# Belleville Wix Academy - Computing Curriculum 2024 25

# Curriculum Overview

There are 6 areas of focus in our curriculum:

- 1. Computer Science (Coding and Computational Thinking)
- 2. IT: Media
- 3. IT: Creativity
- 4. IT: Data
- 5. Computer Networks
- 6. Digital Literacy (embedded throughout our units)

We are using these six themes for digital literacy across the national curriculum as proposed by the National Centre for Computing Excellence (NCCE):

- Use of devices and applications
- Handling and storing data and information
- Design, creation, and editing of content
- Communication using technology
- Online safety
- Moral and ethical behaviour relating to technology

# Computing Progression Map 2024 / 25

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Rec	Early Years Links: : PSED, Understanding the world  Online Safety	Early Years Links: Science and Geography, PSED  Awesome Autumn /	Early Years Links: Geography and science, PSED Winter Warmers /	Curriculum Links: Science, Maths, English, D&T, PSED Boats Ahoy / Use of	Early Years Links: Science and Geography, Understanding the world, PSED  Springtime /	Early Years Links: Maths, D&T, Understanding the world, PSED  New and old tech
	Unplugged computing activity:	Online safety	Online Safety	devices and	Data handling / New	/ Intro to Beebots
	Children will explore how bodies move and grow. They will use provided resources to learn about body parts and create simple routines of movements using algorithms.	Unplugged computing activity: Autumn themed activities which see the children explore patterns in Garlands Galore, create a leaf labyrinth and make Pumpkin Soup using computational thinking skills.	unplugged computing activity: Snowmen scarves and patterns, creating igloos and bird feeders- all take centre stage in our three winter themed activities.	applications  Unplugged computing activity: Takes children on a journey of discovery as they investigate boats. Four activities make up this set of resources. Includes different uses of boats, floating and sinking predictions, creating a good boat through exploring designs and role play.	springtime unplugged computing activity: Spring themed activities see the children make a Rabbit run, create Junk scarecrows and explore sequencing whilst planting seeds.	Range of technology in role play areas. Children identify new and older technology. Children learn how to use technology safely and respectfully. Children are introduced to algorithms and programming using the Beebots
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Y1	Computer Networks and Digital Literacy  Tech around us  Develop your learners' understanding of technology and how it can help them. They will become more familiar with the different components of a computer by developing their keyboard and mouse skills, and also start to consider how to use technology responsibly.	Pupils will explore the concept of data and how to collect it using tally charts. They will use attributes to organise data and present it through pictograms and block diagrams, then use the data to answer questions.  - Chromebooks - J2E	Pupils will program Bee Bots to follow instructions, move in shapes, and navigate obstacles, while developing debugging skills to fix mistakes in their code. They will write simple algorithms, predict and test outcomes, refine their code, and apply their skills using the Bee Bot app on a screen.	Computer Science and Digital Literacy Controlling animations on a screen  Pupils will learn basic coding in Hopscotch by making characters react to sounds, movement, or taps, and use code blocks to draw and create effects like fireworks and sounds.  -Hopscotch -iPads	IT: Media and Digital Literacy  Digital Books  Pupils will learn to safely use search engines, find appropriate images, and enhance their E-book projects with text, sound, photos, and videos. They will also understand the importance of permission when filming, keeping personal information private, and talking to an adult	Creating digital Literacy Creating digital art  Learners will create digital artwork inspired by famous artists like Matisse, Picasso, Mondrian, and Julian Opie using iPads and the Brushes Redux app.  - iPads - Brushes Redux  Success Criteria

	- Chromebook - Code.org - Painz.app  Success criteria I can learn about how technology helps us in different ways. I can get to know the different parts of a computer and how they work. I can practise using the keyboard and mouse. I can think about how to use technology responsibly.	Success Criteria I can understand and explain what data means. I can collect data and record it using a tally chart. I can use the term 'attribute' to help organise data. I can present data using pictograms and block diagrams. I can analyse and answer questions based on the data presented.	- BeeBot App - iPads  Success criteria  I can program Bee Bots to follow instructions and move in specific shapes. I can navigate Bee Bots around obstacles accurately. I can identify and fix mistakes (debug) in my Bee Bot programs. I can write simple algorithms to control the Bee Bots and predict what will happen. I can test my code, make adjustments, and refine it based on the results. I can use the Bee Bot app to practise my coding skills and apply what I have learned on a screen.	Success criteria I can make characters move, jump, or spin using sounds, shaking, or tapping the iPad. I can use code blocks to make a character draw or create effects like fireworks and sounds. I can understand that I can use this app to make simple or complex games.	if they encounter anything upsetting online.  - iPads - Book Creator App - Safari App - Camera App  Success Criteria I can use the internet safely to find pictures for my project. I can add words, sounds, and pictures to my work. I can ask before taking a photo or video of someone. I can keep my personal information safe when sharing my work. I can tell an adult if I see something online that makes me feel upset or unsure.	I can make digital pictures inspired by famous artists like Matisse and Picasso. I can use an iPad and the Brushes Redux app to create my artwork. I can choose different colours and brushes to make my picture look how I want.
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Y2	Autumn 1  Computer Networks and Digital Literacy IT around us  How is information technology (IT) being used for good in our lives? With an initial focus on IT in the home, learners explore how IT benefits society in places such as shops, libraries, and hospitals. Whilst discussing the responsible use of technology, and how to make smart choices when using it.  - Chromebook  Success criteria	Autumn 2  Computer Science and Digital Literacy Happy Traveller  This unit links to Go Kart modelling activities in DT. These lessons will develop your pupils' understanding of computer science as they create sequences and loops, decompose problems, and improve programs in order to meet specific needs. They'll investigate ways of accurately describing the decisions they've made when creating a program, carry out fair tests and develop their ability to	IT: Data and Digital Literacy Recording bug hunt data  Pupils will collect data about bugs, linked to the science topic of living things and their habitats. They will use iPads to take photos of mini-beasts and use the zoom function to identify their features. The collected data will be organised and presented using j2e charts.  - iPad - j2E charts - Chromebooks	IT: Media and Digital Literacy Puppet Pals  Pupils will use Puppet Pals to create a story related to their topic of study, using cut-out photographs of themselves as animated characters alongside cartoon characters and backgrounds. They will design a simple storyboard, add narration, and export their film as a .mov file, gaining a basic understanding of how cartoons and films are made. Link to story in English.  - iPads	Computer Science and Digital Literacy Creating a story  Pupils will use Scratch Junior to make a character (sprite) move on a background (stage) using code. They will use pre-made sprites and draw their own to create a simple animated story.  - iPads - Scratch Jr  Success criteria I can create and test simple algorithms to make sure they work and find and fix bugs in my programs.	It: Creativity and Digital Literacy  Taking, selecting and editing digital images  Learners will use the iPad camera app to capture photos and gain hands-on experience with taking, editing, and improving their own pictures.  They will then use their new skills to understand that not all images they see are real, sparking their curiosity about the world of digital images.  - iPad - Camera app

	I can explain how technology helps us at home and in places like shops, libraries, and hospitals. I can talk about how technology is useful and benefits us. I can learn how to use technology safely and make good choices when using it.	generate and debug multiple solutions.  - Lego Spike kits - Chromebooks - Lego Spike Planning - Taxi Taxi Plans - Big Bus Plans - Get Around Town  Success criteria I can understand and follow instructions in a sequence to see what happens. I can use commands in different orders to find out how it changes the outcome. I can design simple algorithms and test them to see if they work. I can find and fix bugs in my programs.	Success criteria I can use an iPad to take photos of minibeasts. I can use the zoom function to see and identify the features of mini-beasts. I can collect and organise data about bugs using j2e charts.	- Puppet Pal App  Success criteria  I can use Puppet Pals to create a story related to my topic of study. I can use cut-out photographs of myself and cartoon characters to make my story come to life. I can add extra characters and backgrounds from Google Images to illustrate my topic. I can create a simple storyboard to plan my story and add narration to my film. I can save my film as a Puppet Pals file and export it as a .mov file.	I can use Scratch Junior to code a character to move on a background. I can choose and draw my own sprites. I can use pre-made and my own sprites to create a simple animated story. I can build and tell a story using Scratch Junior.	- iPhotos - Teach computing L4 and 5  Success criteria I can use the camera app on the iPad to capture photographs. I can take, edit, and improve my own photos. I can understand that not all images I see are real.
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Y3	Computer Networks and Digital Literacy  Connecting	IT: Data and Digital Literacy  Datalogging	Computer Science and Digital Literacy Crazy Carnival Games	IT: Media and Digital Literacy  Stop Motion	Computer Science and Digital Literacy <b>Events and actions in</b>	IT: Creativity and Digital Literacy Using Digital Pencil &
	computers			Animation	programs	Pop Art
	Challenge your learners to develop their understanding of digital devices, with an initial focus on inputs, processes, and outputs. Start by comparing digital and non-digital devices, before introducing them to computer networks that include network infrastructure devices like routers and switches.	Pupils will explore how and why data is collected over time. They will learn about human senses and how computers use sensors to monitor the environment. Pupils will collect and review data, examining data points, data sets, and logging intervals. Towards the end of the unit, they will pose questions and use Microbits to automatically collect the data needed to answer those questions.	Pupils will deepen their understanding of computer science by creating sequences and loops, breaking down problems, and improving their programs to meet specific needs. They will learn to clearly explain their programming choices, conduct fair tests, and develop their skills in generating and debugging different solutions.	Pupils will explore various animation examples and techniques, then create their own stop-motion animations using 2D paper cutouts and backgrounds with the iMotion app. They will export their animations to iMovie to add titles and narration and learn about different platforms where they can share their work.	Learners will explore how to move a sprite in different directions and use it to navigate a maze. They will learn to draw with sprites using pen blocks, change line size and colour, and design their own maze tracing program. They will also practise solving problems and debugging their programs to ensure they work properly.	Pupils will explore Pop Art, a vibrant art movement known for its bold colours, graphic lines, and popular culture elements. They will use digital tools to create their own Pop Art-inspired artworks and will learn how to use the camera app to capture and enhance high-quality portraits as part of their creative process.
	- Chromebooks  Success criteria	- Microbits	- <u>Lego Spike lessons</u> - Chromebooks	Linked to Iron Man in English	- Scratch - iPad / Chromebook - Scratch pupil accounts	- iPencil. - iPad - Camera

different.	es to see how they are bout computer networks and like routers and switches help m.	Success criteria I can understand why and how data is collected over time. I can learn about human senses and how computers use sensors to monitor the environment. I can collect and review data, looking at data points, data sets, and logging intervals. I can use a computer to analyse data and find answers to questions. I can use MicroBits to automatically collect data to answer specific questions.	I can create sequences and loops in my programs. I can break down big problems into smaller steps to solve them. I can make changes to my programs so they work the way I want them to. I can explain why I made certain choices when making my program. I can test my programs fairly and debug them.	Success criteria  I can create stop-motion animations using paper cutouts and backgrounds with the iMotion app. I can export my animations to iMovie and add titles and narration. I can explore different platforms where my animations can be shared. I can use examples of animations to inspire my own work. I can use different techniques to improve my animations based on my topic	I can use a sprite to navigate through a maze I can use pen blocks to draw lines with sprites and change their size and colour. I can design and code my own maze tracing program. I can solve problems and debug my program to make sure it works correctly.	I can use the camera app to take clear and high-quality portraits. I can edit my photos to improve their quality and add artistic effects. I can use digital tools to create artwork inspired by Pop Art. I can apply bright colours, bold lines, and graphic patterns to my digital art.
4	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
14	Networks and Digital Literacy he Internet	Computer Science and Digital Literacy Repetition and loops	IT: Creativity and Digital Literacy  Motion Graphic	IT: Media and Digital Literacy  Creating a website	Computer Science and Digital Literacy Hopscotch Games	IT: Data and Digital Literacy Branching Databases
internet is networks to be secure that the W part of the practice of about con what they create. The online con reliability of impact of a Success of I can understood the secure of the	a network of and why it needs to a. They will understand World Wide Web is a e internet and exploring it to learn intent ownership and y can access and ney will also evaluate intent to determine its and understand the false information.	Learners will explore the difference between count-controlled and infinite loops and use this knowledge to enhance existing animations and games through repetition. For their final project, they will design and create a game that incorporates repetition, applying the stages of programming design throughout the process.  - Chromebooks - Scratch  Success criteria I can understand and explain the difference between count-controlled and	Pupils will use iPads and iPencils to draw and animate Shackleton's Journey. They will explore Keynote transitions to create a short motion graphic that illustrates Shackleton's Journey. Pupils will learn how to use different tools and techniques in Keynote to make their animations smooth and engaging.  -iPads - Keynote app  Success criteria I can use an iPad and an iPencil to draw the solar system. I can use Keynote transitions to animate my drawings and create a motion graphic.	Pupils will use Google Sites to create a website about climate changeThey will include external hyperlinks, keep personal information private, and research other websites to design a clear and user-friendly site. Linked to Geography topic: Polar Environments & Climate Change  - Google Sites - Chromebooks  Success criteria I can use Google Sites to create a website that showcases my work on recent topics. I can include projects like Micro Bit coding, Comic Life worksheets, written work, and	Pupils will use Hopscotch to create a Spiral Draw game and then build a Crossy Road game by adding code to multiple Sprites. They will learn to debug and refine their code, enhance their game with roads, landscapes, and sounds, and create a two-player mode with separate controllers.  -iPads - Hopscotch app  Success criteria  I can use Hopscotch to create a Spiral Draw game. I can add code to Sprites to build and	Learners will explore what a branching database is and how to create one by using yes/no questions to sort objects based on their attributes. They will build both physical and digital branching databases, and design an identification tool to test and refine. They will also consider how branching databases are used in real-world situations.  - Chromebooks - J2E  Success criteria I can understand and create a branching database using yes/no questions.

I can explore the World Wide Web to learn I can design and create a game that uses I can explain how I used the tools to I can add external hyperlinks to my I can debug and refine my code to make I can build both physical and on-screen about who owns content and what I can repetition effectively. animate the solar system. website. sure it works correctly. branching databases. access and create. I can solve problems and debug my code I can present my animation and describe I can keep personal information private I can add roads, landscapes, and sounds I can design and test an identification tool I can evaluate online content to decide if to make sure my game works as intended. how the planets and other elements while working on my website. using a branching database. to improve my game. it is honest, accurate, or reliable. I can research other websites to learn I can create a two-player mode with I can use tools like Chrome Music Lab to what makes them effective and use this separate controllers in my game. see what can be made on the World Wide IT: Creativity and Digital Literacy knowledge to make my website easy to Web. navigate. **Motion Graphic** Pupils will use iPads and iPencils to draw and animate the solar system. They will explore Keynote transitions to create a short motion graphic that illustrates the movement of planets and other celestial bodies. Pupils will learn how to use different tools and techniques in Keynote to make their animations smooth and engaging. -iPads - Keynote app Success criteria I can use an iPad and an iPencil to draw the solar system. I can use Keynote transitions to animate my drawings and create a motion graphic. I can apply different Keynote tools and techniques to make my animation smooth. I can explain how I used the tools to animate the solar system. I can present my animation and describe how the planets and other elements move

Autumn 1 Autumn 2 Spring 1 Spring 2 Summer 2 Summer 1 Computer Networks and Digital Literacy Digital Literacy Creativity Computer Science and Digital Literacy IT: Data and Digital Literacy Computer Science and Digital Literacy IT: Media and Digital Literacy Y5 Intro to iPad & iPencils Commands, Functions Flat-file databases Selection in quizzes Systems and **Podcasting** searching / Pop Art and Loops This unit looks at how a flat-file Pupils will learn how to create Pupils develop their knowledge database can be used to their own podcasts. They will Learners will explore how of selection by revisiting how Pupils will learn to use the Pupils will explore how to give organise data in records. Pupils explore how to plan their computer systems work and conditions can be used in iPencil to create detailed commands to make things use tools within a database to podcast, record their voice, how information is transferred programs and then learning digital drawings on their iPads, happen in their programs, order and answer auestions edit their audio, and share their between different systems and how the If... Then... Else exploring various drawing tools create their own functions to about data. They create finished podcast with others. devices. They will examine structure can be used to select and techniques. In the 'Pop Art' organise their code and use araphs and charts from their This lesson helps pupils develop both small-scale and largedifferent outcomes depending lesson, they will use their iPencil loops to make actions repeat data to help solve problems. their storytelling skills and learn scale systems, explaining their on whether a condition is true skills to create vibrant, Pop Artwithout rewriting them. These They use a real-life database about the basics of audio input, output, and processing or false. They represent this inspired pieces, applying bold skills will help them solve to answer a question, and production. components. Additionally, understanding in algorithms colours and patterns to their problems more effectively. present their work to others. learners will discover how and then by constructing digital artwork to mimic the iPad search engines find and rank programs using the Scratch style of famous Pop artists. - iPad Chromebook Garageband information on the World Wide programming environment. - Swift Playgrounds app Web and compare different They use their knowledge of · iPad - Apple store visit? Success criteria search engines. writing programs and using Success criteria iPencil I can use a database to organise Success criteria I can plan what I want to say in my selection to control outcomes information into records. **Chromebook** Camera app podcast and decide how to organise it. I can make a character move or do to design a quiz in response to I can use tools within the database to sort something by giving clear instructions. I can record my voice clearly and make Range of search engines Photos app and find answers to questions about the a given task and implement it sure my podcast sounds good. I can see that commands tell the data. I can use editing tools to improve my computer what to do, like steps in a as a program. Success criteria I can create graphs and charts from my Success criteria podcast and fix any mistakes. recipe. data to help solve problems. I can understand how computer systems I can use the iPencil to draw detailed I can share my finished podcast with others I can make instructions that I can use I can use a real-life database to find work and how information moves pictures on my iPad. Chromebooks / iPads and tell them about what I made. again by creating a function. answers and present my findings to others. between devices. I can explore different drawing tools and I can use functions to keep my code Scratch I can explain the input, output, and techniques to improve my digital art. simple and neat. process of different real-world systems. I can create digital drawings by using the I can use loops to make things happen I can learn how search engines work and features of the iPencil effectively Success criteria multiple times without rewriting them. how they find and rank information on the I can apply bold colours and patterns to I can see that loops help my programs I can use conditions in my programs to my artwork to mimic the Pop Art style. repeat actions quickly. control outcomes. I can compare different search engines to I can use my creativity to design vibrant I can understand and use the If... Then... see how they work. and eye-catching digital art. Else structure to choose different outcomes based on whether a condition is true or false I can represent my understanding of conditions and selection in algorithms. I can create programs using Scratch to apply selection and control outcomes. I can design and implement a quiz using selection to control how the program responds to different answers.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Y6	Autumn 1  Computer Networks and Digital Literacy Communication and collaboration  Explore how data is transferred over the internet, starting with addressing and the structure of data packets. Then learn how the internet supports online communication and collaboration by completing shared projects and evaluating different communication methods. Lastly, focus on responsible online communication, considering	Autumn 2  IT: Data and Digital Literacy Spreadsheets  Pupils are introduced to spreadsheets, helping them organise data into columns and rows to create their own datasets. They will learn the importance of formatting for calculations, apply formulas to multiple cells, and use spreadsheets to plan an event and answer questions. Finally, pupils will create charts to evaluate their results against the questions posed.	Spring 1  Computer Science and Digital Literacy Variables and Conditional Code  Pupils learn how to store information in variables and use conditional statements to make decisions in their programs. By understanding these concepts, they can create more dynamic and interactive projects, where the program changes based on different inputs or conditions iPads	Spring 2  IT: Creative and Digital Literacy Green screen  Pupils will explore short documentary films and news reports online for inspiration before working in pairs to create their own news-style report on a current topic. They will save images from Google, film themselves using a green screen, and edit their videos in iMovie, adding title credits and music to finalise their report.  - iPad	. Computer Science and Digital Literacy  Al Lessons  Pupils are introduced to artificial intelligence (AI) and its impact on everyday life, focusing on its benefits, limitations, and ethical considerations. Pupils will explore AI through hands-on activities, learning about decision-making, data privacy, and online safety, while developing digital literacy skills aligned with the KS2	Summer 2  IT: Media and Digital Literacy Digital yearbook  Pupils will collaborate to create an end-of-year school book using Canva. They will take, edit, and curate selected photos of each other and their school environment, conduct interviews with key staff members, and compile these elements into a fun and memorable keepsake that reflects their school year.  - iPad - Chromebooks
	what is appropriate to share on the internet.  - Chromebooks  Success criteria  I can explain how data is transferred over the internet. I can understand the role of addressing and data packets in online communication. I can collaborate on a shared project using the internet. I can evaluate different methods of online communication. I can communicate responsibly by knowing what should and should not be shared online.	- Chromebooks - Google sheets  Success criteria I can organise data into columns and rows in a spreadsheet. I can format data to support calculations. I can use formulas to calculate data in a spreadsheet. I can apply formulas to multiple cells and use them to solve problems. I can create charts and evaluate results based on my data	-Swift Playgrounds  Success criteria I can use variables to store information in my program. I can change what happens in my program by using conditional statements. I can make my program respond to different situations or inputs. I can create more interactive projects by using variables and conditions.	- iMovie - Green screen  Success criteria I can look at examples of documentaries and news reports to get ideas for my own project. I can create a news-style report based on my current topic. I can save images and add them to my project in iMovie. I can film myself in front of a green screen and appear in my project. I can add title credits and music to my video using iMovie.	Computing curriculum.  - Chromebooks  Success criteria  I can understand what AI is and how it's used in everyday life. I can recognise the benefits and limitations of AI. I can create simple AI systems to see how they work. I can understand how AI affects decision-making and data privacy. I can practise safe online behaviour and protect my personal data.	- Chromebooks - Google Docs - Canva (Education accounts)  Success criteria I can work together with my classmates to plan and organise our yearbook project. I can take and edit photos of each other and our school to include in the book. I can interview key staff members to gather meaningful content for our yearbook. I can make design choices in Canva to create an appealing layout for our yearbook. I can reflect on our teamwork and contributions to create a fun and memorable keepsake.

# Computing Progression Map 2024 / 25

	PSED, Understanding the world	Science and Geography, PSED	Geography and science, PSED	Science, Maths, English, D&T, PSED	Science and Geography, Understanding the world, PSED	Maths, D&T, Understanding the world, PSED
Rec	Early Years Links: : PSED, Understanding the world	Early Years Links: Science and Geography, PSED	Early Years Links: Geography and science, PSED	Curriculum Links: Science, Maths, English, D&T, PSED	Early Years Links: Science and Geography, Understanding the world, PSED	Early Years Links: Maths, D&T, Understanding the world, PSED
	Online Safety	Awesome Autumn /	Winter Warmers /	Boats Ahoy / Use of	Springtime /	New and old tech
	Unplugged computing activity:	Online safety	Online Safety	devices and	Data handling / New	/ Intro to Beebots
	Children will explore how	Unplugged computing activity:	unplugged computing activity:	applications	and old tech	
	bodies move and grow. They will use provided resources to learn about body parts and create simple routines of movements using algorithms.	Autumn themed activities which see the children explore patterns in Garlands Galore, create a leaf labyrinth and make Pumpkin Soup using computational thinking skills.	Snowmen scarves and patterns, creating igloos and bird feeders- all take centre stage in our three winter themed activities.	Unplugged computing activity: Takes children on a journey of discovery as they investigate boats. Four activities make up this set of resources. Includes different uses of boats, floating and sinking predictions, creating a good boat through exploring designs and role play.	Springtime unplugged computing activity: Spring themed activities see the children make a Rabbit run, create Junk scarecrows and explore sequencing whilst planting seeds.	Range of technology in role play areas. Children identify new and older technology. Children learn how to use technology safely and respectfully. Children are introduced to algorithms and programming using the Beebots
	Computer Networks and DL	Computer Science and DL	Computer Science and DL	IT: Media and DL	IT: Data and Digital Literacy	IT: Creativity and Digital Literacy
Y1	Computer Networks and Digital Literacy	Computer Science and Digital Literacy	Computer Science and Digital Literacy	IT: Media and Digital Literacy	IT: Data and Digital Literacy	IT: Creativity and Digital Literacy
' '	Tech around us	Programmable toys	Controlling animations on	Digital Books	Pictograms	Creating digital art
	Develop your learners' understanding of technology and how it can help them. They will become more familiar with the different components of a computer by developing their keyboard and mouse skills, and also start to consider how to use technology responsibly.	Pupils will program Bee Bots to follow instructions, move in shapes, and navigate obstacles, while developing debugging skills to fix mistakes in their code. They will write simple algorithms, predict and test outcomes, refine their code, and apply their skills using the Bee Bot app on a	Pupils will learn basic coding in Hopscotch by making characters react to sounds, movement, or taps, and use code blocks to draw and create effects like fireworks and sounds.  -Hopscotch	Pupils will learn to safely use search engines, find appropriate images, and enhance their E-book projects with text, sound, photos, and videos. They will also understand the importance of permission when filming, keeping personal information private, and talking to an adult	Pupils will explore the concept of data and how to collect it using tally charts. They will use attributes to organise data and present it through pictograms and block diagrams, then use the data to answer questions.  - Chromebooks - J2E	Learners will create digital artwork inspired by famous artists like Matisse, Picasso, Mondrian, and Julian Opie using iPads and the Brushes Redux app.  - iPads - Brushes Redux
	,	screen.	-iPads		Success Criteria	Success Criteria

- Chromebook
- Code.org
- Painz.app

responsibly.

#### Success criteria

I can learn about how technology helps us in different ways.

I can get to know the different parts of a computer and how they work. I can practise using the keyboard and

mouse. I can think about how to use technology

- Beebots
- BeeBot App
- · iPads

#### Success criteria

I can program Bee Bots to follow instructions and move in specific shapes. I can navigate Bee Bots around obstacles

I can identify and fix mistakes (debua) in my Bee Bot programs.

I can write simple algorithms to control the Bee Bots and predict what will happen. I can test my code, make adjustments, and refine it based on the results. I can use the Bee Bot app to practise my coding skills and apply what I have learned on a screen.

#### Success criteria

I can make characters move, jump, or spin using sounds, shaking, or tapping the iPad. I can use code blocks to make a character draw or create effects like fireworks and sounds.

I can understand that I can use this app to make simple or complex games.

if they encounter anythina upsetting online.

- iPads
- Book Creator App
- Safari App
- Camera App

#### Success Criteria

I can use the internet safely to find pictures for my project.

I can add words, sounds, and pictures to my work.

I can ask before taking a photo or video of someone

I can keep my personal information safe when sharing my work.

I can tell an adult if I see something online that makes me feel upset or unsure.

I can understand and explain what data means

I can collect data and record it using a tally chart.

I can use the term 'attribute' to help oraanise data.

I can present data using pictograms and block diagrams.

I can analyse and answer questions based on the data presented.

I can make digital pictures inspired by famous artists like Matisse and Picasso. I can use an iPad and the Brushes Redux app to create my artwork I can choose different colours and brushes

to make my picture look how I want.

### **Y2**

Computer Networks and Digital Literacy

## IT around us

How is information technology (IT) being used for good in our lives? With an initial focus on IT in the home, learners explore how IT benefits society in places such as shops, libraries, and hospitals. Whilst discussing the responsible use of technology, and how to make smart choices when using it.

Chromebook

#### Success criteria

I can explain how technology helps us at home and in places like shops, libraries, and hospitals.

I can talk about how technology is useful and benefits us.

I can learn how to use technology safely and make good choices when using it.

#### Computer Science and Digital Literacy

# **Amazing Amusement** Park

This unit introduces your pupils to engineering design skills. They'll learn about the steps that are involved in defining a problem, brainstormina solutions and testing and refining prototypes to improve their ideas. They'll learn observation skills by gathering information about a problem and modifying a solution to meet others' needs.

- Lego Spike kits
- Chromebooks
- Planning

#### Success criteria

I can understand and follow instructions in a sequence to see what happens.

Computer Science and Digital Literacy

# Creating a story

Pupils will use Scratch Junior to make a character (sprite) move on a background (stage) using code. They will use pre-made sprites and draw their own to create a simple animated story.

- iPads
- Scratch Jr

#### Success criteria

I can create and test simple algorithms to make sure they work and find and fix buas in my programs.

I can use Scratch Junior to code a character to move on a background. I can choose and draw my own sprites. I can use pre-made and my own sprites to create a simple animated story. I can build and tell a story using Scratch Junior.

#### IT: Media and Digital Literacy

# Puppet Pals

Pupils will use Puppet Pals to create a story related to their topic of study, using cut-out photographs of themselves as animated characters alongside cartoon characters and backgrounds. They will design a simple storyboard, add narration, and export their film as a .mov file, gaining a basic understanding of how cartoons and films are made.

- iPads
- Puppet Pal App

#### Success criteria

I can use Puppet Pals to create a story related to my topic of study. I can use cut-out photographs of myself and cartoon characters to make my story come to life.

### IT: Data and Digital Literacy

# Recording bug hunt data

Pupils will collect data about bugs, linked to the science topic of living things and their habitats. They will use iPads to take photos of mini-beasts and use the zoom function to identify their features. The collected data will be organised and presented using i2e charts.

- · iPad
- i2E charts
- Chromebooks

#### Success criteria

I can use an iPad to take photos of minibeasts.

I can use the zoom function to see and identify the features of mini-beasts. I can collect and organise data about bugs using j2e charts.

### IT: Creativity and Digital Literacy

# Taking, selecting and editing digital images

Learners will use the iPad camera app to capture photos and gain hands-on experience with taking, editing, and improving their own pictures. They will then use their new skills to understand that not all images they see are real, sparking their curiosity about the world of digital images.

- iPad
- Camera app
- iPhotos
- Teach computing L4 and 5

#### Success criteria

I can use the camera app on the iPad to capture photographs. I can take, edit, and improve my own

I can understand that not all images I see

Y3	Computer Networks and Digital Literacy  Connecting  computers	I can use commands in different orders to find out how it changes the outcome. I can design simple algorithms and test them to see if they work. I can find and fix bugs in my programs.  Computer Science and Digital Literacy  Events and actions in programs	Computer Science and Digital Literacy Crazy Carnival Games	I can add extra characters and backgrounds from Google Images to illustrate my topic. I can create a simple storyboard to plan my story and add narration to my film. I can save my film as a Puppet Pals file and export it as a .mov file.  IT: Media and Digital Literacy  Stop Motion  Animation	IT: Data and Digital Literacy Branching Databases	IT: Creativity and Digital Literacy Using Digital Pencil & Pop Art
	Challenge your learners to develop their understanding of digital devices, with an initial focus on inputs, processes, and outputs. Start by comparing digital and non-digital devices, before introducing them to computer networks that include network infrastructure devices like routers and switches.  - Chromebooks  Success criteria I can understand how digital devices work by learning about inputs, processes, and	Learners will explore how to move a sprite in different directions and use it to navigate a maze. They will learn to draw with sprites using pen blocks, change line size and colour, and design their own maze tracing program. They will also practise solving problems and debugging their programs to ensure they work properly.  - Scratch - iPad / Chromebook - Scratch pupil accounts	Pupils will deepen their understanding of computer science by creating sequences and loops, breaking down problems, and improving their programs to meet specific needs. They will learn to clearly explain their programming choices, conduct fair tests, and develop their skills in generating and debugging different solutions.  - Lego Spike - Lego Spike lessons - Chromebooks	Pupils will explore various animation examples and techniques, then create their own stop-motion animations using 2D paper cutouts and backgrounds with the iMotion app. They will export their animations to iMovie to add titles and narration and learn about different platforms where they can share their work.  - iMotion - iMovie - iPads	Learners will explore what a branching database is and how to create one by using yes/no questions to sort objects based on their attributes. They will build both physical and digital branching databases, and design an identification tool to test and refine. They will also consider how branching databases are used in real-world situations.  - Chromebooks - J2E  Success criteria Lan understand and create a branching	Pupils will explore Pop Art, a vibrant art movement known for its bold colours, graphic lines, and popular culture elements. They will use digital tools to create their own Pop Art-inspired artworks and will learn how to use the camera app to capture and enhance high-quality portraits as part of their creative process.  - iPencil iPad - Camera - Photo app
	outputs. I can compare digital devices with non-digital devices to see how they are different. I can learn about computer networks and how devices like routers and switches help connect them.	Success criteria I can move a sprite in four directions I can use a sprite to navigate through a maze I can use pen blocks to draw lines with sprites and change their size and colour. I can design and code my own maze tracing program. I can solve problems and debug my program to make sure it works correctly.	Success criteria I can create sequences and loops in my programs. I can break down big problems into smaller steps to solve them. I can make changes to my programs so they work the way I want them to. I can explain why I made certain choices when making my program. I can test my programs fairly and debug them.	Success criteria  I can create stop-motion animations using paper cutouts and backgrounds with the iMotion app. I can export my animations to iMovie and add titles and narration. I can explore different platforms where my animations can be shared. I can use examples of animations to inspire my own work. I can use different techniques to improve	database using yes/no questions. I can use attributes to sort objects into groups. I can build both physical and on-screen branching databases. I can design and test an identification tool using a branching database.	Success criteria I can use the camera app to take clear and high-quality portraits. I can edit my photos to improve their quality and add artistic effects. I can use digital tools to create artwork inspired by Pop Art. I can apply bright colours, bold lines, and graphic patterns to my digital art.

my animations based on my topic

**Y4** 

Computer Networks and Digital Literacy

### The Internet

Learners will explore how the internet is a network of networks and why it needs to be secure. They will understand that the World Wide Web is a part of the internet and practice exploring it to learn about content ownership and what they can access and create. They will also evaluate online content to determine its reliability and understand the impact of false information.

- Chromebooks

#### Success criteria

I can understand that the internet is made up of many connected networks that need to be secure.

I can explore the World Wide Web to learn about who owns content and what I can access and create

I can evaluate online content to decide if it is honest, accurate, or reliable.
I can use tools like Chrome Music Lab to see what can be made on the World Wide

cy Computer Science and Digital Literacy

### **Hopscotch Games**

Pupils will use Hopscotch to create a Spiral Draw game and then build a Crossy Road game by adding code to multiple Sprites. They will learn to debug and refine their code, enhance their game with roads, landscapes, and sounds, and create a two-player mode with separate controllers.

-iPads

- Hopscotch app

#### Success criteria

I can use Hopscotch to create a Spiral Draw game.

I can add code to Sprites to build and enhance a Crossy Road game. I can debug and refine my code to make sure it works correctly.

I can add roads, landscapes, and sounds to improve my game.

I can create a two-player mode with separate controllers in my game.

Computer Science and Digital Literacy

## Repetition and loops

Learners will explore the difference between count-controlled and infinite loops and use this knowledge to enhance existing animations and games through repetition. For their final project, they will design and create a game that incorporates repetition, applying the stages of programming design throughout the process.

#### Success criteria

I can understand and explain the difference between count-controlled and infinite loops.

I can modify animations and games by using repetition to improve them.

I can design and create a game that uses repetition effectively.

I can solve problems and debug my code to make sure my game works as intended.

IT: Media and Digital Literacy

# Creating a website

Pupils will use Google Sites to create a website featuring their recent work, including Microbit coding projects, Comic Life worksheets, and their own written and visual content. They will include external hyperlinks, keep personal information private, and research other websites to design a clear and user-friendly site.

- Google Sites
- Chromebooks

#### Success criteria

I can use Google Sites to create a website that showcases my work on recent topics. I can include projects like Micro Bit coding, Comic Life worksheets, written work, and drawings on my website.

I can add external hyperlinks to my website.

I can keep personal information private while working on my website.

I can research other websites to learn what makes them effective and use this knowledge to make my website easy to navigate.

IT: Data and Digital Literacy

# **Datalogging**

Pupils will explore how and why data is collected over time. They will learn about human senses and how computers use sensors to monitor the environment. Pupils will collect and review data, examining data points, data sets, and logging intervals. Towards the end of the unit, they will pose questions and use Microbits to automatically collect the data needed to answer those auestions.

- Microbits
- Chromebooks

#### Success criteria

I can understand why and how data is collected over time.

I can learn about human senses and how computers use sensors to monitor the environment.

I can collect and review data, looking at data points, data sets, and logging intervals.

I can use a computer to analyse data and find answers to questions.

I can use MicroBits to automatically collect data to answer specific questions.

IT: Creativity and Digital Literacy

# **Motion Graphic**

Pupils will use iPads and iPencils to draw and animate the solar system. They will explore Keynote transitions to create a short motion graphic that illustrates the movement of planets and other celestial bodies. Pupils will learn how to use different tools and techniques in Keynote to make their animations smooth and engaging.

-iPads

- Keynote app

#### Success criteria

I can use an iPad and an iPencil to draw the solar system.

I can use Keynote transitions to animate my drawings and create a motion graphic. I can apply different Keynote tools and techniques to make my animation smooth. I can explain how I used the tools to animate the solar system.

I can present my animation and describe how the planets and other elements move.

**Y5** 

Computer Networks and Digital Literacy

# Systems and searching

Learners will explore how computer systems work and how information is transferred between different systems and devices. They will examine both small-scale and largescale systems, explaining their input, output, and processing components. Additionally, learners will discover how search engines find and rank information on the World Wide Web and compare different search engines.

- Chromebook
- Range of search engines

#### Success criteria

I can understand how computer systems work and how information moves between devices.

I can explain the input, output, and process of different real-world systems. I can learn how search engines work and how they find and rank information on the web.

I can compare different search engines to see how they work.

Computer Science and Digital Literacy

# Selection in quizzes

Pupils develop their knowledge of selection by revisiting how conditions can be used in programs and then learning how the If... Then... Else structure can be used to select different outcomes depending on whether a condition is true or false. They represent this understanding in algorithms and then by constructing programs using the Scratch programming environment. They use their knowledge of writing programs and using selection to control outcomes to design a quiz in response to a given task and implement it as a program.

- Chromebooks / iPads
- Scratch

#### Success criteria

I can use conditions in my programs to control outcomes

I can understand and use the If... Then.. Flse structure to choose different outcomes based on whether a condition is true or false.

I can represent my understanding of conditions and selection in algorithms. I can create programs using Scratch to apply selection and control outcomes. I can design and implement a quiz using selection to control how the program responds to different answers.

Computer Science and Digital Literacy

# Commands, Functions and Loops

Pupils will explore how to give commands to make things happen in their programs, create their own functions to organise their code and use loops to make actions repeat without rewriting them. These skills will help them solve problems more effectively.

- · iPad
- Swift Playgrounds app
- Apple store visit?

#### Success criteria

simple and neat.

I can make a character move or do something by giving clear instructions. I can see that commands tell the computer what to do, like steps in a recipe.

I can make instructions that I can use again by creating a function. I can use functions to keep my code

I can use loops to make things happen multiple times without rewriting them. I can see that loops help my programs repeat actions quickly

IT: Media and Digital Literacy

## **Podcasting**

Pupils will learn how to create their own podcasts. They will explore how to plan their podcast, record their voice. edit their audio, and share their finished podcast with others. This lesson helps pupils develop their storytelling skills and learn about the basics of audio production.

- iPad
- Garageband

#### Success criteria

podcast and decide how to organise it. I can record my voice clearly and make sure my podcast sounds good. I can use editing tools to improve my podcast and fix any mistakes. I can share my finished podcast with others and tell them about what I made.

I can plan what I want to say in my

IT: Data and Digital Literacy

## Flat-file databases

This unit looks at how a flat-file database can be used to organise data in records. Pupils use tools within a database to order and answer auestions about data. They create graphs and charts from their data to help solve problems. They use a real-life database to answer a question, and present their work to others

Chromebook

#### Success criteria

I can use a database to organise information into records.

I can use tools within the database to sort and find answers to questions about the

I can create graphs and charts from my data to help solve problems

I can use a real-life database to find answers and present my findings to others. Digital Literacy Creativity

# Intro to iPad & iPencils / Pop Art

Pupils will learn to use the iPencil to create detailed digital drawings on their iPads, exploring various drawing tools and techniques. In the 'Pop Art' lesson, they will use their iPencil skills to create vibrant, Pop Artinspired pieces, applying bold colours and patterns to their digital artwork to mimic the style of famous Pop artists.

- iPad
- **iPencil**
- Camera app
- Photos app

#### Success criteria

pictures on my iPad. I can explore different drawing tools and techniques to improve my digital art. I can create digital drawings by using the features of the iPencil effectively I can apply bold colours and patterns to my artwork to mimic the Pop Art style. I can use my creativity to design vibrant

I can use the iPencil to draw detailed

and eye-catching digital art.

**Y6** 

Computer Networks and Digital Literacy

Communication and collaboration

Computer Science and Digital Literacy

Variables and **Conditional Code**  Computer Science and Digital Literacy

Al Lessons

IT: Media and Digital Literacy

Digital yearbook

IT: Data and Digital Literacy

**Spreadsheets** 

IT: Creativity and Digital Literacy

Green screen (iMovie)

Explore how data is transferred over the internet, starting with addressing and the structure of data packets. Then learn how the internet supports online communication and collaboration by completing shared projects and evaluating different communication methods. Lastly, focus on responsible online communication, considering what is appropriate to share on the internet.

- Chromebooks

#### Success criteria

I can explain how data is transferred over the internet.

I can understand the role of addressing and data packets in online communication.

I can collaborate on a shared project using the internet.

I can evaluate different methods of online communication.

I can communicate responsibly by knowing what should and should not be shared online. Pupils learn how to store information in variables and use conditional statements to make decisions in their programs. By understanding these concepts, they can create more dynamic and interactive projects, where the program changes based on different inputs or conditions.

- iPads

-Swift Playgrounds

#### Success criteria

I can use variables to store information in my program.

I can change what happens in my program by using conditional statements. I can make my program respond to different situations or inputs.

I can create more interactive projects by using variables and conditions.

Pupils are introduced to artificial intelligence (AI) and its impact on everyday life, focusing on its benefits, limitations, and ethical considerations. Pupils will explore AI through hands-on activities, learning about decision-making, data privacy, and online safety, while developing digital literacy skills aligned with the KS2 Computing curriculum.

- Chromebooks

#### Success criteria

I can understand what AI is and how it's used in everyday life.

I can recognise the benefits and limitations of AI.

I can create simple AI systems to see how they work. I can understand how AI affects decision-

making and data privacy.

I can practise safe online behaviour and protect my personal data.

Pupils will collaborate to create an end-of-year school book using Canva. They will take, edit, and curate selected photos of each other and their school environment, conduct interviews with key staff members, and compile these elements into a fun and memorable keepsake that reflects their school year.

- iPad
- Chromebooks
- Google Docs
- Canva (Education accounts)

#### Success criteria

I can work together with my classmates to plan and organise our yearbook project.
I can take and edit photos of each other and our school to include in the book.
I can interview key staff members to gather meaningful content for our yearbook.

I can make design choices in Canva to create an appealing layout for our yearbook.

I can reflect on our teamwork and contributions to create a fun and memorable keepsake.

Pupils are introduced to spreadsheets, helping them organise data into columns and rows to create their own datasets. They will learn the importance of formatting for calculations, apply formulas to multiple cells, and use spreadsheets to plan an event and answer questions. Finally, pupils will create charts to evaluate their results against the questions posed.

- Chromebooks
- Google sheets

#### Success criteria

I can organise data into columns and rows in a spreadsheet.

I can format data to support calculations. I can use formulas to calculate data in a spreadsheet.

I can apply formulas to multiple cells and use them to solve problems.

I can create charts and evaluate results based on my data.

Pupils will explore short documentary films and news reports online for inspiration before working in pairs to create their own news-style report on a current topic. They will save images from Google, film themselves using a green screen, and edit their videos in iMovie, adding title credits and music to finalise their report.

- iPad
- iMovie
- Green screen

#### Success criteria

I can look at examples of documentaries and news reports to get ideas for my own project.

I can create a news-style report based on my current topic.

I can save images and add them to my project in iMovie.

I can film myself in front of a green screen and appear in my project.

I can add title credits and music to my video using iMovie.