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.

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 social media.

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

Computer Science

Unit	Area of Learning	Key Vocabulary
Early programming EYFS - Programming - iLearn2 | Primary Computing. Made Easy.	Knows how to operate simple equipment (30-50 months) Give explanations (Speaking 30-50 months)	Sequence Algorithm Predict

Digital Literacy

Unit	Area of Learning	Key Vocabulary
E-Safety EYFS - E-safety - iLearn2 | Primary Computing. Made Easy.	Explain the reasons for rules, know right from wrong and try to behave accordingly (Early Learning Goals)	Safe Strangers Internet

Information Technology

Unit	Area of Learning	Key Vocabulary
Computer discovery Computer Discovery - Early Years - iLearn2 | Primary Computing. Made Easy.	Understanding the World; Children recognise that a range of technology is used in places such as home and schools (Early Learning) Communication and Language; Listening and Attention, Understanding, Speaking. Health and Self Case: Understands that equipment needs to be used safely (30-50 months). Mathematics: Count on and back to find an answer. (Early Learning) Interact with age appropriate computer software (40-60+ months)	**Mouse** **Trackpad** **Cursor** **Left button** **Scroll wheel** **Home row**
Early digital music EYFS/Year 1 Music Creation - iLearn2 | Primary Computing. Made Easy. Pupil code – 44M5	Explore how sounds can be changed (30-50 months) Explore different sounds of instruments (40-60 months) They select and use technology for a particular purpose (Early Learning Goals) Represent own ideas through music (Early Learning Goals)	**Rhythm** **Melody** **Tempo**
Digital photos and videos EYFS - Digital Photos and Videos - iLearn2 | Primary Computing. Made Easy.	Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for a particular purpose. Knows how to operate simple equipment (30-50 months) Choose particular colours for a purpose (40-60 months) Communication and Language (Speaking) Writing (Early Learning Goals)	**Colour** **Picture** **Photo** **Video** **Camera**
Digital art and design EYFS - Digital Art and Design - iLearn2 | Primary Computing. Made Easy. Pupil code – MM78	Uses simple tools and techniques competently and appropriately (40-60+ months) Selects appropriate resources and adapts them where necessary (40-60+ months) Explores how colours can be changed (30-50 months) Chooses particularly colours to use for a purpose (40-60 months)	**Fill** **Paint** **Draw** **Tool**

Cross-curricular Options

Literacy and Numeracy skills EYFS - Digital Numeracy and Literacy - iLearn2 | Primary Computing. Made Easy.	Knows that information can be retrieved from a computer (30-50 months Interacts with age-appropriate computer software. (40-60 months) Knows that information can be relayed in the form of print (40-60 months) Interacts with age appropriate computer software. (40-60 months)

Year 1

Computer Science

Unit	Progression of skills	Key Vocabulary
Introduce Programming Year 1 Programming - iLearn2 | Primary Computing. Made Easy. Pupil code – P844 NC - *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.*	- Place instructions into the correct order (sequence) to make something work. - Use direction arrows to move an on-screen object (character/sprite) to achieve an objective. - Predict a route and sequence direction commands (algorithm) to achieve an objective. Correct the errors if necessary (debug). - Predict a route and sequence distance commands to program an on-screen object to achieve an objective. - Predict and sequence movement and pen commands to program the drawing of different 2D shapes. - Sequence code blocks, including movements and execute (start program) blocks to write a program to achieve an objective.	**Sequence** **Algorithm** **Predict** **Execute** **Debug**

Digital Literacy

Unit	Progression of skills	Key Vocabulary
Online safety E-safety - Key Stage 1 - iLearn2 | Primary Computing. Made Easy. Pupil code – ES75 NC - *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.*	- Understand what the internet is and how people use it. - Understand what personal information is and why we keep personal information private. - Why do websites want personal information. - Identify when and where to go for help when concerned.	**Personal information** **Sharing** **Permission** **Report** **Trust** **Respect**

Information Technology

Unit	Progression of skills	Key Vocabulary
Mouse and Keyboard skills EYFS/Year 1 Mouse and Keyboard - iLearn2 | Primary Computing. Made Easy. Pupil code – MM78	- Move the mouse or trackpad and left click to select an object. - Drag and drop with mouse or trackpad to move objects around the screen. - Find letters or numbers on a keyboard. - Begin touch typing with home row keys.	**Mouse** **Trackpad** **Cursor** **Left button** **Scroll wheel** **Home row**
Digital Art Year 1 Digital Art - iLearn2 | Primary Computing. Made Easy. Pupil code – A265 NC - *Use technology purposefully to create, organise and manipulate digital content*	– Change the colour of individual pixels to accurately re-create basic artwork. – Make changes where required. – Change the colour of individual pixels to accurately re-create detailed artwork	**Pixels** **Grid** **Fill** **Check**
3D design Year 1 Design - iLearn2 | Primary Computing. Made Easy. Pupil code – D827 NC - *Use technology purposefully to create, organise and manipulate digital content*	- Change the colour and pattern of elements. - Position and rotate objects on a design. - Position objects in relation to each other. - Resize, rotate, flip and arrange objects behind/in front of each other.	**3D** **Rotate** **Arrange** **Flip**
Text and Images	- Change the background colour of a page. - Add, resize and position images (pictures) on a page.	**Icon**

[Year 1 Text & Images - iLearn2	Primary Computing. Made Easy.](#) Pupil code – T824 NC - *Use technology purposefully to create, organise, store, manipulate and retrieve digital content.*	- Type and position text on a page, if possible using capital letters and punctuation. - Label pictures with text. - Use word-banks for writing sentences about pictures.	**Object** **Drag** **Text box** **Shift** **Image**
Music creation [EYFS/Year 1 Music Creation - iLearn2	Primary Computing. Made Easy.](#) Pupil code – 44M5 NC - *Use technology purposefully to create, organise, store, manipulate and retrieve digital content.*	- Create a rhythm using a pattern of beats. - Create digital sounds using patterns and shapes. - Create a simple melody using patterns and adjust tempo.	**Rhythm** **Melody** **Tempo**

Year 2

Computer Science

Unit	Progression of skills	Key Vocabulary
Develop Programming [Year 2 Programming - iLearn2	Primary Computing. Made Easy.](#) Pupil code – D942 NC – *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.*	- Create and debug simple programs by selecting code blocks, placing them in the correct sequence and executing a program. - Use logical reasoning to predict the behaviour of simple programs. - Simplify a program by using a loop.	**Sequence** **Algorithm** **Predict** **Execute** **Debug**

Digital Literacy

Unit	Progression of skills	Key Vocabulary
Recognise uses of IT [Year 2 Uses of IT - iLearn2	Primary Computing. Made Easy.](#) Pupil code - RR87 NC - *Recognise common uses of information technology beyond school.*	- Understand what makes a computer a computer. - Understand computers store and follow instructions. - Spot digital technology in school. - Understand how different technology helps us.	**Microprocessor** **Analogue** **Digital**

E-Safety		
E-Safety E-safety - Key Stage 1 - iLearn2 | Primary Computing. Made Easy. Pupil code - ES75 NC - *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.*	- What are the dangers of sharing photos online? - People online are not always who they say they are. - Trusting information online. - Using the Internet responsibly. - Being respectful.	**Personal information** **Sharing** **Permission** **Report** **Trust** **Respect**
Internet research Year 2 Research - iLearn2 | Primary Computing. Made Easy. Pupil code – R287 NC - *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.*	- Understand how a web-page displays information in different ways; text, images, videos and interactive elements. - Use a web-page to answer questions.	**Internet browser** **Webpage** **Keywords** **Video Transcript** **Bullet points**

Information Technology		
Unit	**Progression of skills**	**Key Vocabulary**
Digital Art Year 2 Digital Art - iLearn2 | Primary Computing. Made Easy. Pupil code – DP93 NC - *Use technology purposefully to create, organise, store, manipulate and retrieve digital content.*	- Use lines and fill tools to make interesting patterns. - Add a variety of shapes (outlines and fill) and label them with text. - Re-create graphics using pixels with different colours.	**Pixels** **Fill** **Text** **PNG** **GIF**
Introduction to Data Handling Year 2 Data Handling - iLearn2 | Primary Computing. Made Easy. Pupil code – 33YY NC - *Use technology purposefully to create, organise, store, manipulate and retrieve digital content.*	- Understand what data is and collect it as a tally. - Use software to label a pictogram and add data to each column. - Edit a table with correct titles and numbers. - Use software to create a bar chart/pie chart/line chart suitable for the data. - Interpret a pictogram/bar chart/line chart.	**Table** **Bar chart** **Pie chart** **Pictogram**
Introduction to Animation Year 2 Animation - iLearn2 | Primary Computing. Made Easy. Pupil code – A798 NC - *Use technology purposefully to create, organise, store, manipulate and retrieve digital content.*	- Add a background and objects to a frame (including text) - Copy/clone a frame and move objects to create an animation, including flipping objects. - Create an animation with multiple objects moving simultaneously. - Create screen-recording animation (*optional, requires iPad*). - Create stop-motion animation with photos (*optional, requires iPad*). - Create animated drawings of characters by cropping photos and adjusting points of movement.	**Frame** **Clone** **Onion Skin** **Frame Rate**

Year 3

Computer Science

Unit	Progression of skills	Key Vocabulary
Programming in Scratch Year 3 Scratch - iLearn2 | Primary Computing. Made Easy. Pupil code –19QA, SQ43, SK32, SC87, ST67 NC – *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.*	- Design, write and debug programs that accomplish specific goals. (Including outputs) - Use repetition in programs. - Work with various forms of inputs; keyboard, mouse and touch screen. - Write programs to simulate physical systems.	**Sprite** **Stage** **Sequence** **Debug** **Loops** **Repetitions** **Inputs**

Digital Literacy

Unit	Progression of skills	Key Vocabulary
E-safety E-safety - Key Stage 2 - iLearn2 | Primary Computing. Made Easy. Pupil code – ES82 NC – *Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.*	- Understand what to do if something upsets you online. - Understand why and how people can be nasty online. - Describe the term 'sharing online' and why we need to get permission to share photos and videos of other people. - Understand why people pretend to be someone else online. - Understand why we only talk to people we know in the real world, when online. - Understand why we should not always trust what we read online and how to check - Understand the importance of being kind in the real world and also online. - Understand the importance of using avatars and how to make them.	**Personal information** **Sharing** **Permission** **Report** **Trust** **Respect**

Information Technology

Unit	Progression of skills	Key Vocabulary
Comic Creation Year 1/3 Comic Creation - iLearn2 | Primary Computing. Made Easy. Pupil code – 45TT NC – *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.*	- Add, resize and organise colour or picture backgrounds. - Add, resize, organise characters/objects to different panels. - Add narration using text and direct speech using speech bubbles. - Save comic with name and title. - Add audio recordings (optional).	**Panel** **Narration** **Stickers** **Scale** **Arrange** **Flip**
Digital Art Year 3 Digital Art - iLearn2 | Primary Computing. Made Easy. Pupil code –DP97 NC – *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.*	- Use various lines and fill tools plus copy/paste and rotation to create pattern effects. - Use shapes, fill, copy/paste, zoom and flip to create reflective symmetry effects. - Use stamps, copy/paste, layers and multiple frames to create animated GIF computer game graphics.	**Rotation** **Zoom** **Flip** **Symmetry** **Stamp** **GIF**

Unit	Progression of skills	Key Vocabulary
Music Creation [Year 3 Music Creation - iLearn2 | Primary Computing. Made Easy.](#) Pupil code – MM87 NC – *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.*	- Create ascending and descending scales. - Add chords evenly across the scales. - Add arpeggios and melodies. - Add a steady and even rhythm. - Use sampled sounds to create an effective mix. - Build beats, melody (tones) and effects.	**Scales Chords Arpeggio Bars and Beats Samples sounds Effects**
Document Editing and Creation [Year 3 Document Creation - iLearn2 | Primary Computing. Made Easy.](#) Pupil code – DW34 NC – *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.*	- Copy and Paste text and images. - Find and replace words. - Format text for a purpose. - Add bullet points to make lists. - Experiment with keyboard shortcuts.	**Word processor Find and replace Format Text Wrapping Keyboard shortcuts Bullet points**
3D Design [Year 3 3D Design - iLearn2 | Primary Computing. Made Easy.](#) Pupil code – D776 NC – *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.*	- Understand and use 3D space on a grid. - Design cities/towns for a purpose and to a budget. - Re-create or design familiar 3D models using cubes, such as tables and chairs. - Use chisel tool to improve and adapt models. - Colour individual blocks or whole models.	**3D Rotate Zoom Grid Chisel, Hammer, Trowel Spray Bucket**

Year 4

Computer Science

Unit	Progression of skills	Key Vocabulary
Programming in scratch [Year 4 Scratch - iLearn2 | Primary Computing. Made Easy.](#) Pupil code – SR37, SB63, SB72, 163A, VX62 NC – *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.*	- Program inputs with loops, selection and sensing for interactions. - Work with variables and various forms of input and output. - Debug programs that accomplish goals. (correcting errors) - Use selection, data variables and operators. - Program a virtual robot using Scratch blocks.	**Input Selection Sensing Variables Debug**

Digital Literacy

Unit	Progression of skills	Key Vocabulary
Internet Research [Year 4 Inside a Computer - iLearn2 | Primary Computing. Made Easy.](#) Pupil code – CCY2	- Use search technologies to find specific pieces of information. - Understand features of an Internet Browser. - Reference the correct source of information.	**Internet Browser Web Address Address Bar Search Engine**

NC – *Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.*	- Be discerning in evaluating digital content. - Check the internet for fake news by cross-referencing facts.	**WWW** **Ranking**
E-Safety E-safety - Key Stage 2 - iLearn2 | Primary Computing. Made Easy. Pupil code – ES82 NC – *Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.*	- Understand what to do if something upsets you online. - Understand why and how people can be nasty online. - Describe the term 'sharing online' and why we need to get permission to share photos and videos of other people. - Understand why people pretend to be someone else online. - Understand why we only talk to people we know in the real world, when online. - Understand why we should not always trust what we read online and how to check - Understand the importance of being kind in the real world and also online. - Understand the importance of using avatars and how to make them.	**Personal information** **Sharing** **Permission** **Report** **Trust** **Respect**

Information Technology

Unit	Progression of skills	Key Vocabulary
Animation Year 4 Animation - iLearn2 | Primary Computing. Made Easy. Pupil code – 1J77 NC – *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.*	- Create a stop-motion video by duplicating slides that include backgrounds and shapes. - Create animation using transition and animation effects (morph, motion paths, pulse etc), including taking and editing a screenshot. - Animate individual elements of objects. - Create animated GIF files by animating pixels.	**Frame** **Clone** **Onion Skin** **Frame Rate** **Timeline** **Transition** **GIF**
Data Handling Year 4 Data Handling - iLearn2 | Primary Computing. Made Easy. Pupil code – D953 NC – *Collecting, analysing, evaluating and presenting data and information.*	- Change appearance of cells in a spreadsheet (fill colour and border) then add and align text. - Find and add data to a spreadsheet, resize cells and use the software to create a suitable chart with a title.	**Spreadsheet** **Cell** **Bar chart** **Pie chart** **Line Graph**
3D design Year 4 3D Design - iLearn2 | Primary Computing. Made Easy. Pupil code – 3D92 NC – *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*	- Understand 3D spacial awareness. - Add 3D shapes, resize, adjust height, duplicate and use the different perspective. - Re-create different types of buildings using 3D shapes. - Create roads/paths by adjusting the height of 3D shapes. - Add windows and door shapes.	**Zoom** **Work plane** **Viewpoint** **Perspective** **Orthographic** **Duplicate**
Video editing Year 4 Video Editing - iLearn2 | Primary Computing. Made Easy. Pupil code – VK34	- Add scene images. - Add scripted voiceover audio, adjust the volume and crop clips (including splitting a clip). - Add more clips and use transition effects. - Add titles. - Use elements such as shapes.	**Clips** **Timelines** **Split** **Transitions** **Titles** **Voiceovers** **Export**

NC – *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.*	- Add music background music and adjust the volume. - Export a project.	

Year 5		

Computer Science		
Unit	**Progression of skills**	**Key Vocabulary**
Programming in Scratch Year 5 Scratch - iLearn2 | Primary Computing. Made Easy. Pupil code – 4T46, VMQ2, SST9, SC47 NC - *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.*	- Program inputs for control, selection (conditions) and sensing for interaction and data variables for scoring and a game timer. - Program distance sensing and movement. - Program Inputs, outputs, loops, conditions, sensing and variables. - Program list variables that chooses randomly.	**Inputs** **Selection** **Sensing** **Variables** **Debug**
Physical Devices Year 5 Physical Systems - iLearn2 | Primary Computing. Made Easy. Pupil code – MBH2 NC - *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.*	- Understand that computers use physical inputs and outputs and give examples. - Program physical inputs, outputs (e.g. program LED lights) and random variables. - Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems.	**Microbit** **Outputs** **Inputs** **Accelerometer** **Processor**

Digital Literacy		
Unit	**Progression of skills**	**Key Vocabulary**
Computer Networks and the Internet Year 5 Computer Networks - iLearn2 | Primary Computing. Made Easy. Pupil code – N7X8 NC - *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.*	- Understand Computer Networks, Internet and Cloud Computing and how they help us. - What is email and how can we use it safely? - Understand how and why we collaborate online (including blogging).	Server Router Firewall IP address Wireless Access Point Cloud Computing

Information Technology		
Unit	**Progression of skills**	**Key Vocabulary**
App Design Year 5 App Design - iLearn2 | Primary Computing. Made Easy. Pupil code – 8IT2	- Adjust slide size to mimic a phone/tablet size. - Add text and images to a slide. - Add icons and text to use as navigation.	**Screen Dimensions** **Icons** **Navigation** **Hyperlinks**

NC - *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.*	- Duplicate slides to create multiple pages of the app. - Create hyperlinks to create navigation.	**Duplicate**
Data Handling Year 5 Data Handling - iLearn2 | Primary Computing. Made Easy. Pupil code – DZT3 NC - *Select, use and combine a variety of software (including internet services). Collecting, analysing, evaluating and presenting data and information.*	- Select and use non-adjacent cells plus resize multiple cell widths and copy/paste cells. - Use formulae to find totals, averages and maximum/minimum numbers. - Find data and create a spreadsheet to suit it. - Search a database for specific information.	**Spreadsheet** **Cell** **Formula** **Database** **Record** **Field** **Sort**
Music Creation Year 5 Music Creation - iLearn2 | Primary Computing. Made Easy. Pupil code – WXY4, GBX7 NC - *Select, use and combine a variety of software (including internet services) on a range of digital devices to design content that accomplish given goals.*	- Layer tracks using sounds and effects. - Create effective instrument tracks. - Edit tracks and effectively adjust volume and add effects.	**Scales** **Chords** **Arpeggio** **Bars and Beats** **Sample sounds** **Effects**

Year 6

Computer Science

Unit	Progression of skills	Key Vocabulary
Programming in Scratch – Yr6 Year 6 Scratch - iLearn2 | Primary Computing. Made Easy. Pupil code – SKT7, SPF2, 541A, SPW2, SPG4 NC - *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.*	- Program keyboard/touch screen inputs, selection (conditions), loops and random variables for unpredictability (operators). - Program inputs, selection, sensing, random variables, operators for direction and data variables for scoring. - Use inputs, selection, loops, sensing, costume changes and broadcasts. - Work with multiple sprites to send broadcast messages between them	**Input** **Operators** **Sensing** **Variable** **Broadcast**

Digital Literacy

Unit	Progression of skills	Key Vocabulary
E-Safety Yr6 E-safety - Key Stage 2 - iLearn2 | Primary Computing. Made Easy. Pupil code – ES82 NC - *Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.*	- Keep personal information private. - Respect and protect against online bullies. - Understand the consequences of sharing photo/videos online. - Understand the term digital footprint. - How can we check online content is trustworthy. - How, where and who can we report concerns we have to. - Use suitable usernames and passwords for online accounts. - Understand the pitfalls of in-app purchases.	**Personal information** **Sharing** **Permission** **Report** **Trust** **Respect**

Information Technology

Unit	Progression of skills	Key Vocabulary
Graphic Design Year 6 Graphic Design - iLearn2 | Primary Computing. Made Easy. Pupil code – A780 NC- *Design and create digital content to accomplish goals.*	- Add, adjust and fill shapes. - Group shapes to improve accuracy and speed. - Add and customise gradient effects. - Adjust transparency/opacity for a purpose. - Use a colour picker correctly. - Accurately rotate shapes.	**Grouping** **Gradient** **Transparency / Opacity** **Colour picker** **Arrange**
Image editing Year 6 Image Editing - iLearn2 | Primary Computing. Made Easy. Pupil code - EFZ6 NC - *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.*	- Adjust the colours, brightness and contrast to improve a photo. - Create a before and after slide in presentation software. - Take and crop a screenshot. - Add drawing and text layers. - Import new images as layers and resize them to fit. - Add colour elements to a black and white image using layers and eraser tools.	**Crop** **Aspect ratio** **Filter** **Colour editing** **Lighting editing**
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**