

Year: 5/6		Subject: Computing		Topic Question/Title: How can we stay safe online?		Term - Autumn 1		Curriculum - A	
PoS: Online Safety- Digital literacy									
Prior Knowledge All children have looked at online safety last year. Children have looked at how to use the internet and devices safety and how to be respectful online. In year 4 the children have looked at respectful relationships online and what to do if they have a problem or are feeling uncomfortable online. Children have also looked at how to stay healthy when using devices and the ownership of information online. In year 5 they learnt- 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.				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 video/ information leaflet that could be sent home/ put on twitter of how to stay safe including information for parents.		
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. Continuing in year 6 the children will learn- how to keep digital information safe, positive digital footprints, how to get help online, age rating for games and apps, and all about trusting information and how information can be manipulated and shared. In KS3 children will learn in more detail about the impacts of staying safe online, they will look in more detail about age ratings and the uses of social media and the impacts these can have on people. They will focus on how to stay safe as well as what to do if they feel like they need help.				Stimulus Be internet legends game online. First hand experiences (enrichment)			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> To describe issues online that could make anyone feel sad, worried, uncomfortable or frightened. I know and can give examples of how to get help, both on and offline. Online relationships To explain how sharing something online may have an impact either positively or negatively. To describe how things shared privately online can have unintended consequences for others e.g. screen grabs. <u>Online reputation</u> To explain the ways in which anyone can develop a positive online reputation. <u>Online Bullying</u> To explain how someone would report online bullying in different contexts. <u>Managing Online information</u> To explain how and why some people may present ‘opinions’ as ‘facts’; why the popularity of an opinion or the personalities of those promoting it does not necessarily make it true, fair or perhaps even legal. To define the terms ‘influence’, ‘manipulation’ and ‘persuasion’ and explain how someone might encounter these online <u>Heath, well- being and Lifestyle</u> To describe common systems that regulate age-related content (e.g. PEGI, BBFC, and parental warnings) and describe their purpose. To recognise and can discuss the pressures that technology can place on someone and how / when they could manage this. <u>Privacy and Security</u> To describe effective ways people can manage passwords (e.g. storing them securely or saving them in the browser). To describe ways in which some online content targets people to gain money or information illegally; I can describe strategies to help me identify such content (e.g. scams, phishing). <u>Copyright and Ownership</u> To demonstrate the use of search tools to find and access online content which others can reuse.				Project evolve resources.			

Year: 5/6		Subject: Computing		Topic Question/Title: Present the world!		Term - Autumn 2		Curriculum - A	
PoS: Digital literacy- Presenting information.									
Prior Knowledge All children will have completed some digital literacy unit about presenting information. In year 3/4 children will have looked at the basics of Word and PowerPoint. On these the children will have looked at typing, finding and using capital letters and full stops on the keyboard, inserting pictures (pre-chosen for them to insert) and well as themes and fonts. In year 5, the children will have completed another collecting and presenting information unit based on spreadsheets, where they will have inputted data, formatted cells, used a range of functions as well as looking at suitable ways to present information. They will also, complete a unit on webpage creation, where they will look at presenting information in different ways on a web-based software.				Key Vocabulary Technology, digital devices, PowerPoint, Software, hyperlinks, transitions, text boxes, layout key board shortcuts.				Outcome To create an edited text for purpose	
Future Learning In year 6, the children will have completed another collecting and presenting information unit based on spreadsheets, where they will have inputted data, formatted cells, used a range of functions as well as looking at suitable ways to present information. They will also, complete a unit on webpage creation, where they will look at presenting information in different ways on a web-based software. In KS3, children will evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems. They will be responsible, competent, confident and creative users of information and communication technology.				Stimulus Real life Posters / Books / Adverts First hand experiences (enrichment)				World of Work Journalist /Author	
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 understand why hyperlinks are used. • To explain choices when using a range of recording and presenting software. • To explain the pros and cons of different software/apps and layout/presentation choices. <u>Online safety focus:</u> <u>Self- image and identity</u> To describe issues online that could make anyone feel sad, worried, uncomfortable or frightened. I know and can give examples of how to get help, both on and offline. <u>Online relationships</u> To explain how sharing something online may have an impact either positively or negatively. To describe how things shared privately online can have unintended consequences for others e.g. screen grabs.				• Children should look at how we can present information and what is the purpose of it? Why would we use this and how would we use this in everyday life? • Some recap might need to be given to typing and word processing skills as this was missed for some children last year. • Children should be appropriately paired or work on their own presentation for assessment purposes. • Skills should include hyperlinks, transitions, text boxes, imbedded pictures and interactive pages. • The focus of this topic is dependent on what you are teaching or what you give them.			
		Application of Key Skills				Possible evidence			
		• To consolidate the use of touch typing, introducing some common keyboard shortcuts. • To insert hyperlinks and transitions, text boxes, imbedded pictures and interactive pages. • To present data collected in a way that makes it easy for others to understand. • To use and adapt a range of methods for collating and recoding digital information. • To evaluate the appropriateness of digital information and resources. • To refine and modify methods and ideas in new situations and in a range of contexts.				• Focus on the use of PowerPoint presentation, this will involve some taught sessions, but for the most part children should be able to transfer skills from their use of word. • Focus should be on a project style challenge, children to be given a topic and they need to create an informative presentation. • Children should also be given the opportunity to present their slides as a performance opportunity.			

Year: 5/6 Subject: Computing PoS: Computer Science- 3D modelling		Topic Question/Title: Build it!	Term - Spring 1	Curriculum - A	
Prior Knowledge This unit progresses students' knowledge and understanding of creating 3D graphics using a computer. Prior to undertaking this unit, learners should have worked with 2D graphics applications. In year 3/4, the children have looked at a range of different software to create projects for a purpose. They will have looked at the purposes of these pieces of software and how they can be used to enhance the creation of projects. They have designed and created a range of programs, systems, and content that accomplish given goals. They will also have used their debugging skills to solve any problems that they will face. In year 5, the children will have also designed, created using a range of programs to achieve given goals. They will have presented information, evaluated designs and creations and used debugging skills to solve and enhance their projects.			Key Vocabulary 3D model, digital tools, construct, resize, rotate, combine, lifting, lowering, recolour, duplicate, placeholders, modify.	Outcome Design created in 3D	
Future Learning In year 6, children will continue their learning using a variety of different software. They will use scratch, video software, google webpage creation. They will also design, create using a range of programs to achieve given goals. They will present information, evaluated designs and creations and used debugging skills to solve and enhance their projects. In KS3, children will undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users. Understand a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy; recognise inappropriate content, contact and conduct and know how to report concerns.			Stimulus Items built on 3D printer <u>First hand experiences (enrichment)</u>	World of Work Game Programmer	
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. - 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	Key Knowledge		Possible evidence		
	- To explain that 3D models can be created on a computer - To recognise that a 3D environment can be viewed from different perspectives - To recognise that digital tools can be used to manipulate 3D objects - To recognise that artefacts can be broken down into a collection of 3D objects <u>Online safety focus:</u> <u>Online reputation</u> To explain the ways in which anyone can develop a positive online reputation. <u>Online Bullying</u> To explain how someone would report online bullying in different contexts.		- Examine shapes from a variety of views within the 3D space. - Consider the practicality of 3D printing the objects they have made. - Explode 3D models of buildings to see what shapes they comprise of. - Then look at real world structures and identify the shapes that they include. Then plan their own 3D building design. - Once completed children to be able to explain their designs and their choices with the project.		
	Application of Key Skills		Possible evidence		
	- To position 3D shapes relative to one another - To use digital tools to modify 3D objects. - To combine objects to create a 3D digital artefact - To use digital tools to accurately size 3D objects - To construct a 3D model which reflects a real-world object		- Manipulate 3D objects digitally. Resize objects in one, two, and three dimensions. Lift and lower 3D objects relative to the work plane and combine two 3D objects to make a new shape. - Children to recolour 3D objects. - Rotate objects in three dimensions, duplicate objects, and then use grouping and ungrouping to manipulate many objects at once. - Combine these skills to create their own 3D name badge. - Introduce placeholders which can be used to create holes in objects. - Duplicate, then resize multiple objects to create a meaningful 3D object. - Create a computer 3D model based on their design. Evaluate their model and that of another learner, before modifying their own model to improve it.		

Year: 5/6 PoS: Scratch		Topic Question/Title: Bring Your Game to Life!	Term - Spring 2	Curriculum - A 
Prior Knowledge In year 1/2, children completed a unit of work on Scratch Jr on making basic quizzes, using basic sequencing, programming and debugging skills. Children in year 3.4 have looked at scratch to sequence events and actions. From year 3.4 children will have a basic understanding of the functions on scratch. They should know sprites and their commands. They should know how to use the backgrounds, costumes and scripts functions to make their programs work. Children in year 5 have looked another scratch unit about selection in quizzes. They will look at count controlled loops, conditions, selections, input and outputs. They will also build on their existing skills from all previous computer science units.		Key Vocabulary Scratch, variables, sprite, backgrounds, scripts, costumes, design, algorithms, program, purpose, outcomes, debugging, problem solving, code, coding.		Outcome Children to create a game for another class to play based on unit.
Future Learning In year 6- children will continue to develop their understanding of scratch and variables. There is another scratch unit about selection in quizzes. They will look at count controlled loops, conditions, selections, input and outputs. They will also build on their existing skills from all previous computer science units. In KS3, children will be taught to understand several key algorithms that reflect computational thinking [for example, ones for sorting and searching] and how to use logical reasoning to compare the utility of alternative algorithms for the same problem. They will undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals. Including collecting and analysing data and meeting the needs of known users and recreate, re-use, revise and re-purpose digital artefacts for a given audience, with attention to trustworthiness, design and usability.		Stimulus Playing games already created on Scratch.		World of Work Coding skills Computer programmer/ 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		Possible evidence	
	- To define a ‘variable’ as something that is changeable - To explain that a variable can be used in a program, eg ‘score - To explain that a variable has a name and a value - To recognise that the value of a variable can be used by a program - To recognise that a variable can be set as a constant (fixed value) To explain that the name of a variable needs to be unique <u>Online safety focus:</u> <u>Heath, well- being and Lifestyle</u> To describe common systems that regulate age-related content (e.g. PEGI, BBFC, and parental warnings) and describe their purpose. To recognise and can discuss the pressures that technology can place on someone and how / when they could manage this.		- See examples of real-world variables (score and time in a football match) before they explore them in a Scratch project. - Identify that variables are named and that they can be letters (strings) as well as numbers. - They identify variables in an unfamiliar project and learn the importance of naming variables. - Consider how they could improve their own projects and make small changes to achieve this. Learners then have the opportunity to add a variable independently. - Evaluate each other’s projects; they identify features that they liked and features that could be improved.	
	Application of Key Skills		Possible evidence	
	- To identify a variable in an existing program - To experiment with the value of an existing variable - To decide where in a program to set a variable - To update a variable with a user input - To use a variable in a conditional statement to control the flow of a program - To use the same variable in more than one location in a program		- Complete an unplugged task that demonstrates the process of changing variables. - Explore why it is important to name variables and apply their learning in a Scratch project in which they make, name, and update variables. - Apply the concept of variables to enhance an existing game in Scratch. They predict the outcome of changing the same change score block in different parts of a program, then they test their predictions in Scratch. - Experiment with using different values in variables, and with using a variable elsewhere in a program. - Design the sprites and backgrounds for their project, then they design their algorithms to create their program flow.	

Year: 5/6 Subject: Computing		Topic Question/Title: Wonderful Websites		Term - Summer 1	Curriculum - 
PoS: Webpage Creations					
Prior Knowledge The children have a range of knowledge and understanding. They will have all had access to using the internet, looking at websites and creating their own digital work based on a purpose. This unit progresses students’ knowledge and understanding of the following units from year 3/4 and 5/6: digital writing, digital painting, desktop publishing, digital photography and photo editing. The children will also have a basic understanding of copyright as this comes up throughout multiple units where the children have access to the internet and units about Online Safety.		Key Vocabulary Website, copyright, fair-use navigation, navigation paths, hyperlinks, web-pages, layout, media, internet, HTML.		Outcome Create own information website	
Future Learning In year 6, the children will continue to develop their computing skills by imputing and manipulating data, images and media. They will also create their own unit of work for their leaver’s assembly. In KS3, children will undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users and understand a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy; recognise inappropriate content, contact and conduct and know how to report concerns.		Stimulus Websites First hand experiences (enrichment)		World of Work Web designer/ Marketing	
National Curriculum PoS - To use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content - To 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. - To use technology safely, respectfully, and responsibly; recognise acceptable/unacceptable behaviour.		Key Knowledge - To recognise that web pages can contain different media types - To recognise that web pages are written by people - To recognise components of a web page layout - To consider the ownership and use of images (copyright) - To recognise the need to preview pages (different screens / devices) - To recognise the implications of linking to content owned by others <u>Online safety Focus:</u> <u>Privacy and Security</u> To describe effective ways people can manage passwords (e.g. storing them securely or saving them in the browser). To describe ways in which some online content targets people to gain money or information illegally; I can describe strategies to help me identify such content (e.g. scams, phishing). <u>Copyright and Ownership</u> To demonstrate the use of search tools to find and access online content which others can reuse.		Possible evidence - Explore and review existing websites and evaluate their content. They will have some understanding that websites are created by using HTML code. - Look at the different layout features available in Google Sites and plan their own web page on paper. - Become familiar with the terms ‘fair use’ and ‘copyright’. They will gain an understanding of why they should only use copyright-free images and will find appropriate images to use in their work from suggested sources. - Consider the implications of linking to content owned by other people and create hyperlinks on their own websites that link to other people’s work.	
		Application of Key Skills		Possible evidence	
		- To review an existing website (navigation bars, header) - To create a new blank web page - To add text to a web page - To set the style of text on a web page - To embed media in a web page - To add web pages to a website - To insert hyperlinks to other pages and another site		- Children to create their own website using the skills they have developed in the unit. - Using their plan from previous lessons, children to create their own web page/home page. Preview their web page as it will appear on different devices and suggest or make edits to improve the user experience on each device. - Plan their website, paying attention to the navigation paths (the way that pages are linked together). Then create multiple web pages for their site and use hyperlinks to link them together as detailed in their planning. - Consider the implications of linking to content owned by other people and create hyperlinks on their own websites that link to other people’s work.	

Year: 5/6		Subject: Computing		Topic Question/Title: Director’s Cut		Term - Summer 2		Curriculum - A			
Prior Knowledge This unit progresses learners’ knowledge and understanding of creating media by guiding them systematically through the process involved in creating a video. The unit builds on the Year 4 unit ‘Photo editing’ where composition is introduced and the Year 3 unit ‘Stop-frame animation’ where learners explored some of the features of video production						Key Vocabulary Edit, Video, reshoot, filming, media formats, camera angles, microphone, camera, lens, record.			Outcome To create a video for the leavers assembly.		
Future Learning In year 6, the children will continue to develop their computing skills by imputing and manipulating data, images and media. They will also create their own unit of work for their leaver’s assembly. In KS3, children undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users. They will create, reuse, revise and repurpose digital artefacts for a given audience, with attention to trustworthiness, design and usability.						Stimulus End of Year 6 celebrations. First hand experiences (enrichment) End of Year 6 celebrations.			World of Work TV / Film Careers		
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 • 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 the features of video as a visual media format • To recognise which devices can and can’t record video • To recognise that filming techniques can be used to create different effects • To recognise the need to regularly review and reflect on a video project • To identify videos can be improved through and reshooting or editing • To recognise projects, need to be exported to be shared <u>Online safety focus:</u> <u>Managing Online information</u> To explain how and why some people may present ‘opinions’ as ‘facts’; why the popularity of an opinion or the personalities of those promoting it does not necessarily make it true, fair or perhaps even legal. To define the terms ‘influence’, ‘manipulation’ and ‘persuasion’ and explain how someone might encounter these online				Children to work through looking at: • Why do we use videos • How to create a video • What makes a good video • How to improve the video • Evaluate the video created					
		Application of Key Skills				Possible evidence					
		• To use different camera angles • To use pan, tilt and zoom • To identify features of a video recording device or application • To combine filming techniques for a given purpose • To choose to reshoot a scene or improve later through editing • To decide what changes, I will make when editing • To use split, trim and crop to edit a video				Children to use iMovie on the iPad to create, shoot and edit their video. These should then be able to be sent to the Teacher to play in assembly. Y5s to help create the video in the mixed class. Year 5 might want to create a video on something else, Year 5 at Casterton or about their time at Casterton so far.					