



# JLPS Curriculum Overview for Computing

## Curriculum Intent

The learning journey for each year group at Joy Lane has been split up into the three main strands from the National Curriculum and uses the online computing lessons from [www.iLearn2.co.uk](http://www.iLearn2.co.uk).

### Intent

The intent of the Joy Lane computing curriculum using iLearn2 is to help pupils become independent, creative, safe, respectful and problem-solving digital citizens with a broad and transferrable skillset. Using the wide range of resources from the iLearn2 website, computing is made fun for pupils, inspiring them to develop skills beyond the classroom and building an awareness of all the opportunities the subject provides.

This long term plan outlines how the activities meet the expectations of the national curriculum programmes of study for Key Stages 1 and 2 and it ensures pupils learn computing skills from the three recognised aspects of computing (Computer Science, Digital Literacy and Information Technology) within each year. This means that pupils will build upon skills and concepts they established from the previous year and develop them further in the current and subsequent year.

The three aspects are (as explained by iLearn2):

- [Computer Science](#) – this covers programming (both block-based and text-based), including computational thinking using web-based software such as Scratch. Pupils across Key Stage 1 and 2 will write code to program physical and on-screen objects, interactive games and use text-based language, such as HTML and Python by the end of Key Stage 2.
- [Information Technology](#) – this covers the use of applications to create digital content, including document creation and editing, video making, digital art, graphic design, animation, 3D modelling and website building.
- [Digital Literacy](#) – covers skills to find, evaluate, utilise and share using technologies and the Internet. This includes important e-safety and internet research skills, as well as an understanding of computer networks in Key Stage 2.

Online safety is a consistent feature of our curriculum and its delivery is adapted to the needs of the year group and their current usage online, ensuring that children feel confident when using computers and the Internet and know what to do if they come across something inappropriate which may make them feel uncomfortable. Teaching of online safety in the classroom is supplemented by information to parents in our weekly newsletters and via our Facebook Page.

### Implementation

We follow the iLearn2 activity packs with step-by-step, easy to follow video tutorials and challenges for both teachers and pupils to access. This has many advantages including:

- Pupils can learn computing skills at their own pace, developing independent learning skills with opportunities to continually review and revisit the skills covered.
- The pupil activity codes help teachers provide pupils with specific activities, meaning pupils can access resources and content suitable for their individual ability and needs.
- The pupil activity packs are available across Key Stage 1 and 2. Key Stage 1 pupils learn how to apply the skills they learn in the tutorials to their own work. Key Stage 2 pupils apply and develop the skills they learn in the tutorials into their own projects, independently improving and evaluating their work.
- The video tutorials are compatible with Google Chrome's Live Caption tool, meaning pupils with hearing loss can access the video content.

### Impact

After working through the computing curriculum at Joy Lane our children will be:

- **Ready** to competently and confidently use technology in their lives as children and beyond, as they move in to the world of work.
- **Responsible** with their actions online and know how to keep themselves and others safe.
- **Respectfully** understand and appreciate the impact computing and technology has on them personally and the world around them, both positive and negative.

## National Curriculum

### Purpose of study

A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

### Aims

The national curriculum for computing aims to ensure that all pupils:

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- are responsible, competent, confident and creative users of information and communication technology.

### Attainment targets

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.

### Subject content

#### Key stage 1 Pupils should be taught to:

- 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
- use technology purposefully to create, organise, store, manipulate and retrieve digital content
- recognise common uses of information technology beyond school
- 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.

#### Key stage 2 Pupils should be taught to:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- 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
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- 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
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

**Reception – Not required**  
**All units available as optional activities to introduce children to computing as and when it is appropriate**

**Computer Science**

Unit	Key Vocabulary
<p align="center"><b>Early programming</b>  <a href="#">EYFS - Programming - iLearn2   Primary Computing. Made Easy.</a></p>	<p align="center">Sequence Algorithm Predict</p>

**Digital Literacy**

Unit	Key Vocabulary
<p align="center"><b>E-Safety</b>  <a href="#">EYFS - E-safety - iLearn2   Primary Computing. Made Easy.</a></p>	<p align="center">Safe Strangers Internet</p>

**Information Technology**

Unit	Key Vocabulary
<p align="center"><b>Computer discovery</b>  <a href="#">Computer Discovery - Early Years - iLearn2   Primary Computing. Made Easy.</a></p>	<p align="center">Children will know what a sensible amount of screen time is and why this is important for their health</p>
<p align="center"><b>Early digital music</b>  <a href="#">EYFS/Year 1 Music Creation - iLearn2   Primary Computing. Made Easy.</a>                      Pupil code – 44M5</p>	<p align="center">Mouse Trackpad Cursor Left button Scroll wheel Home row</p>
<p align="center"><b>Digital photos and videos</b>  <a href="#">EYFS - Digital Photos and Videos - iLearn2   Primary Computing. Made Easy.</a></p>	<p align="center">Rhythm Melody Tempo</p>
<p align="center"><b>Digital art and design</b>  <a href="#">EYFS - Digital Art and Design - iLearn2   Primary Computing. Made Easy.</a>                      Pupil code – MM78</p>	<p align="center">Colour Picture Photo Video Camera</p>
	<p align="center">Fill Paint Draw Tool</p>

**Cross curricular options**

Literacy and Numeracy skills  
[EYFS - Digital Numeracy and Literacy - iLearn2 | Primary Computing. Made Easy.](#)

## Year I

### Computer Science

Unit	Progression of skills	Key Vocabulary
<p><b>Introduce programming</b>  <a href="#">Year 1 Programming - iLearn2   Primary Computing. Made Easy.</a>                      Pupil code – P844                      NC - <i>Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.</i>  <i>Create and debug simple programs.</i>  <i>Use logical reasoning to predict the behaviour of simple programs.</i></p>	<ul style="list-style-type: none"> <li>- Place instructions into the correct order (sequence) to make something work.</li> <li>- Use direction arrows to move an on-screen object (character/sprite) to achieve an objective.</li> <li>- Predict a route and sequence direction commands (algorithm) to achieve an objective. Correct the errors if necessary (debug).</li> <li>- Predict a route and sequence distance commands to program an on-screen object to achieve an objective.</li> <li>- Predict and sequence movement and pen commands to program the drawing of different 2D shapes.</li> <li>- Sequence code blocks, including movements and execute (start program) blocks to write a program to achieve an objective.</li> </ul>	<p>Sequence Algorithm Predict Execute Debug</p>

### Digital Literacy

Unit	Progression of skills	Key Vocabulary
<p><b>Online safety</b>  <a href="#">E-safety - Key Stage 1 - iLearn2   Primary Computing. Made Easy.</a> Pupil code – ES75                      NC - <i>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.</i></p>	<ul style="list-style-type: none"> <li>- Understand what the internet is and how people use it.</li> <li>- Understand what personal information is and why we keep personal information private.</li> <li>- Why do websites want personal information.</li> <li>- Identify when and where to go for help when concerned.</li> </ul>	<p>Personal information Sharing Permission Report Trust Respect</p>

### Information Technology

Unit	Progression of skills	Key Vocabulary
<p><b>Mouse and Keyboard skills</b>  <a href="#">EYFS/Year 1 Mouse and Keyboard - iLearn2   Primary Computing. Made Easy.</a>                      Pupil code – MM78</p>	<ul style="list-style-type: none"> <li>- Move the mouse or trackpad and left click to select an object.</li> <li>- Drag and drop with mouse or trackpad to move objects around the screen.</li> <li>- Find letters or numbers on a keyboard.</li> <li>- Begin touch typing with home row keys.</li> </ul>	<p>Mouse Trackpad Cursor Left button Scroll wheel Home row</p>
<p><b>Digital Art</b>  <a href="#">Year 1 Digital Art - iLearn2   Primary Computing. Made Easy.</a>                      Pupil code – A265                       NC - <i>Use technology purposefully to create, organise and manipulate digital content</i></p>	<ul style="list-style-type: none"> <li>– Change the colour of individual pixels to accurately re-create basic artwork.</li> <li>– Make changes where required.</li> <li>– Change the colour of individual pixels to accurately re-create detailed artwork</li> </ul>	<p>Pixels Grid Fill Check</p>

<p><b>3D design</b>  <a href="#">Year 1 Design - iLearn2   Primary Computing. Made Easy.</a>  Pupil code – D827  NC - <i>Use technology purposefully to create, organise and manipulate digital content</i></p>	<ul style="list-style-type: none"> <li>- Change the colour and pattern of elements.</li> <li>- Position and rotate objects on a design.</li> <li>- Position objects in relation to each other.</li> <li>- Resize, rotate, flip and arrange objects behind/in front of each other.</li> </ul>	<p>3D  Rotate  Arrange  Flip</p>
<p><b>Text and Images</b>  <a href="#">Year 1 Text &amp; Images - iLearn2   Primary Computing. Made Easy.</a>  Pupil code – T824  NC - <i>Use technology purposefully to create, organise, store, manipulate and retrieve digital content.</i></p>	<ul style="list-style-type: none"> <li>- Change the background colour of a page.</li> <li>- Add, resize and position images (pictures) on a page.</li> <li>- Type and position text on a page, if possible using capital letters and punctuation.</li> <li>- Label pictures with text.</li> <li>- Use word-banks for writing sentences about pictures.</li> </ul>	<p>Icon  Object  Drag  Text box  Shift  Image</p>
<p><b>Music creation</b>  <a href="#">EYFS/Year 1 Music Creation - iLearn2   Primary Computing. Made Easy.</a>  Pupil code – 44M5  NC - <i>Use technology purposefully to create, organise, store, manipulate and retrieve digital content.</i></p>	<ul style="list-style-type: none"> <li>- Create a rhythm using a pattern of beats.</li> <li>- Create digital sounds using patterns and shapes.</li> <li>- Create a simple melody using patterns and adjust tempo.</li> </ul>	<p>Rhythm  Melody  Tempo</p>

Year 2		
Computer Science		
Unit	Progression of skills	Key Vocabulary
<p><b>Develop Programming</b>  <a href="#">Year 2 Programming - iLearn2   Primary Computing. Made Easy.</a>  Pupil code – D942  NC – <i>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.</i></p>	<ul style="list-style-type: none"> <li>- Create and debug simple programs by selecting code blocks, placing them in the correct sequence and executing a program.</li> <li>- Use logical reasoning to predict the behaviour of simple programs.</li> <li>- Simplify a program by using a loop.</li> </ul>	<p>Sequence  Algorithm  Predict  Execute  Debug</p>
Digital Literacy		
Unit	Progression of skills	Key Vocabulary
<p><b>Recognise uses of IT</b>  <a href="#">Year 2 Uses of IT - iLearn2   Primary Computing. Made Easy.</a>  Pupil code - RR87  NC - <i>Recognise common uses of information technology beyond school.</i></p>	<ul style="list-style-type: none"> <li>- Understand what makes a computer a computer.</li> <li>- Understand computers store and follow instructions.</li> <li>- Spot digital technology in school.</li> <li>- Understand how different technology helps us.</li> </ul>	<p>Microprocessor  Analogue  Digital</p>

<p><b><u>E-Safety</u></b>  <a href="#">E-safety - Key Stage 1 - iLearn2   Primary Computing. Made Easy.</a>  Pupil code - ES75</p> <p>NC - <i>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.</i></p>	<ul style="list-style-type: none"> <li>- What are the dangers of sharing photos online?</li> <li>- People online are not always who they say they are.</li> <li>- Trusting information online.</li> <li>- Using the Internet responsibly.</li> <li>- Being respectful.</li> </ul>	Personal information Sharing Permission Report Trust Respect
<p><b><u>Internet research</u></b>  <a href="#">Year 2 Research - iLearn2   Primary Computing. Made Easy.</a>  Pupil code – R287</p> <p>NC - <i>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.</i></p>	<ul style="list-style-type: none"> <li>- Understand how a web-page displays information in different ways; text, images, videos and interactive elements.</li> <li>- Use a web-page to answer questions.</li> </ul>	Internet browser Webpage Keywords Video Transcript Bullet points
<b>Information Technology</b>		
<b>Unit</b>	<b>Progression of skills</b>	<b>Key Vocabulary</b>
<p><b><u>Digital Art</u></b>  <a href="#">Year 2 Digital Art - iLearn2   Primary Computing. Made Easy.</a>  Pupil code – DP93</p> <p>NC - <i>Use technology purposefully to create, organise, store, manipulate and retrieve digital content.</i></p>	<ul style="list-style-type: none"> <li>- Use lines and fill tools to make interesting patterns.</li> <li>- Add a variety of shapes (outlines and fill) and label them with text.</li> <li>- Re-create graphics using pixels with different colours.</li> </ul>	Pixels Fill Text PNG GIF
<p><b><u>Introduction to Data Handling</u></b>  <a href="#">Year 2 Data Handling - iLearn2   Primary Computing. Made Easy.</a>  Pupil code – 33YY</p> <p>NC - <i>Use technology purposefully to create, organise, store, manipulate and retrieve digital content.</i></p>	<ul style="list-style-type: none"> <li>– Understand what data is and collect it as a tally.</li> <li>– Use software to label a pictogram and add data to each column.</li> <li>– Edit a table with correct titles and numbers.</li> <li>– Use software to create a bar chart/pie chart/line chart suitable for the data.</li> <li>– Interpret a pictogram/bar chart/line chart.</li> </ul>	Table Bar chart Pie chart Pictogram
<p><b><u>Introduction to Animation</u></b>  <a href="#">Year 2 Animation - iLearn2   Primary Computing. Made Easy.</a>  Pupil code – A798</p> <p>NC - <i>Use technology purposefully to create, organise, store, manipulate and retrieve digital content.</i></p>	<ul style="list-style-type: none"> <li>- Add a background and objects to a frame (including text)</li> <li>- Copy/clone a frame and move objects to create an animation, including flipping objects.</li> <li>- Create an animation with multiple objects moving simultaneously.</li> <li>- Create screen-recording animation (<i>optional, requires iPad</i>).</li> <li>- Create stop-motion animation with photos (<i>optional, requires iPad</i>).</li> <li>- Create animated drawings of characters by cropping photos and adjusting points of movement</li> </ul>	Frame Clone Onion Skin Frame Rate

## Year 3

### Computer Science

Unit	Progression of skills	Key Vocabulary
<p><b>Programming in Scratch</b>  <a href="#">Year 3 Scratch - iLearn2   Primary Computing. Made Easy.</a>                      Pupil code –19QA, SQ43, SK32, SC87, ST67</p> <p>NC – <i>Design, write and debug programs that accomplish specific goal, including simulating physical systems. Use sequence and repetition in programs; work with various forms of input.</i></p>	<ul style="list-style-type: none"> <li>- Design, write and debug programs that accomplish specific goals. (Including outputs)</li> <li>- Use repetition in programs.</li> <li>- Work with various forms of inputs; keyboard, mouse and touch screen.</li> <li>- Write programs to simulate physical systems.</li> </ul>	<p style="text-align: center;">Sprite                      Stage                      Sequence                      Debug                      Loops                      Repetitions                      Inputs</p>

### Digital Literacy

Unit	Progression of skills	Key Vocabulary
<p><b>E-safety</b>  <a href="#">E-safety - Key Stage 2 - iLearn2   Primary Computing. Made Easy.</a>                      Pupil code – ES82</p> <p>NC – <i>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</i></p>	<ul style="list-style-type: none"> <li>- Understand what to do if something upsets you online.</li> <li>- Understand why and how people can be nasty online.</li> <li>- Describe the term ‘sharing online’ and why we need to get permission to share photos and videos of other people.</li> <li>- Understand why people pretend to be someone else online.</li> <li>- Understand why we only talk to people we know in the real world, when online.</li> <li>- Understand why we should not always trust what we read online and how to check</li> <li>- Understand the importance of being kind in the real world and also online.</li> <li>- Understand the importance of using avatars and how to make them.</li> </ul>	<p style="text-align: center;">Personal information                      Sharing                      Permission                      Report                      Trust                      Respect</p>

### Information Technology

Unit	Progression of skills	Key Vocabulary
<p><b>Comic Creation</b>  <a href="#">Year 1/3 Comic Creation - iLearn2   Primary Computing. Made Easy.</a>                      Pupil code – 45TT</p> <p>NC – <i>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.</i></p>	<ul style="list-style-type: none"> <li>- Add, resize and organise colour or picture backgrounds.</li> <li>- Add, resize, organise characters/objects to different panels.</li> <li>- Add narration using text and direct speech using speech bubbles.</li> <li>- Save comic with name and title.</li> <li>- Add audio recordings (optional).</li> </ul>	<p style="text-align: center;">Panel                      Narration                      Stickers                      Scale                      Arrange                      Flip</p>
<p><b>Digital Art</b>  <a href="#">Year 3 Digital Art - iLearn2   Primary Computing. Made Easy.</a>                      Pupil code –DP97</p> <p>NC – <i>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.</i></p>	<ul style="list-style-type: none"> <li>- Use various lines and fill tools plus copy/paste and rotation to create pattern effects.</li> <li>- Use shapes, fill, copy/paste, zoom and flip to create reflective symmetry effects.</li> <li>- Use stamps, copy/paste, layers and multiple frames to create animated GIF computer game graphics.</li> </ul>	<p style="text-align: center;">Rotation                      Zoom                      Flip                      Symmetry                      Stamp                      GIF</p>

<p><b>Music Creation</b>  <a href="#">Year 3 Music Creation - iLearn2   Primary Computing. Made Easy.</a>  Pupil code – MM87  NC – <i>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.</i></p>	<ul style="list-style-type: none"> <li>- Create ascending and descending scales.</li> <li>- Add chords evenly across the scales.</li> <li>- Add arpeggios and melodies.</li> <li>- Add a steady and even rhythm.</li> <li>- Use sampled sounds to create an effective mix.</li> <li>- Build beats, melody (tones) and effects.</li> </ul>	<p>Scales  Chords  Arpeggio  Bars and Beats  Samples sounds  Effects</p>
<p><b>Document Editing and Creation</b>  <a href="#">Year 3 Document Creation - iLearn2   Primary Computing. Made Easy.</a>  Pupil code – DW34  NC – <i>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.</i></p>	<ul style="list-style-type: none"> <li>- Copy and Paste text and images.</li> <li>- Find and replace words.</li> <li>- Format text for a purpose.</li> <li>- Add bullet points to make lists.</li> <li>- Experiment with keyboard shortcuts.</li> </ul>	<p>Word processor  Find and replace  Format  Text Wrapping  Keyboard shortcuts  Bullet points</p>
<p><b>3D Design</b>  <a href="#">Year 3 3D Design - iLearn2   Primary Computing. Made Easy.</a>  Pupil code – D776  NC – <i>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.</i></p>	<ul style="list-style-type: none"> <li>- Understand and use 3D space on a grid.</li> <li>- Design cities/towns for a purpose and to a budget.</li> <li>- Re-create or design familiar 3D models using cubes, such as tables and chairs.</li> <li>- Use chisel tool to improve and adapt models.</li> <li>- Colour individual blocks or whole models.</li> </ul>	<p>3D  Rotate  Zoom  Grid  Chisel, Hammer, Trowel  Spray  Bucket</p>

<b>Year 4</b>		
<b>Computer Science</b>		
Unit	Progression of skills	Key Vocabulary
<p><b>Programming in scratch</b>  <a href="#">Year 4 Scratch - iLearn2   Primary Computing. Made Easy.</a>  Pupil code – SR37, SB63, SB72, 163A, VX62  NC – <i>Design, write and debug programs that accomplish specific goals. Use sequence, selection, and repetition in programs; work with various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.</i></p>	<ul style="list-style-type: none"> <li>- Program inputs with loops, selection and sensing for interactions.</li> <li>- Work with variables and various forms of input and output.</li> <li>- Debug programs that accomplish goals. (correcting errors)</li> <li>- Use selection, data variables and operators.</li> <li>- Program a virtual robot using Scratch blocks.</li> </ul>	<p>Input  Selection  Sensing  Variables  Debug</p>



## Digital Literacy

Unit	Progression of skills	Key Vocabulary
<p><b>Internet Research</b>  <a href="#">Year 4 Inside a Computer - iLearn2   Primary Computing. Made Easy.</a>                      Pupil code – CCY2</p> <p>NC – <i>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.</i></p>	<ul style="list-style-type: none"> <li>- Use search technologies to find specific pieces of information.</li> <li>- Understand features of an Internet Browser.</li> <li>- Reference the correct source of information.</li> <li>- Be discerning in evaluating digital content.</li> <li>- Check the internet for fake news by cross-referencing facts.</li> </ul>	Internet Browser Web Address Address Bar Search Engine WWW Ranking
<p><b>E-Safety</b>  <a href="#">E-safety - Key Stage 2 - iLearn2   Primary Computing. Made Easy.</a>                      Pupil code – ES82</p> <p>NC – <i>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</i></p>	<ul style="list-style-type: none"> <li>- Understand what to do if something upsets you online.</li> <li>- Understand why and how people can be nasty online.</li> <li>- Describe the term ‘sharing online’ and why we need to get permission to share photos and videos of other people.</li> <li>- Understand why people pretend to be someone else online.</li> <li>- Understand why we only talk to people we know in the real world, when online.</li> <li>- Understand why we should not always trust what we read online and how to check</li> <li>- Understand the importance of being kind in the real world and also online.</li> <li>- Understand the importance of using avatars and how to make them.</li> </ul>	Personal information Sharing Permission Report Trust Respect

## Information Technology

Unit	Progression of skills	Key Vocabulary
<p><b>Animation</b>  <a href="#">Year 4 Animation - iLearn2   Primary Computing. Made Easy.</a>                      Pupil code – 1J77</p> <p>NC – <i>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.</i></p>	<ul style="list-style-type: none"> <li>- Create a stop-motion video by duplicating slides that include backgrounds and shapes.</li> <li>- Create animation using transition and animation effects (morph, motion paths, pulse etc), including taking and editing a screenshot.</li> <li>- Animate individual elements of objects.</li> <li>- Create animated GIF files by animating pixels.</li> </ul>	Frame Clone Onion Skin Frame Rate Timeline Transition GIF
<p><b>Data Handling</b>  <a href="#">Year 4 Data Handling - iLearn2   Primary Computing. Made Easy.</a>                      Pupil code – D953</p> <p>NC – <i>Collecting, analysing, evaluating and presenting data and information.</i></p>	<ul style="list-style-type: none"> <li>- Change appearance of cells in a spreadsheet (fill colour and border) then add and align text.</li> <li>- Find and add data to a spreadsheet, resize cells and use the software to create a suitable chart with a title.</li> </ul>	Spreadsheet Cell Bar chart Pie chart Line Graph

<p><b>3D design</b>  <a href="#">Year 4 3D Design - iLearn2   Primary Computing. Made Easy.</a>  Pupil code – 3D92</p> <p>NC – <i>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</i></p>	<ul style="list-style-type: none"> <li>- Understand 3D spacial awareness.</li> <li>- Add 3D shapes, resize, adjust height, duplicate and use the different perspective.</li> <li>- Re-create different types of buildings using 3D shapes.</li> <li>- Create roads/paths by adjusting the height of 3D shapes.</li> <li>- Add windows and door shapes.</li> </ul>	<p>Zoom  Work plane  Viewpoint  Perspective  Orthographic  Duplicate</p>
<p><b>Video editing</b>  <a href="#">Year 4 Video Editing - iLearn2   Primary Computing. Made Easy.</a>  Pupil code – VK34</p> <p>NC – <i>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.</i></p>	<ul style="list-style-type: none"> <li>- Add scene images.</li> <li>- Add scripted voiceover audio, adjust the volume and crop clips (including splitting a clip).</li> <li>- Add more clips and use transition effects.</li> <li>- Add titles.</li> <li>- Use elements such as shapes.</li> <li>- Add music background music and adjust the volume.</li> <li>- Export a project.</li> </ul>	<p>Clips  Timelines  Split  Transitions  Titles  Voiceovers  Export</p>

<b>Year 5</b>		
<b>Computer Science</b>		
Unit	Progression of skills	Key Vocabulary
<p><b>Programming in Scratch</b>  <a href="#">Year 5 Scratch - iLearn2   Primary Computing. Made Easy.</a>  Pupil code – 4T46, VMQ2, SST9, SC47</p> <p>NC - <i>Design, write and debug programs that accomplish specific goals; solve problems by decomposing them into smaller parts. Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.</i></p>	<ul style="list-style-type: none"> <li>- Program inputs for control, selection (conditions) and sensing for interaction and data variables for scoring and a game timer.</li> <li>- Program distance sensing and movement.</li> <li>- Program Inputs, outputs, loops, conditions, sensing and variables.</li> <li>- Program list variables that chooses randomly.</li> </ul>	<p>Inputs  Selection  Sensing  Variables  Debug</p>
<p><b>Physical Devices</b>  <a href="#">Year 5 Physical Systems - iLearn2   Primary Computing. Made Easy.</a> Pupil code – MBH2</p> <p>NC - <i>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems. Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.</i></p>	<ul style="list-style-type: none"> <li>- Understand that computers use physical inputs and outputs and give examples.</li> <li>- Program physical inputs, outputs (e.g program LED lights) and random variables.</li> <li>- Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems.</li> </ul>	<p>Microbit  Outputs  Inputs  Accelerometer  Processor</p>

<b>Digital Literacy</b>		
<b>Unit</b>	<b>Progression of skills</b>	<b>Key Vocabulary</b>
<p><b>Computer Networks and the Internet</b>  <a href="#">Year 5 Computer Networks - iLearn2   Primary Computing. Made Easy.</a>  Pupil code – N7X8</p> <p>NC - <i>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.</i></p>	<ul style="list-style-type: none"> <li>- Understand Computer Networks, Internet and Cloud Computing and how they help us.</li> <li>- What is email and how can we use it safely?</li> <li>- Understand how and why we collaborate online (including blogging).</li> </ul>	<p style="text-align: center;">Server  Router  Firewall  IP address  Wireless Access Point  Cloud Computing</p>
<b>Information Technology</b>		
<b>Unit</b>	<b>Progression of skills</b>	<b>Key Vocabulary</b>
<p><b>App Design</b>  <a href="#">Year 5 App Design - iLearn2   Primary Computing. Made Easy.</a>  Pupil code – 81T2</p> <p>NC - <i>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.</i></p>	<ul style="list-style-type: none"> <li>- Adjust slide size to mimic a phone/tablet size.</li> <li>- Add text and images to a slide.</li> <li>- Add icons and text to use as navigation.</li> <li>- Duplicate slides to create multiple pages of the app.</li> <li>- Create hyperlinks to create navigation.</li> </ul>	<p style="text-align: center;">Screen Dimensions  Icons  Navigation  Hyperlinks  Duplicate</p>
<p><b>Data Handling</b>  <a href="#">Year 5 Data Handling - iLearn2   Primary Computing. Made Easy.</a>  Pupil code – DZT3</p> <p>NC - <i>Select, use and combine a variety of software (including internet services). Collecting, analysing, evaluating and presenting data and information.</i></p>	<ul style="list-style-type: none"> <li>- Select and use non-adjacent cells plus resize multiple cell widths and copy/paste cells.</li> <li>- Use formulae to find totals, averages and maximum/minimum numbers.</li> <li>- Find data and create a spreadsheet to suit it.</li> <li>- Search a database for specific information.</li> </ul>	<p style="text-align: center;">Spreadsheet  Cell  Formula  Database  Record  Field  Sort</p>
<p><b>Music Creation</b>  <a href="#">Year 5 Music Creation - iLearn2   Primary Computing. Made Easy.</a>  Pupil code – WXY4, GBX7</p> <p>NC - <i>Select, use and combine a variety of software (including internet services) on a range of digital devices to design content that accomplish given goals.</i></p>	<ul style="list-style-type: none"> <li>- Layer tracks using sounds and effects.</li> <li>- Create effective instrument tracks.</li> <li>- Edit tracks and effectively adjust volume and add effects.</li> </ul>	<p style="text-align: center;">Scales  Chords  Arpeggio  Bars and Beats  Sample sounds  Effects</p>

## Year 6

### Computer Science

Unit	Progression of skills	Key Vocabulary
<p><b><u>Programming in Scratch – Yr6</u></b>  <a href="#">Year 6 Scratch - iLearn2   Primary Computing. Made Easy.</a>                      Pupil code – SKT7, SPF2, 541A, SPW2, SPG4                      NC - <i>Design, write and debug programs that accomplish specific goals; solve problems by decomposing them into smaller parts.</i>  <i>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.</i>  <i>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.</i></p>	<ul style="list-style-type: none"> <li>- Program keyboard/touch screen inputs, selection (conditions), loops and random variables for unpredictability (operators).</li> <li>- Program inputs, selection, sensing, random variables, operators for direction and data variables for scoring.</li> <li>- Use inputs, selection, loops, sensing, costume changes and broadcasts.</li> <li>- Work with multiple sprites to send broadcast messages between them</li> </ul>	<p>Input Operators Sensing Variable Broadcast</p>

### Digital Literacy

Unit	Progression of skills	Key Vocabulary
<p><b><u>E-Safety Yr6</u></b>  <a href="#">E-safety - Key Stage 2 - iLearn2   Primary Computing. Made Easy.</a>                      Pupil code – ES82                       NC- <i>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</i></p>	<ul style="list-style-type: none"> <li>- Keep personal information private.</li> <li>- Respect and protect against online bullies.</li> <li>- Understand the consequences of sharing photo/videos online.</li> <li>- Understand the term digital footprint.</li> <li>- How can we check online content is trustworthy.</li> <li>- How, where and who can we report concerns we have to.</li> <li>- Use suitable usernames and passwords for online accounts.</li> <li>- Understand the pitfalls of in-app purchases.</li> </ul>	<p>Personal information Sharing Permission Report Trust Respect</p>

### Information Technology

Unit	Progression of skills	Key Vocabulary
<p><b><u>Graphic Design</u></b>  <a href="#">Year 6 Graphic Design - iLearn2   Primary Computing. Made Easy.</a>                      Pupil code – A780                       NC- <i>Design and create digital content to accomplish goals.</i></p>	<ul style="list-style-type: none"> <li>- Add, adjust and fill shapes.</li> <li>- Group shapes to improve accuracy and speed.</li> <li>- Add and customise gradient effects.</li> <li>- Adjust transparency/opacity for a purpose.</li> <li>- Use a colour picker correctly.</li> <li>- Accurately rotate shapes.</li> </ul>	<p>Grouping Gradient Transparency / Opacity Colour picker Arrange</p>
<p><b><u>Image editing</u></b>  <a href="#">Year 6 Image Editing - iLearn2   Primary Computing. Made Easy.</a>                      Pupil code - EFZ6                      NC - <i>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.</i></p>	<ul style="list-style-type: none"> <li>- Adjust the colours, brightness and contrast to improve a photo.</li> <li>- Create a before and after slide in presentation software.</li> <li>- Take and crop a screenshot.</li> <li>- Add drawing and text layers.</li> <li>- Import new images as layers and resize them to fit.</li> <li>- Add colour elements to a black and white image using layers and eraser tools.</li> </ul>	<p>Crop Aspect ratio Filter Colour editing Lighting editing</p>

**Data detectives**

[Year 6 Data Detectives - iLearn2 | Primary Computing. Made Easy.](#)

Pupil code – DE45

NC - *Select, use and combine a variety of software (including internet services). Collecting, analysing, evaluating and presenting data and information.*

- Use comprehension skills to find clues that match the column headings of a spreadsheet.
- Use spreadsheet tools (filters and conditional formatting) to find the specific data to match the clues.

Spreadsheet  
Cell  
Filter  
Conditional formatting

