

# Computing Progression Map - Reception



Aut 1 Traditional Tales	Aut 2 Traditional Tales	Spr 1 Animals	Spr 2 Animals	Sum 1 Growing and changing	Sum 2 Growing and changing
<p><b><u>Communicating: Multimedia</u></b></p> <p>Getting ready for - Unit 2.1 How do I record sounds and pictures?</p> <p><b>CONCEPTS:</b> Computer; software/application; creating &amp; editing content; multimedia - image, audio, video.</p> <p><b>KNOWLEDGE:</b> A range of devices can take digital photos/record audio; pictures can be edited to alter them; why we use computers; where to open and save work at school.</p> <p><b>SKILLS:</b> Use a microphone/tablet to record audio; create and edit digital content, select media (e.g. images, video, sound) and combine it with</p>	<p><b><u>Key Skills</u></b></p> <p>Getting ready for - Unit 0.1 What is a computer?</p> <p><b>CONCEPTS:</b> What is technology?</p> <p><b>KNOWLEDGE:</b> recognise the basic parts of a computer and iPad. E.g. mouse, screen, keyboard, touchscreen. Name a range of digital devices.</p> <p><b>SKILLS:</b> Open an app on an iPad. Use the mouse or digital pen to drag objects on screen. (iPad - Use the touch screen to drag objects. White board - use the pen to drag objects). Select and use tools - fill, shape, change colour and size of pen, rubber, undo. Use iPads to create</p>	<p><b><u>Programming and Computational Thinking</u></b></p> <p>Getting ready for - Unit 4.1 What is an algorithm?</p> <p><b>CONCEPTS:</b> Computer; algorithm; program; sequence; robot.</p> <p><b>KNOWLEDGE:</b> Computers don't have a brain and we control them by giving them instructions; these instructions are called algorithms; the order of instructions in an algorithm is important; how to create their own algorithm;</p> <p><b>SKILLS:</b> Create a simple algorithm to control a robot; plan an algorithm then test it out by following the steps. Order the steps of a known story or nursery</p>	<p><b><u>Programming &amp; Computational Thinking</u></b></p> <p>Getting ready for - Unit 5.1 What is a program?</p> <p><b>CONCEPTS:</b> Computer; algorithm; program; sequence; robot; debugging.</p> <p><b>KNOWLEDGE:</b> Computers don't have a brain and we control them by giving them instructions; these instructions are called algorithms; the order of instructions in an algorithm is important; an algorithm entered into a computer is called a program; computer games are created by a person and there are rules around how old you need to be to play some games; identifying and</p>	<p><b><u>Data</u></b></p> <p>Getting ready for - Unit 3.1 How do I present data using pictures?</p> <p><b>CONCEPTS:</b> Computer; software/application; personal information; information &amp; data; chart/pictogram.</p> <p><b>KNOWLEDGE:</b> We can present data in charts; different kinds of charts and pictograms; key features of a chart/pictogram; why we use computers;</p> <p><b>SKILLS:</b> Mouse &amp; keyboard skills; collecting data; create a simple chart/pictogram; answer questions about data shown in a pictogram or chart. Can present simple data using images, e.g. number of animals. Sort</p>	<p><b><u>Communicating: Text &amp; Images</u></b></p> <p>Getting ready for - Unit 1.1 How do I use school technology?</p> <p><b>CONCEPTS:</b> What is a computer; software application; creating content; personal information.</p> <p><b>KNOWLEDGE:</b> Why we use a computer to write; recognise key parts of a keyboard, e.g. spacebar, numbers and letters; basic icons and where to find options in menus in word-processing software; where to open and save work at school; how to edit; why we need to keep personal information private.</p> <p><b>SKILLS:</b> Logging on; Mouse skills - left, right, double click, targeting;</p>

support to present information (e.g. images and audio to make a video).

digital sounds by drawing shapes on screen. Explore different effects.

rhyme.

correcting errors in a program is called debugging.

**SKILLS:** Create a simple program to control a robot; plan an algorithm then test it out; debug simple programs; predict the outcome of simple programs.

**Communicating:**  
**Multimedia**

**Getting ready for**  
**Unit 2.1 How do I**  
**record sounds and**  
**pictures?**

**CONCEPTS:** Computer; software/application; creating & editing content; multimedia - audio, video.

**KNOWLEDGE:** A range of devices that can take digital photos/record audio; photos can be edited to alter them; why we use computers; where to open and save work at school; what makes a good photo; digital content is owned by the person who created it; what to do if

familiar objects into 1 or more categories. Answer basic questions about information displayed in images, e.g. more or less.

keyboard skills - simple typing, basic keys; open and save documents highlight text and change appearance.

			they see an upsetting image online. <b>SKILLS:</b> Use a camera/microphone/tablet to record audio and take photos or record videos; create and edit digital content, select media (e.g. images, video, sound).		
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Online Safety and Digital Literacy

Create a set of class rules for using computers, iPads and other devices at school.

Are aware that some online content is inappropriate.

Are aware that information can be public or private.

Know to tell an adult if they see something on the computer that upsets them.

# Computing Progression Map - Y1



Aut 1 Superheroes	Aut 2 Toys	Spr 1 Castles	Spr 2 Animal Planet	Sum 1 Plants	Sum 2 Pirates
<p><b><u>Communicating: Multimedia</u></b></p> <p>Unit 2.1 How do I record sounds and pictures?</p> <p><b>NC Statement</b> 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.</p> <p><b>CONCEPTS:</b> Computer; software/application; creating &amp; editing content; multimedia - text, image, audio, video; copyright; personal information.</p>	<p><b><u>Key Skills</u></b></p> <p>Unit 0.1 What is a computer?</p> <p><b>NC Statement</b> Use technology purposefully to create, organise, store, manipulate and retrieve digital content. Recognise common uses of information technology beyond school.</p> <p><b>CONCEPTS:</b> What is technology?</p> <p><b>KNOWLEDGE:</b> Know why we use passwords. Name parts of a computer. Name a range of digital devices.</p> <p><b>SKILLS:</b> Log onto a computer or iPad. Use the mouse to drag objects on screen. Use the touch screen to drag objects around the</p>	<p><b><u>Understanding &amp; Sharing Data</u></b></p> <p>Unit 3.1 How do I present data using pictures?</p> <p><b>NC Statement:</b> Use technology purposefully to create, organise, store, manipulate and retrieve digital content. Use technology safely and respectfully, keeping personal information private.</p> <p><b>CONCEPTS:</b> Computer; software/application; personal information; information &amp; data; chart/pictogram.</p> <p><b>KNOWLEDGE:</b> We can present data in charts; different kinds of charts and pictograms; key features of a chart/pictogram; why we use computers; who to share personal</p>	<p><b><u>Communicating: Text &amp; Images</u></b></p> <p>Unit 1.1 How do I use school technology?</p> <p><b>NC Statement:</b> Use technology purposefully to create, organise, store, manipulate and retrieve digital content. Use technology safely and respectfully, keeping personal information private.</p> <p><b>CONCEPTS:</b> What is a computer; hardware; software; creating content; personal information.</p> <p><b>KNOWLEDGE:</b> Why we use a computer to write; basic icons and where to find options in menus in word-processing software; where to open and save work at school; how to edit text and why we use particular effects</p>	<p><b><u>Programming &amp; Computational Thinking</u></b></p> <p>Unit 4.1 What is an algorithm?</p> <p><b>NC Statement:</b> Recognise common uses of information technology beyond school; understand what algorithms are; how they are implemented as programs on digital devices. Create and debug simple programs; use logical reasoning to predict the behaviour of simple programs.</p> <p><b>CONCEPTS:</b> Computer; algorithm; program; sequence; robot.</p> <p><b>KNOWLEDGE:</b> Computers don't have a brain and we control them by giving them instructions; these instructions are called</p>	<p><b><u>Programming &amp; Computational Thinking</u></b></p> <p>Unit 5.1 What is a program?</p> <p><b>NC Statement:</b> 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.</p> <p><b>CONCEPTS:</b> Computer; algorithm; program; sequence; robot; debugging.</p> <p><b>KNOWLEDGE:</b> Computers don't have a brain and we control them by giving them instructions; these</p>

<p><b>KNOWLEDGE:</b> A range of devices that can take digital photos/record audio; photos can be edited to alter them; why we use computers; where to open and save work at school; what makes a good photo; digital content is owned by the person who created it; what to do if they see an upsetting image online.</p> <p><b>SKILLS:</b> Use a camera/microphone/tablet to record audio and take photos; create and edit digital content, select media (e.g. images, video, sound) and combine it with support to present information (e.g. images and audio).</p>	<p>screen. Save and open files and apps with support or independently. Use the keyboard to enter and edit text.</p>	<p>information with.</p> <p><b>SKILLS:</b> Mouse &amp; keyboard skills; collecting data; open and save documents; create a simple pictogram; answer questions about data shown in a pictogram or chart. Modify simple charts/ pictograms e.g. add title, item or labels.</p>	<p>(e.g. bold, underline); why we need to keep personal information private.</p> <p><b>SKILLS:</b> Logging on; Mouse skills - left, right, double click, targeting; keyboard skills - simple typing, basic keys; open and save documents highlight text and change appearance; insert an image.</p>	<p>algorithms; the order of instructions in an algorithm is important; how to create their own algorithm; how to control a Bee-Bot (or software to program a sprite); an algorithm entered into a computer is called a program; computer games are created by a person and there are rules around how old you need to be to play some games.</p> <p><b>SKILLS:</b> Create a simple program to control a device/sprite; plan an algorithm away from the Bee-Bot then test out.</p>	<p>instructions are called algorithms; the order of instructions in an algorithm is important; how to create their own algorithm; how to control a Bee-Bot/program a sprite in Scratch Jr; an algorithm entered into a computer is called a program; computer games are created by a person and there are rules around how old you need to be to play some games; identifying and correcting errors in a program is called debugging.</p> <p><b>SKILLS:</b> Create a simple program to control a device/sprite; plan an algorithm away from the Bee-Bot/computer then test out; debug simple programs; predict the outcome of simple programs.</p>
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**Online Safety and Digital Literacy - links to RHE**

Recognise examples of personal information and the need to keep it private e.g. name, image.

Know who to tell if concerned about content or contact online.

Recognise that digital content belongs to the person who created it.

Explain why we use passwords.

Can use a simple password and know not to tell anyone.

Talk about their use of technology at home.

Recognise that spending a long time in front of a computer screen can be unhealthy.



# Computing Progression Map - Y2



Aut 1 Dragons	Aut 2 Great Fire of London	Spr 1 The Deep - Habitats	Spr 2 Plants	Sum 1 Journeys	Sum 2 Journeys
<p><b><u>Communicating: Multimedia</u></b></p> <p>Unit 2.2 How do I create a multimedia story? (Animation -Stop motion)</p> <p><b>NC Statement:</b> Use technology purposefully to create, organise, store, manipulate and retrieve digital content.</p> <p>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.</p> <p><b>CONCEPTS:</b> Computer; software/application; creating &amp; editing content; animation; multimedia - text, image, audio, video; copyright;</p>	<p><b><u>Key Skills</u></b></p> <p>Unit 0.2 What is a computer?</p> <p><b>NC Statement</b> Use technology purposefully to create, organise, store, manipulate and retrieve digital content. Recognise common uses of information technology beyond school.</p> <p><b>CONCEPTS:</b> Computer Recognise what a computer is. (input&gt;process&gt;output) Creating and editing digital content.</p> <p><b>KNOWLEDGE:</b> Recognise common uses of information technology beyond school. Know that a range of devices contain computers, e.g. washing machine, car, laptop. Know why we use</p>	<p><b><u>Understanding &amp; Sharing Data</u></b></p> <p>Unit 3.2 What is a branching database?</p> <p><b>NC Statement:</b> Use technology purposefully to create, organise, store, manipulate and retrieve digital content. Use technology safely and respectfully, keeping personal information private.</p> <p><b>CONCEPTS:</b> Computer; software/application; personal information; information &amp; data; chart/pictogram; branching database; debugging.</p> <p><b>KNOWLEDGE:</b> We can present data in different ways; why we use branching databases; key features of a branching database; what makes a good question; why we</p>	<p><b><u>Communicating: Text &amp; Images</u></b></p> <p>Unit 1.2 How do I use a computer as a writer?</p> <p><b>NC Statement:</b> 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.</p> <p><b>CONCEPTS:</b> What is a computer; hardware; software; input and output devices; creating content.</p> <p><b>KNOWLEDGE:</b> A range of input and output devices; why we use a</p>	<p><b><u>Programming &amp; Computational Thinking</u></b></p> <p>Unit 4.2 How do I improve my algorithm? (Scratch Jr)</p> <p><b>NC Statement:</b> Recognise common uses of information technology beyond school; 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.</p> <p><b>CONCEPTS:</b> Computer; algorithm; program; sequence; debugging.</p> <p><b>KNOWLEDGE:</b> Computers don't have a</p>	<p><b><u>Programming &amp; Computational Thinking</u></b></p> <p>Unit 5.2 How do I improve my program? (Bee-Bots)</p> <p><b>NC Statement:</b> 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.</p> <p><b>CONCEPTS:</b> Computer; algorithm; program; sequence; robot; debugging; evaluation &amp; decomposition (ext).</p> <p><b>KNOWLEDGE:</b> An algorithm is a sequence of instructions to make</p>

<p>personal information.</p> <p><b>KNOWLEDGE:</b> What makes a good animation/photostory; why we use computers; where to open and save work at school; digital content is owned by the person who created it.</p> <p><b>SKILLS:</b> Plan, create and edit a stop motion video animation. Use a camera/iPad to take photos or create an animation; mouse skills.</p>	<p>passwords, working online safely and who to go to if they have concerns. Identify input devices, e.g. mouse, keyboard, microphone, touchscreen. Identify a range of output devices, e.g. printer, speakers, monitor/screen. Explain what the basic parts of a computer are used for. Learn the function of different keys. Capital letter/number, enter, space bar, delete, highlight text etc. Understand about the ownership and permission for use of images.</p> <p><b>SKILLS:</b> Use technology safely and respectfully, keeping personal information private. Use technology purposefully to create, organise, store, manipulate and retrieve digital content. Use input devices, e.g. mouse, keyboard, microphone, touchscreen. Use a range of output devices, e.g. printer, speakers, monitor/ screen. Open apps independently.</p>	<p>use computers; why we should be careful who we share personal information with.</p> <p><b>SKILLS:</b> Mouse &amp; keyboard skills; open and save documents; create a simple branching database; identify an object using a branching database; identify errors in a branching database.</p>	<p>computer to write; basic icons and where to find options in menus in wordprocessing software; where to open and save work at school; how to edit text and why we use particular effects (e.g. bold, underline); why we need rules when using technology.</p> <p><b>SKILLS:</b> Logging on; mouse skills - left, right, double click, targeting; keyboard skills - simple typing, basic keys; open and save documents highlight text and change appearance; insert an image.</p>	<p>brain and we control them by giving them instructions; these instructions are called algorithms; the instructions in an algorithm need to be clear and unambiguous; importance of planning the algorithm before programming; how to control the turtle in Logo/program a sprite in Scratch Jr; an algorithm entered into a computer is called a program; identifying and correcting errors in a program is called debugging.</p> <p><b>SKILLS:</b> Create a simple program to control a device/sprite; plan an algorithm away from the computer then test out; debug simple programs.</p>	<p>something happen; the order of instructions in an algorithm is important; &amp; they need to be clear and unambiguous; how to create their own algorithm; how to control a Bee-Bot/program a sprite in Scratch Jr; an algorithm entered into a computer is called a program; identifying and correcting errors in a program is called debugging; there may be more than one way to program a computer to solve a problem; we can decompose programs into smaller parts to help us solve them (ext).</p> <p><b>SKILLS:</b> Create a simple program to control a device/sprite; plan an algorithm away from the Bee-Bot/computer then test out; debug simple programs; create multiple solutions to a problem; predict the outcome of simple programs</p>
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	Develop keyboard skills / iPad keyboards. Save and open files to /from a given folder. Add an image to a document from a given folder/ source ('Kiddle' search engine). Resize/edit an image in a document. Capture media independently (take a selfie).				
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**Online Safety and Digital Literacy - Links to RHE**

Recognise what personal information is and the need to keep it private.

Can remember a simple password and know not to tell anyone. Explain why this is important.

Identify rules to add to an acceptable use policy for the class.

Recognise that spending a long time in front of a computer screen can be unhealthy.

Recognise that not all information found online is true and that people are not always who they say they are.

Recognise that the digital content we make belongs to us and others need to ask permission to use it.