## **Year One** Topic + Concept Links

Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2	
Digging for Dinosaurs		How Does your Garden Grow?		Are We There Yet?		
Introduce children to code.org to help familiarise them with the Mac Suite, Keyboard and Mouse skills and the basic ideas of coding.  Gradually work through Course A in a semistructured way to ensure all children are able to understand and move at their own pace.	Thinking about how the Great Fire of London started, create an algorithm for something that happened in the bakery. This might be making a sandwich, baking bread or maybe a cake.  Type up these algorithms on the computer and make the connection between instructions and computer code.	Use the iPads to learn about Photography and how we can explore the outside world using technology.  Set the children a series of nature-themed scavenger hunts where they need to go and photograph plants and flowers that meet certain descriptors.  Label a photograph of a plant to show the different parts.	Using iPads, we will enhance the area around us by photographing and then drawing over images of the school site to add more nature through plants, flowers and animals.  Use examples from Oliver Jeffers as inspiration.	Revisit coding on code.org before moving onto using Scratch Jnr on iPads and KUBO Robots to begin to explore hands-on coding experiences.  Discuss how we can write instructions that can have an affect on other things and how a computer won't do anything on its own - it needs to be told what to do.	Use Sphero Robots to create simple algorithms and sets of instructions.  Use directional commands to write programs that will help Sphero complete simple mazes and obstacle courses.	
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## **Year Two** Topic + Concept Links

Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2	
Castles + Guy Fawkes and the Gunpowder Plot		Bees Knees		Commotion in the Ocean		
Coding with code.org. Start children on Course B and work through with whole class input and individual student-led learning.  Highlight and discuss key concepts as we arrive at them and ensure students have a good understanding of what key concepts and ideas mean.	Build a 2D Castle in Keynote using blocks, textures and shapes. Learn about how we can adjust, resize and move objects on a computer and how t copy/paste.  Photograph a place from around the school and then use this as a background for the castles.	Use LEGO WeDo 2.0 to create a series of basic models, finishing with building the Pollinating Bee model.  Use Shapes in Keynote to create different styles of tessellation. Learn about Copy + Paste, Grouping, Rotating etc. Create a honeycomb image using tessellation and bees.  Explore pollinators and pollination using Minecraft Education Edition to become a bee and learn how to create honey.	Use the iPads to create a rich document full of Bee Facts and illustrations, using hexagons to link facts together.  Use the internet safely to research information and use the iPads and Crayons to draw images of Bees and Flowers.	Discuss recycling and what can and can't be recycled. Create a visual document to represent waste being sent to landfill by filling a pyramid shape with non-recyclable objects.  Photograph the children standing next to the pile and use Instant Alpha to superimpose these photos onto the document.	Staying Safe Online. Discuss how we use the internet and what risks there might be.  With the iPads we can start to create informational posters to remind us how to avoid these dangers and stay safe online.	
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# **Year Three** Topic + Concept Links

Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2	
Walk Like an Egyptian		Mine Craft		Raving Rainforests		
Use Tinkercad to design and create 3D Winter Ornaments which will then be printed on the MakerBot 3D Printer before the end of term.  Encourage children to think of bold, interesting designs that work well with the split contrast colour schemes.	Code Sphero Robots to complete Egyptian Adventures. Hieroglyphics, River Nile, Gods and Goddesses etc.  Work in small teams to share roles and responsibilities so that everyone has an equal chance to code, organise and document the Sphero's activities.	Online Safety with Be Internet Legends.  Introduce the five areas of BIL and begin to have honest and open discussions about how we use the internet and how to ensure we stay safe online.  Discuss what the internet is and how it works - and why this can be both a good and a bad thing in terms of how we stay safe.	Hour of Code: Minecraft Edition  Reintroduce Scratch and begin to explore different blocks of code and what we can build with them. Learn about algorithms, repeating loops and more.	Connect Micro:Bits to Scratch and learn about how we can use these as input and output devices.  Create a series of programs which use Input, Output and then Sensors to affect the code on screen.  Discuss how sensors can be used to measure changes in the world around us, such as in the rainforest.	AR Rainforest: use Keynote and AR Makr to research, plan and create an Augmented Reality exploration through a rainforest.  Students can draw their own elements of the rainforest using Logitech Crayons which will then be used in their AR experiences.	
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#### **Year Four** Topic + Concept Links

Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2	
Rampaging Romans		Magic Matters		Earthquakes + Explosions		
Create an animation of a Roman Temple in Keynote by learning about shapes, symbols and Magic Move.  Research facts about a Roman Emperor and add these to the animations we created.	Online Safety with Be Internet Legends.  Follow on from the learning started in Year 3 by taking a deeper dive into the five areas of Be Internet Legends and encourage rich, honest conversations about how these might affect us when we're using the internet.	Use LEGO WeDo 2.0 and Scratch to invent, create and program robots to fulfil a series of challenges.  These robot inventions will complete certain activities using Scratch coding.	Use the iPads to explore Drawing and Photography. Create a piece of Art Text and a Photo Collage around the theme of inventions and the future.	Use iMovie or Clips to record a News Report from the scene of either an Earthquake or an Explosion. Research facts online and write a script.  Use Green Screen special effects.	Use Keynote to create an interactive app which shares information about volcanoes and earthquakes around the world. Focus on facts and data linked to each location.  Discuss how to research data, images etc and how you know what information is reliable and what isn't.	
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## **Year Five** Topic + Concept Links

Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2	
The Stone Age		May the Force Be With You		Conservation Conversation		
Recreate Stone Age Cave Paintings using Sphero Robots. Write code to move the Sphero around the shape of a chosen Stone Age Symbol and then use paint to create our own modern take on Stone Age art.	How does the Internet work? How does this differ from other methods of communication (i.e. Stone Age times)  Online Safety with Be Internet Legends.	Create an Augmented Reality Documentary about our Solar System using AR Makr, Keynote and Clips.  Astro-Pi Coding Challenge.	Create a Podcast Interview with an Alien. Use the internet to research facts and write a script, then record in GarageBand with Sound Effects and Editing.  Design Cover Artwork and learn about Importing/Exporting Files.	Create a Better Planet animations. [ECC Drawing: Motion Graphics chapter]. Design an animation to improve the Earth as it moves across the screen.	Use Scratch to create interactive apps and games to help people make good choices to protect our environment for the future.  Use Micro:Bits, LEGO WeDo 2.0 and Scratch to create programs which use sensors to help us measure climate change.	
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## **Year Six** Topic + Concept Links

Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2		
Wartime Britain		Light It Up		The World Is Your Oyster			
The History of Computing including Codebreaking, Alan Turing and Bletchley Park. Consider how this influences modern computers and encryption.  What is a computer? Build one from its component parts.	Coding with Swift Playgrounds and Sphero.  Learn the basics of Swift Coding using the Everyone Can Code activities. Take this further by controlling Sphero Robots in Swift Playgrounds.	Use LEGO WeDo 2.0 and Spike Prime Robotics to create robots that use light in different ways.  Use Light Sensors to activate movements.  Use Sphero and iPads to plan and create long exposure images using light trails.	Online Safety with Be Internet Legends.  Recap previous years learning and design and create a '6th Pillar' to teach others about being safe online.  Design a character, poster and game for this 6th Pillar.	Remix popular songs and use Live Loops in GarageBand to create our own songs and soundtracks.  Begin learning the basics of Video Editing using iMovie and bring in our GarageBand songs as Soundtracks.	Video Editing and Special Effects. [ECC Video: Special Effects chapter] Learn to use Green Screen, Jump Cuts, Reverse Footage, Stop Motion and other special effects to create a mini 'End of Penpol' movie.  Learn what types of content can and can't be shared safely and learn techniques to share in a more safe way.		
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