

Year: 3/4 Subject: Computing PoS: Digital Literacy		Topic Title: Online Safety	Term - Autumn 1	Curriculum - B
Prior Knowledge All children have completed some online safety units of work whether in year 2 or 3. In year 2 children learnt- what is meant by permission, what it means to keep things private, whether they can always believe what they see online, understanding what belongs to them online, online bullying and then understanding how to show respect online. In year 3, children learnt- identity, how to be respectful online, understanding that information is always reliable as information can be changed, why it is important to limit time spent online and how to keep information private online.		Key Vocabulary Self-image, identity, online, internet, online relationships, online reputation, online bullying, responsible, online information, personal information, technology, privacy, security, ownership, copy right.		Outcome Children to create a poster/presentation to explain what they have learnt in the unit.
Future Learning Children will continue this learning in any unit using the internet or devices. Online safety should be recapped at every opportunity. Children will also have internet safety day later in the year. Moving into year 4 children will learn- changing identity, trusting people online, how people’s feelings can be hurt online, sharing information online, online bullying and impacts of spending too much time online. Moving into year 5 children will learn- how to keep digital detail online safe, creating a positive digit footprint, ways to seek help online, understand that information can be manipulated online, age ratings and the sharing of information.		Stimulus Be internet legends game First hand experiences (enrichment) Be internet legends game		World of Work General employment skills for a variety of jobs. Media Computer programmer/ designer Social media influencer.
National Curriculum PoS Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Key Knowledge		Possible evidence	
	<u>Self- image and identity</u> I can explain how people can represent themselves in different ways online <u>Online relationships</u> I can explain what it means to ‘know someone’ online and why this might be different from knowing someone offline. I can explain how someone’s feelings can be hurt by what is said or written online. <u>Online reputation</u> I can explain how to search for information about others online <u>Online Bullying</u> I can describe appropriate ways to behave towards other people online and why this is important. I can give examples of how bullying behaviour could appear online and how someone can get support. <u>Managing Online information</u> I can explain the difference between a ‘belief’, an ‘opinion’ and a ‘fact. and can give examples of how and where they might be shared online, e.g. in videos, memes, posts, news stories etc. <u>Heath, well- being and Lifestyle</u> I can explain why some online activities have age restrictions, why it is important to follow them and know who I can talk to if others pressure me to watch or do something online that makes me feel uncomfortable <u>Privacy and Security</u> I can describe simple strategies for creating and keeping passwords private. I can describe how connected devices can collect and share anyone’s information with others. <u>Copyright and Ownership</u> I can explain why copying someone else’s work from the internet without permission isn’t fair and can explain what problems this might cause.		See project evolve resources. See ‘Be internet legends’ resources.	

Year: 3/4		Subject: Computing		Topic Title: I have the Power		Term - Autumn 2		Curriculum - B			
Prior Knowledge Children in year 2 have looked at presenting information using text ease. They have looked at typing, adding text and information. They have manipulated images and they have manipulated text. The have looked at turning on computers, opening and saving documents and switching off a computer safely. Children in year 3 have used word to present information. In this the children have learnt to type effectively. Adding text, information and images. They have used the internet safely and used that to find images to insert into their document. They have added in the relevant text and looked at how this fits the purpose of the text.						Key Vocabulary PowerPoint, slide, audio, text, image, insert, delete, duplicate, input, open, save, open.			Outcome Powerpoint to show in assembly or to another class.		
Future Learning Children will move onto in 5/6 to look in more detail about effective ways to present information. They will build on and use these skills to create more complex PowerPoints. They will also look at manipulating text and images for a purpose in the webpage creation unit. They also have a spreadsheets unit where they will look at imputing data in order to present the information and data further.						Stimulus PowerPoints from guests. First hand experiences (enrichment) Creating PowerPoints.			World of Work Teacher / Lecturer / Training		
National Curriculum PoS - 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						Key Knowledge			Possible evidence		
						- To recognise how text and images can be used together to convey information. - To consider how different layouts can suit different purposes - To recognise how different font styles and effects are used for particular purposes - To consider the benefits of using a desktop publishing application. <u>Online safety focus:</u> <u>Privacy and Security</u> I can describe simple strategies for creating and keeping passwords private. I can describe how connected devices can collect and share anyone’s information with others. <u>Copyright and Ownership</u> I can explain why copying someone else’s work from the internet without permission isn’t fair and can explain what problems this might cause.			Evaluate already created PowePoints and discuss effectiveness and improvements to them. Plan own PowerPoint to fit the purpose. Evaluate PowerPoint and slides to suit the purpose.		
						Application of Key Skills			Possible evidence		
						- To efficiently manipulate font size, alignment, indents, bold, italics and underlining in typed writing. - Demonstrate how to insert and image into a PowerPoint. - Collect and record and present information in a variety of digital formats, using a range of software/apps. - To add new slides, images, audio and text into a PowerPoint. - Discern when it is best to use technology and where it adds little or no value.			Create slide templates and organise slides with hyperlinks. Add theme, transitions and animation to a presentation. Use action settings on slides. Insert audio and video on to slides. Evaluate slide layout and make improvements based on feedback.		

Year: 3/4		Subject: Computing		Topic Question/Title: Picture Perfect		Term - Spring 1		Curriculum - B			
Prior Knowledge In year 2, children have completed a unit on digital photography. In this they looked at taking photos using different angles, different light and different subject points. In year 3, children will have looked at presenting information. They will have looked at a range of devices and how to use them to create a piece of digital media.						Key Vocabulary Photo, image, edit, open, retrieve, rotate, flip, crop, filters, effects, border, text, retouch.			Outcome Children all to create an image for a photo display in school.		
Future Learning Children will continue to develop their use of devices to create digital media in year 5/6. They will look at webpage creation where they will add and edit their own content. They will also look at video production where the children will use their iPads to create a video for the end of year assembly. They will use different camera angle, to use pan, tilt and zoom and combine filming techniques for a given purpose.						Stimulus Andy Warhol First hand experiences (enrichment) Taking photos.			World of Work Advertising, editor, photographer, designer.		
National Curriculum PoS - 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				Key Knowledge				Possible evidence			
				- To recognise that digital images can be manipulated - To recognise that images can be changed for different purposes - To use the most appropriate tool for a particular purpose - To recognise that not all images are real - To consider the impact of changes made on the quality of the image <u>Online safety focus:</u> <u>Managing Online information</u> I can explain the difference between a ‘belief’, an ‘opinion’ and a ‘fact. and can give examples of how and where they might be shared online, e.g. in videos, memes, posts, news stories etc.				In this unit, children will look at photos and editing them to meet a purpose. They will look at already edited photos and evaluate them. They will then use a variety of different skills in order to edit them to meet the purpose. Children will then use some different photos to edit them to create a piece of artwork. Children are then to evaluate their photos and explain how they created them.			
				Application of Key Skills				Possible evidence			
				- To use a computer to (further) manipulate images - To open/retrieve an image - To arrange (rotate, flip) - To crop and cut out a part - To adjust colours, apply filters and add effects - To retouch and reuse. - To draw - To add an element (e.g., a border) and text.				Children will explore when we need to rotate and crop an image as well as how to use an image editor to make these changes. Learners will then discuss image composition. Children will choose appropriate effects to fit a scenario and explain how they made their choices. They will then edit the images using different effects to suit two different scenarios. Children will learn how to use different tools to select areas of an image. Learners then use copy and paste within one image and between two images to produce a combined image. Children then to put all of this learning together and choose from a selection of images, open them and edit them to create their own project.			

Year:3/4 Subject: Computing PoS: Information Technology		Topic Question/Title: Lights, Camera, Action!	Term - Spring 2	Curriculum - B 
<u>Prior Knowledge</u> In year 1/2 children will have had a unit on taking photos. They will have looked at what makes a good photo, how to take a photo and also evaluated their photos. In year 3, children will have looked at presenting information. They will have looked at a range of devices and how to use them to create a piece of digital media.		<u>Key Vocabulary</u> Frames, animation, sequence, image, media, media, onion skinning.	<u>Outcome</u> Own video animation	
<u>Future Learning</u> This unit progresses students’ knowledge and understanding of using digital devices to create media, exploring how they can create stop-frame animations. Following this unit, learners will further develop their video editing skills in Year 5/6. Children will also use the skills of sequencing and problem solving in Computer Science units in 5/6. In year 5/6 children complete a unit of work on video production. In here the children will learn how to sequence and edit videos to match a purpose whilst also adding and removing parts to improve the video.		<u>Stimulus</u> Wallace and Gromit clips <u>First hand experiences (enrichment)</u>	<u>World of Work</u> TV / Film Careers	
<u>National Curriculum PoS</u> - 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	Key Knowledge		Possible evidence	
	- To explain that an animation is made up of a sequence of images. - To identify that a capturing device need to be in a fixed position. - To recognise that smaller movements create smother animations. - To explain the need for consistency in working. - To explain the impact of adding other media to an animation. - To explain that a project must be exported so it can be shared. <u>Online safety focus:</u> <u>Self- image and identity</u> I can explain how people can represent themselves in different ways online <u>Online relationships</u> I can explain what it means to ‘know someone’ online and why this might be different from knowing someone offline. I can explain how someone’s feelings can be hurt by what is said or written online.		- Explore a range of already created stop frame animations- look at how they are created and what techniques they use. - Give children time to tinker and explore creating a simple stop frame animation. - Create storyboards as a plan to recreate as a simple stop frame animation. - Evaluate their animations and try to improve them by creating a brand-new animation based on their feedback. - Evaluate and present their animations.	
	Application of Key Skills		Possible evidence	
	- To plan an animation using a storyboard. - To capture an image. - To use a tool to review a subject position. - To move a subject between captures. - To review a captured sequence of frames as an animation - To remove frames to improve an animation. - To add media to enhance an animation - To review a completed project.		- Start by creating some physical flipbooks using post it notes- show physically how stop frame animations work. - Use tablets to carefully create stop-frame animations, paying attention to consistency. - Add other media and effects into their animations, such as music and text. - Use the iMotion which is an iPad app.	

Year: 3/4 Subject: Computing PoS: Computer Science		Topic Question/Title: Gift Wrapped	Term - Summer 1	Curriculum - B
Prior Knowledge Children have previously looked scratch last year. They either have programmed using scratch in year 3 or scratch Jr in year 2. In these units, children will have looked at the importance of sequencing, debugging and the basics of algorithms. This should give the children a basic understanding of the unit. The children will have looked at selection and choosing the correct code and sequence to make the command that they are trying to use. They will have looked at directions and instructions using their BeeBots as a visual way of learning to code and sequence.		Key Vocabulary Loop, patterns, program, instructions, order, concurrency, sequence.	Outcome To design and create wrapping paper using count-controlled loops.	
Future Learning Children will continue their learning of programming, sequencing and commands in the next unit in Summer 2 in their unit of scratch and to create a game. In this, they will use their programming and debugging skills developed in this unit to create a game. In 5/6, children will also continue to develop their understanding of programming in many units across the year. They will continue their understanding of algorithms. They will also continue the use of 2D shapes and progress this onto 3D modelling using TinkerCad.		Stimulus Unwrap Present First hand experiences (enrichment)	World of Work Artist / Designer	
National Curriculum PoS - 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 - 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	Key Knowledge - To explain that we can use a loop command in a program to repeat instructions - To identify patterns in a sequence - To identify a loop within a program - To explain that an indefinite loop will run until the program is stopped - To justify when to use a loop and when not to - To explain the importance of instruction order in a loop - To recognise that not all tools enable more than one process to be run at once <u>Online safety focus:</u> <u>Online reputation</u> I can explain how to search for information about others online <u>Online Bullying</u> I can describe appropriate ways to behave towards other people online and why this is important. I can give examples of how bullying behaviour could appear online and how someone can get support.		Possible evidence - Introduce Logo Turtle, using commands that are typed on screen. Pupils will learn the basic Logo commands and use their knowledge of them to read and write code. - Look at examples of patterns in everyday life. Children will recognise where numbers, shapes, and symbols are repeated, and how many times repeats occur. - Look at real-life examples of count-controlled loops and use them in regular 2D shapes. - Trace code to predict which shapes will be drawn - In the final lesson, pupils will apply the skills that they have learnt in this unit to create a program containing a count-controlled loop. Over the course of the lesson, they will design wrapping paper using more than one shape, which they will create with a program that uses count-controlled loops.	
	Application of Key Skills - To use an indefinite loop to produce a given outcome - To plan a program that includes appropriate loops to produce a given outcome - To recognise tools that enable more than one process to be run at the same time (concurrency) - To create two or more sequences that run at the same time		Possible evidence - Create algorithms for their own initials. Children will then implement these algorithms by writing them in Logo commands to draw the letter. Children to debug their code by finding and fixing any errors that they spot. - Children will use algorithm to program a square the ‘long’ way, and recognise the repeated pattern within a square. Once children know the repeated pattern, they will use the repeat command within Logo to program squares the ‘short’ way. - Make count controlled loops in regular 2D shapes and predict what code will be drawn which they can then modify existing code by changing values within the code snippet. - Break down everyday tasks into smaller parts and think about how code snippets can be broken down to make them easier to plan and work with. - Create with a program that uses count-controlled loops. They will begin by creating the algorithm, either as an annotated sketch, or as a sketch and algorithm, and then implement it as code. They will debug their work throughout, and evaluate their programs against the original brief.	

Year: 3/4 Subject: Computing PoS: Computer Science		Topic Question/Title: Game Creators	Term – Summer 2	Curriculum - B
Prior Knowledge In this year, children have completed a previous unit on programming through logo turtle. In this, they have looked at repetition, coding, sequencing, commands and algorithms. They have also looked at debugging and programming. In year A, children will have looked at some scratch programming already, focusing on events and actions. This means some children will be familiar with scratch and how to use it. Children in year 2, will have also completed units on Scratch Jr and units with beebots. This means that children be familiar with programming and sequencing commands.		Key Vocabulary Scratch, patterns, sequence, loop, command, program, process, instruction, tool.		Outcome Design, build and create game
Future Learning In year A, children will continue their learning of programming through another unit on scratch, in this their will continue to develop their understanding of programming, sequencing, debugging and section. In 5/6, children will also continue to develop their understanding of programming in many units across the year. They will continue their understanding of algorithms.		Stimulus Play Computer Games First hand experiences (enrichment)		World of Work Game Programmer
National Curriculum PoS - 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 - 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	Key Knowledge - To explain that we can use a loop command in a program to repeat instructions - To identify patterns in a sequence - To identify a loop within a program - To explain that an indefinite loop will run until the program is stopped - To justify when to use a loop and when not to - To explain the importance of instruction order in a loop - To recognise that not all tools enable more than one process to be run at once <u>Online safety focus:</u> <u>Health, well- being and Lifestyle</u> I can explain why some online activities have age restrictions, why it is important to follow them and know who I can talk to if others pressure me to watch or do something online that makes me feel uncomfortable.		Possible evidence - Look at real-life examples of repetition, and identify which parts of instructions are repeated. - Consider what the different values in each loop signify, then use existing code to modify and create new code, and work on reading code and predicting what the output will be once the code is run. - Evaluate their work, considering how effectively they used repetition in their code. - Look at an existing game and match parts of the game with the design. They make changes to a sprite in the existing game to match the design. They then look at a completed design, and implement the remaining changes in the Scratch game. - Design their own games based on the model project, producing designs and algorithms for sprites in the game.	
	Application of Key Skills		Possible evidence	
	- To use an indefinite loop to produce a given outcome - To plan a program that includes appropriate loops to produce a given outcome - To recognise tools that enable more than one process to be run at the same time (concurrency) - To create two or more sequences that run at the same time		- Use Scratch, a block-based programming environment, to create shapes using count-controlled loops. - Look at different types of loops: infinite loops and count-controlled loops. - Create designs for an animation of the letters in their names. The letter sprites will all animate together when the event block (green flag) is clicked - Follow their algorithms, fix mistakes, and refine designs in their work as they build. They evaluate their work once it is completed, and showcase their games at the end.	