



Computing Curriculum Map 2017/18

		Topic	At School	At Home
R	Autumn	Little Computers (CS)	Children will learn all about the importance of computers in our daily lives. In this activity, children will begin to learn how to use the computers in their settings and begin to understand what the different parts of a computer are. The children will explore the inside of a computer, Junk Model their own computer and practice basic computer skills using inputs and outputs.	Talk to the children about the different parts of a computer. Discuss the different things that are done at home using the computer.
		Let's Celebrate (DL)	The aim is to teach children about sending their first email and the rules that they should be aware of when communicating digitally.	Talk to the children about what an email is and the speed as to which messages are sent.
	Spring	A is for Algorithm (CS)	The children will be introduced to computational thinking and processes. A popular fairy tale will be broken down into individual elements and then rearranged to show the importance of following a sequence.	Explain that we follow instructions for all sorts of things. Look at recipes. What would happen if we did things in the wrong order.



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		Art Attack (DL)	The children will use a variety of software to create drawings/ digital art of some of their favourite things.	Encourage children to use 'Paint' on laptops/ computers or 'Brushes' on the iPads.
	Summer	Junior Explorers (CS)	This activity is aimed at introducing children to the fact that technology works through a sequence of instructions (algorithms). It introduces the children to directional language and simple programming using the Bee-Bots..	Talk about different directions. Encourage children to walk forwards, backwards and turn.
		Fantastic Tales (DL)	This is a cross curricula activity with links to both Literacy and Art. Children will learn a popular tale and then re-tell the story by producing their own animation.	Read fairy tales at home and encourage children to draw pictures to illustrate.
1	Autumn	Pictures Tell a Thousand Words (DL)	This project will teach children about the main functions and buttons of a digital camera as well as about different shots so children can confidently capture their own shots using both a digital camera and the camera app on an iPad. Finally, the	Encourage children to use cameras at home as well as phones or iPads to take pictures.



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		<p>Our Local Area</p>	<p>children will develop an understanding of using pictures to tell a story.</p> <p>In this computing activity we will be using technology to help us explore our local area. It uses investigative tasks to introduce children to the idea of looking at their local area with the aid of technology. This unit focuses on aspects of local features to support learning about directional language and 3D skills to build amazing structures.</p>	<p>Encourage children to make models at home or use apps at home. E.g Toca boca builder, minecraft.</p> <p>Can they name 3 D shapes.</p> <p>Look at google maps Can children identify the local area? Can they find their house?</p>
Spring	<p>Walking with Dinosaurs (CS)</p> <p>Crazy Creatures (IT, DL)</p>	<p>Children will find out the importance of sequencing and will also become familiar with the term algorithm (a set of instructions).</p> <p>Children will use a simple app on an iPad to reinforce this learning.</p> <p>Throughout this project, children will further develop their understanding of control, directional language and programming.</p>	<p>Talk to children about instructions that are used at home. E.g recipes, playing games etc.</p> <p>Help children to reinforce their understanding of direction. Can they travel forwards, backwards etc.</p>	



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			The project will reinforce children's understanding that instructions need to be given in a correct order and children will be able to give instructions using directional language and numerical units.	
Summer	App Attack - Games Design (CS)		The aim of this activity is to introduce children to the simple concepts of games design as well as notions of sequencing, computational thinking, directional language and problem solving. The children will write and become comfortable with writing simple algorithms and understand the need for algorithms to be precise and accurate.	Ask the children to tell you about the games they play at home. What do they need to do to win/ gain points.
	We are all Connected (CS)		The aim of this activity is to help young children come to terms with how the web works and that we are all connected and contactable via access to the Internet . It will build on previous sessions and knowledge	Talk about what the internet is and the speed that information is sent. How is the internet used at home?



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			allowing the children to develop a better understanding of the Internet	
2	Autumn	<p>You've got mail (CS, IT, DL)</p> <p>Whatever the Weather (IT)</p>	<p>The aim of this activity is to help children explore how they can use email to communicate with real people within their schools, families, and community.</p> <p>This activity will get children looking at data and how it can be presented to allow it to be interpreted. Children will have to gather the data and then select the most appropriate method to display the data they have captured – in graphical format.</p>	<p>Let children watch you sending emails and talk about how important they are.</p> <p>Talk to children about the weather. How many days has it rained? How many days of sunshine?</p>



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Spring	Code-tastic (CS)	The best way for children to learn about computer programs and algorithms is to have a go themselves. This activity lets them use a variety of programming apps/software to give children a practical understanding of how computer programs actually run, how a computer follows a sequence of instructions	Give the children instructions at home. What would happen if those instructions were in the wrong order. Look at instructions in everyday life, recipes, flat pack furniture, playing games etc.
	Super Sci-Fi (IT, DL)	This space inspired project starts by children creating a simple space invader game . The children will then create their own digital graphics that they will export to use in a second game that they will create using advanced settings.	If the children have access to an iPad then let them demonstrate their skills using 'SketchNation.' Children can experiment with drawing pictures on a range of devices.
	Summer	Let's Fix IT (CS)	The children will be challenged to analyse simple computer programs and for them to identify the errors within the code and then find a solution.
	Young Authors	The children will look at how	Talk to the children about how



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		(IT, DL)	technology has advanced over the years. They will research particular pieces of technology that has shaped the current technological world we live in. Once they have captured this information they will produce a book to show what they have learned.	technology has changed over the generations. For example internet, mobile phones. Computers etc. Look for images on line to support this discussion.
3	Autumn	Big Robots (CS)	The project will reinforce children's understanding of directional language and programming. Children are able to understand and explain the meaning of algorithms and the importance of order and accuracy.	Encourage the children to talk about direction. Give them directions to follow including forward, backward, left turn and right turn.
		Get Blogging (CS, IT, DL)	In this project, children learn about how the internet works and how the internet is used for communication . Children will develop an understanding of how wikis work and look at examples of blogs.	Talk to the children about blogging that you may use at home including Facebook. (Children under 13 should not be allowed on Facebook) or Twitter. Explain how they work and the importance of being careful about what is posted.
	Spring	We love Games (CS)	In this Apptivity we will use gaming apps to develop computational thinking skills and develop a simple	Let children play a variety of games and talk about the different elements of each game. Is their different levels?



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		Class Democracy (IT, DL)	<p>program as a final project. Children will identify algorithms used in familiar games.</p> <p>This project begins by introducing the concept of democracY to the children. As the project progresses, children will be asked to create a bill for proposed legislation and create an animation and an endorsement to support their bill.</p>	<p>Do they gain points etc?</p> <p>Talk about how the voting system works. How each candidate would make proposals and the public vote on which they think is the best. Ask children what they would change if they were elected.</p>
Summer	My First Program (CS)		<p>This lesson plan will take you through the necessary steps to create your very first computer game in Scratch. This will involve creating your own sprites/graphics and background images.</p>	<p>Allow children to use 'Scratch' on iPads or on the internet. https://scratch.mit.edu/projects/editor/?tip_bar=home Ask them to teach you how to create sprites.</p>
	We are Publishers (DL)		<p>Children will create an eBook retelling the story of a famous book including illustrations that they will create themselves using Brushes.</p>	<p>Ask your child to tell you their favourite story from when they were younger. Can they remember the main points? Can they draw illustrations to accompany it?</p>



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		<p>Hurray for Hollywood (DL)</p>	<p>player must then guess the number selected. Each guess will be tested to see if it is correct or if the player needs to go higher or lower with their next guess.</p> <p>From this project, children will learn about the key factors in producing good footage. The children will devise their own characters, plot and storyboard before filming their short movie. The children will then import their film clips where they will edit and enhance their footage before sharing their movie with the rest of the class.</p>	<p>Encourage children to use video at home. Can they use editing software (E.g iMovie) to enhance their clips.</p>
Summer		<p>We've got the Power</p>	<p>In this computing activity we will be exploring the power of social media as a force for good. We will ask children to start a Campaign to correct one of the many wrongs in our world and use social media to gain support and gather momentum for their cause.</p>	<p>Talk about how social media can be used for good. To spread good news, to find things that are missing etc. Discuss what shouldn't be put on social media.</p>



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		Heroes	In this computing activity, children will blend creative writing and coding to produce their own interactive animations.	Ask children to show you how to use book creator. Talk about animations. Can children name some animated films. Which is their favourite?
Y5	Autumn	Cars (CS)	This lesson plan will take you through the necessary steps to create a detailed 2 player game that includes racing cars around a track. Depending on the amount of time that you have to work on this project you can get the children to design their own cars or use the graphics supplied with the lesson guide. The first to three laps wins the race.	Allow children to use 'Scratch' on iPads or on the internet. https://scratch.mit.edu/projects/editor/?tip_bar=home Ask them to teach you how to create sprites and backgrounds and give instructions.
		Newsroom (DL)	This project will provide you with a six week lesson plan to guide children in creating their own news report. The children will firstly learn about how news is delivered and the differences between local and national news reports. The project culminates in the children recording their own news	Watch the news together. Talk about the different things that are reported on local and national reports.



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			report.	
Spring	Codebreakers (CS)		A computer uses binary codes to function, it is the fundamental language of a computer. This activity has been developed to introduce children to this concept and how codes can be deciphered. The last activity of this activity involves a 'treasure hunt' type activity where the children will be asked to go round school finding codes they need to decipher.	Look for examples of secret codes online. Can the children find out what binary code is?
	Interactive Art Exhibition (DL)		The aim of this activity is to introduce the amazing world of Augmented Reality (AR) to children. AR is a technology that superimposes a computer-generated image or video on a user's view of the real world. This activity will incorporate the basic use of QR codes and then use more complex AR apps like Aurasma.	Encourage your child to research a famous artist. What information would they want others to know?
Summer	Web Site Designers (CS)		This project will provide you with a six week lesson plan to guide children in creating their own website using free	Look at a range of different websites. Do they look inviting? Who are the target audience? What sort of things



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		<p>Let's change the world: Inventors (CS, DL)</p>	<p>templates from WordPress. The project culminates in the children presenting their website to the rest of the class and providing a rationale behind choosing the content that they have used.</p> <p>This project will take you through the steps to guide children in creating their own animation. The children will firstly be introduced to the concept of creating basic animations by using still images to create a moving scene. Next, the children will film their own animated sequence using props and sets that they have created and will also learn how to edit their final piece.</p>	<p>are on websites?</p> <p>Talk to children about animation and if possible make a flip book. Talk about famous animators e.g Pixar. How are animations made?</p>
Y6	Autumn	<p>Heroes & Villains - Graphics (DL)</p>	<p>This project will take you through the steps to create your own Heroes and Villains style game using the program Scratch. As the hero of the game you will battle against the villain to collect diamonds and destroy each other's health. The aim of the game is to</p>	<p>Allow children to use 'Scratch' on iPads or on the internet. https://scratch.mit.edu/projects/editor/?tip_bar=home Ask them to teach you how to create sprites and backgrounds and give instructions.</p>



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		<p>Let's learn a language (CS)</p>	<p>either be the first to collect 5 diamonds or destroy the villain's health to 0.</p> <p>This unit will build on previous experience of coding using a visual based programming language, such as Scratch. They will begin to experiment with coding using other languages. i.e. writing lines of code as opposed to dragging blocks to build algorithms and programs. The aim of this activity is to introduce children to the world of programming languages, of which there are many.</p>	<p>Ask the children about coding. Can they tell you what code is and why it is important?</p>
Spring		<p>Appy Times Pt 1 (CS)</p>	<p>There is a revolution coming and it is called 'wearable technology' which is clothing incorporating computer and advanced electronic technologies. This wearable technology craze has begun and it's not going to slow down anytime soon. In fact, a new report revealed that wearables will have a major impact</p>	<p>Talk about how technology has developed. What technology would your child develop.</p>



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		<p>Stocks and shares (IT, DL)</p>	<p>on our everyday lives over the next decade. So the children's task is to design a piece of wearable technology that links in with a smart phone app.</p> <p>This activity is designed to give children an understanding of the stock market but more importantly engage them in a task that makes them analyse data, make informed choices, present and critique their decisions. It has been designed to bring together all their 'office' skills and show how they can be used to complement each other.</p>	<p>Talk to children about how shares can be bought and sold and that the price fluctuates. Which shares would children buy if they had money to invest?</p>
Summer	Appy Times Pt 2 (CS)	<p>In this activity we will give children the chance to experiment with the basics of programming and app development using a variety of development platforms and styles of code. Then as an overall plenary they will be asked to compare, contrast and express their thoughts on the different programming styles of</p>	<p>Children can experiment with light bot at home. http://light-bot.com/hoc.html</p>	



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		Young Authors - interactive (IT, DL)	languages. During this project, children will develop a story idea in small groups to create a storyboard . The children will then use Book Creator and Brushes to create their own eBook including text, illustrations and audio.	Ask your child to tell you their favourite story from when they were younger. Can they remember the main points? Can they draw illustrations to accompany it? Experiment with paint packages to create digital art.
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