i>-To relate animated movement with a sequence of images</i> <i>-To plan an animation</i> <i>-To identify the need to work consistently and carefully</i> <i>-To review and improve an animation</i> <i>-To evaluate the impact of adding other media to an animation</i> <b>Do you have the patience and tenacity to use onion-skinning carefully to create animation you're proud of?</b>	<b>Y4 Creating media – Audio production</b> <i>-To identify that sound can be recorded</i> <i>-To explain that audio recordings can be edited</i> <i>-To recognise the different parts of creating a podcast project</i> <i>-To apply audio editing skills independently</i> <i>-To combine audio to enhance my podcast project</i> <i>-To evaluate the effective use of audio</i> <b>Can you create audio effects for interludes in a podcast?</b>

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	<b>connect on the screen?</b>	<b>shapes to form a flower shape?</b>	<i>-To recognise the physical components of a network</i> <b>Can you identify how networked devices are connected together?</b>	<i>WWW is created by people</i> <i>-To evaluate the consequences of unreliable content</i> <b>Can you identify the purpose of people who add content to the internet?</b>		
<b>5/6</b>	<p>Y5 Computing systems and networks - Systems and searching</p> <p><i>-To explain that computers can be connected together to form systems</i></p> <p><i>-To recognise the role of computer systems in our lives</i></p> <p><i>-To experiment with search engines</i></p> <p><i>-To describe how search engines select results</i></p>	<p>Y6 Computing systems and networks - Communication and collaboration</p> <p><i>-To explain the importance of internet addresses</i></p> <p><i>-To recognise how data is transferred across the internet</i></p> <p><i>-To explain how sharing information online can help people to work together</i></p> <p><i>-To evaluate different ways of working together online</i></p> <p><i>-To recognise how we communicate using technology</i></p>	<p>Y5 Creating media – video production</p> <p><i>-To explain what makes a video effective</i></p> <p><i>-To identify digital devices that can record video</i></p> <p><i>-To capture video using a range of techniques</i></p> <p><i>-To create a storyboard</i></p> <p><i>-To identify that video can be improved through reshooting and editing</i></p>	<p>Y6 Creating media – Web page creation</p> <p><i>-To review an existing website and consider its structure</i></p> <p><i>-To plan the features of a web page</i></p> <p><i>-To consider the ownership and use of images (copyright)</i></p> <p><i>-To recognise the need to preview pages</i></p> <p><i>-To outline the need for a navigation path</i></p>	<p>Y5 Programming A - Selection in Physical computing</p> <p><i>-To control a simple circuit connected to a computer</i></p> <p><i>-To write a program that includes count-controlled loops</i></p> <p><i>-To explain that a loop can stop when a condition is met</i></p> <p><i>-To explain that a loop can be used to repeatedly check whether a condition has been met</i></p> <p><i>-To design a physical project that includes selection</i></p>	<p>Y6 Programming A – Variables in games</p> <p><i>-To define a ‘variable’ as something that is changeable</i></p> <p><i>-To explain why a variable is used in a program</i></p> <p><i>-To choose how to improve a game by using variables</i></p> <p><i>-To design a project that builds on a given example</i></p> <p><i>-To use my design to create a project</i></p> <p><i>-To evaluate my project</i></p>



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*-To explain how search results are ranked*  
*-To recognise why the order of results is important, and to whom*  
**Can you explain how search engine results are ranked?**

*-To evaluate different methods of online communication*  
**Can you communicate online to help create a collaborative project in class?**

*-To consider the impact of the choices made when making and sharing a video*  
**Can you create a video and then edit it?**

*-To recognise the implications of linking to content owned by other people*  
**Can you plan a webpage which contains hyperlinks to real webpages?**

*-To create a program that controls a physical computing project*  
**Can you create a programmable toy?**

**Can you alter variables to improve your programmable product or toy?**

## Year B

**\*1/2**

Autumn 1  
Y1 Computing systems and networks  
*-To identify technology*  
*-To identify a computer and its main parts*

Autumn 2  
Y2 Creating media - digital photography  
*-To use a digital device to take a photograph*  
*-To make choices when taking a photograph*

Spring 1  
Y1 Programming A - Moving a robot  
*-To explain what a given command will do*  
*-To act out a given word*

Spring 2  
Y2 Data and information – Pictograms  
*-To recognise that we can count and compare objects using tally charts*

Summer 1  
Y1 Creating media - digital writing  
*-To use a computer to write*  
*-To add and remove text on a computer*

Summer 2  
Y2 Programming B  
An introduction to quizzes  
*-To explain that a sequence of commands has a start*



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	<p>-To use a mouse in different ways</p> <p>-To use a keyboard to type on a computer</p> <p>-To use the keyboard to edit text</p> <p>-To create rules for using technology responsibly</p> <p><b>Can you create a picture and writing on the screen, save it and find it again?</b></p>	<p>-To describe what makes a good photograph</p> <p>-To decide how photographs can be improved</p> <p>-To use tools to change an image</p> <p>-To recognise that photos can be changed</p> <p><b>Can you take a photo, then change it to make it happier or sadder?</b></p>	<p>-To combine forwards and backwards commands to make a sequence</p> <p>-To combine four direction commands to make sequences</p> <p>-To plan a simple program</p> <p>-To find more than one solution to a problem</p> <p><b>Can you programme directions on a screen to move from A to B in different ways?</b></p>	<p>-To recognise that objects can be represented as pictures</p> <p>-To create a pictogram</p> <p>-To select objects by attribute and make comparisons</p> <p>-To recognise that people can be described by attributes</p> <p>-To explain that we can present information using a computer</p> <p><b>Can you make and explain pictogrammes?</b></p>	<p>-To identify that the look of text can be changed on a computer</p> <p>-To make careful choices when changing text</p> <p>-To explain why I used the tools that I chose</p> <p>-To compare typing on a computer to writing on paper</p> <p><b>Can you change the look of typing to fit the meaning or the audience?</b></p>	<p>-To explain that a sequence of commands has an outcome</p> <p>-To create a program using a given design</p> <p>-To change a given design</p> <p>-To create a program using my own design</p> <p>-To decide how my project can be improved</p> <p><b>Can you create a sequence of commands which form a block?</b></p> <p><b>Can you then create a sequence of blocks?</b></p>
3 / 4	<p>Y3 Desktop publishing</p> <p>-To recognise how text and images convey information</p>	<p>Y4 Creating media - Photo editing</p> <p>-To explain that the composition of digital images can be changed</p> <p>-To explain that colours can be</p>	<p>Y3 Branching databases</p> <p>-To create questions with yes/no answers</p> <p>-To identify the attributes needed to collect data about an object</p>	<p>Y4 Data logging</p> <p>-To explain that data gathered over time can be used to answer questions</p> <p>-To use a digital device to collect data automatically</p>	<p>Y3 Programming B</p> <p>- Events and actions</p> <p>-To explain how a sprite moves in an existing project</p> <p>-To create a program to move a</p>	<p>Y4 Programming B - Repetition in games</p> <p>-To develop the use of count-controlled loops in a different programming environment</p>



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<p>-To recognise that text and layout can be edited</p> <p>-To choose appropriate page settings</p> <p>-To add content to a desktop publishing publication</p> <p>-To consider how different layouts can suit different purposes</p> <p>-To consider the benefits of desktop publishing</p> <p><b>Can you adjust the layout, pictures and text to match your genre?</b></p>	<p>changed in digital images</p> <p>-To explain how cloning can be used in photo editing</p> <p>-To explain that images can be combined</p> <p>-To combine images for a purpose</p> <p>-To evaluate how changes can improve an image</p> <p><b>Can you explain improvements to images on the screen?</b></p>	<p>-To create a branching database</p> <p>-To explain why it is helpful for a database to be well structured</p> <p>-To plan the structure of a branching database</p> <p>-To independently create an identification tool</p> <p><b>Can you work in pairs to test each other's branching database?</b></p>	<p>-To explain that a data logger collects 'data points' from sensors over time</p> <p>-To recognise how a computer can help us analyse data</p> <p>-To identify the data needed to answer questions</p> <p>-To use data from sensors to answer questions</p> <p><b>Can you use data from sensors to answer questions?</b></p>	<p>sprite in four directions</p> <p>-To adapt a program to a new context</p> <p>-To develop my program by adding features</p> <p>-To identify and fix bugs in a program</p> <p>-To design and create a maze-based challenge</p> <p><b>Can you design and create a maze-based challenge?</b></p>	<p>-To explain that in programming there are infinite loops and count controlled loops</p> <p>-To develop a design that includes two or more loops which run at the same time</p> <p>-To modify an infinite loop in a given program</p> <p>-To design a project that includes repetition</p> <p>-To create a project that includes repetition</p> <p><b>Can you create a project that involves repetition?</b></p>
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5/6	<p>Y5 Creating media – Introduction to Vector graphics</p> <p>-To identify that drawing tools can be used to produce different outcomes</p>	<p>Y6 Creating media - 3D Modelling</p> <p>-To recognise that you can work in three dimensions on a computer</p>	<p>Y5 Flat file databases</p> <p>-To use a form to record information</p> <p>-To compare paper and computer-based databases</p> <p>-To outline how you can answer</p>	<p>Y6 Data and Information - Spreadsheets</p> <p>-To create a data set in a spreadsheet</p> <p>-To build a data set in a spreadsheet</p>	<p>Y5 Programming B</p> <p>- Selection in quizzes</p> <p>-To explain how selection is used in computer programs</p>	<p>Y6 Sensing</p> <p>-To create a program to run on a controllable device</p> <p>-To explain that selection can control the flow of a program</p>
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## Coverage Map – Hope Federation - Computing

<p>-To create a vector drawing by combining shapes</p> <p>-To use tools to achieve a desired effect</p> <p>-To recognise that vector drawings consist of layers</p> <p>-To group objects to make them easier to work with</p> <p>-To apply what I have learned about vector drawings</p> <p><b>Can you explain and use Vector drawings?</b></p>	<p>-To identify that digital 3D objects can be modified</p> <p>-To recognise that objects can be combined in a 3D model</p> <p>-To create a 3D model for a given purpose</p> <p>-To plan my own 3D model</p> <p>-To create my own digital 3D model</p> <p><b>Can you design and create your own 3D digital model?</b></p>	<p>questions by grouping and then sorting data</p> <p>-To explain that tools can be used to select specific data</p> <p>-To explain that computer programs can be used to compare data visually</p> <p>-To use a real-world database to answer questions</p> <p><b>Can you ask questions of a digital database?</b></p>	<p>-To explain that formulas can be used to produce calculated data</p> <p>-To apply formulas to data</p> <p>-To create a spreadsheet to plan an event</p> <p>-To choose suitable ways to present data</p> <p><b>Can you use a spreadsheet to plan an event?</b></p>	<p>-To relate that a conditional statement connects a condition to an outcome</p> <p>-To explain how selection directs the flow of a program</p> <p>-To design a program which uses selection</p> <p>-To create a program which uses selection</p> <p>-To evaluate my program</p> <p><b>Can you design an interactive quiz?</b></p>	<p>-To update a variable with a user input</p> <p>-To use a conditional statement to compare a variable to a value</p> <p>-To design a project that uses inputs and outputs on a controllable device</p> <p>-To develop a program to use inputs and outputs on a controllable device</p> <p><b>Can you design a step counter?</b></p>
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\*There is no expectation to cover computing in EYFS.