KFJS Computing Curriculum Map						
In each unit children will: gain knowledge of different computing devices and apps.						
Year 5						
Unit	**1**	**2**	**3**	**4**	**5**	**6**
Key Question	**What is the difference between an input and an output?**	**How can I edit a video to make it effective?**	**How can I check the information I find online is reliable?**	**What are conditions in Scratch and how will they help me make a quiz?**	**How can I use my programming skills to create a light up picture?**	**How can I create artwork on a digital device?**
Essential understanding	Be able to explain that computers can be connected together to form IT systems. Be able to describe the input and output of a search engine. Be able to demonstrate that different search terms produce different results. Be able to explain how ranking is determined by rules, and that different search engines use different rules.	Know that filming techniques can be used to create different effects. Be able to identify that videos can be improved through reshooting or editing.	Know how to check the reliability of a website by looking for a padlock symbol or an 's' in the web address to see if the website is secure, checking the author of the website (is it an organisation you trust such as the BBC?), checking if the website is clear and well written and double checking the information you find on another website. Know how to use the history function to find a website they have previously looked at.	Know that selection is about choice. It is the place where an algorithm or program branches in different directions. Know that conditions use if, then and else in a program to change the outcome of an algorithm. Conditions can be used to halt an algorithm, select a different path, switch between two different paths or used to stop a loop. Repeat – create loops that once started will not stop until a condition is met.	Be able to connect a crumble kit to the computer and create an effective algorithm to make a light flash. Be able to print their work by selecting the correct printer and changing the printer properties.	Be able to insert an image from the app they are using and from the internet by copying and pasting. Be able to identify that a vector drawing comprises separate objects. Be able to recognise that each object in a drawing is in its own layer. Know how to duplicate objects using copy and paste, modify, group and ungroup, reposition and delete.

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Esafety objectives	Talk about the dangers of spending too long online or playing a game. Explain the importance of communicating kindly and respectfully. Goldilocks book https://www.andersenpress.co.uk/wp-content/uploads/2019/01/Goldilocks-Teaching-Resource.pdf	Know that anything posted online can be seen, used and may affect others. Media sharing activity (1 session) http://code-it.co.uk/mediasharing Discussion points Digital footprint	Know that anything posted online can be seen, used and may affect others. Talk about the dangers of spending too long online or playing a game. Explain the importance of communicating kindly and respectfully. Look at the dove reverse selfie advert. Discuss impact. Look through PPT and look at pictures of filtered and original photos. Impact and pressure to be perfect.	Explain the importance of communicating kindly and respectfully. Communicating online http://code-it.co.uk/communicatingonline discussion points.	Explain why it is necessary to protect self and friends and the best ways to do this, including reporting concerns to an adult. Role play activity – set up scenario of a child faced with an unwanted situation online. Get children to act out how they would support their friend and how they would report their concerns to an adult.	Discuss the importance of choosing an age-appropriate website or game. Know which resources on the Internet can be downloaded and used. Project evolve
Computer science, information technology and digital	**Information technology** Describe the World Wide Web as the part	**Digital literacy** Use text, photo, sound and video editing tools to refine work.	**Digital literacy and Information technology** Use a search engine to find appropriate	**Computer science** Know that conditions use if, then and else in a program to change the outcome of an algorithm.	**Computer science** Use logical thinking, imagination and creativity to extend a program.	**Digital literacy** Select an appropriate online or offline tool to create and share ideas.

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literacy objectives and skills	of the Internet that contains websites. Describe how the internet works. Describe what a network is and how they work. Describe how information is transported on the Internet. NCCE – computer systems and us year 5.	Review and improve own work and support others to improve their work. Work in groups of three to create a stop gap animation highlighting an environmental issue.	information and check its reliability. Recognise and evaluate different types of information I find on the World Wide Web. Describe the different parts of a webpage. Use text, photo, sound and video editing tools to refine work. Select, use and combine the appropriate technology tools to create effects that will have an impact on others. Review and improve own work and support others to improve their work. Use green screen app to create a Greek gallery/museum. Use	Create a multiple choice quiz using scratch. Scratch NCC Y5 unit – selection in quizzes	Change an input to a program to achieve a different output. Crumbles – create a light up picture.	Review and improve own work and support others to improve their work. Vector drawings – NCCE curriculum.

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			the internet to research an item and then present that using the green screen app.			
Assessment	Can I explain what a computer system is and how information is transferred between systems and devices? NCCE Systems and Networks Summative assessment to be completed by each child – from there a judgment of 1,2 or 3 can be made. Score out of 10. 0-3 wts 4-7 exp 8-10 gds	Can I plan, film and edit a stop gap animation combining a mixture of text and graphics? Stop gap animation – environmental issue	Can I use a search engine to find appropriate information and check its reliability? Green screen	Can I use selection and conditions in programming by using the 'if… then… else...' structure to select different outcomes depending on whether a condition is true or false? NCC selection in quizzes Summative assessment to be completed by each child – from there a judgment of 1,2 or 3 can be made. Score out of 10. 0-3 wts 4-7 exp 8-10 gds	Can I use an effective algorithm to create a light up picture using a crumble controller? Crumble – create a light up picture. Create a light up picture using a crumble controller with an effective algorithm.	Can I use different tools and drawing techniques to create artwork on a digital device? NCCE Vector drawings Create a vector drawing for a specific purpose

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WTS	Can explain that systems are built using a number of parts. Can make use of a web search to find specific information.	Storyboard contains pictures and notes related to the story Several frames used to create movement The animation relates to a relevant story Make some changes Recognise that media can be added	Need support when researching and making notes. Film video with support but unable to put together on the green screen app.	Can identify when a condition has been used. Can identify ways the program could be improved.	Create a picture that reflects the task. Write a simple algorithm to control output device. Choose from a scaffolded set of blocks. Identify where the program goes wrong.	Add and remove objects to create a drawing Manipulate the objects to create a drawing Move objects on the screen Position an object on top of another Select and group objects to move them
EXS	Can describe the input, process, and output of a digital system. Can explain that computer systems communicate with other devices. Can refine a web search	Storyboard has a clear beginning, middle, and end Movement is smooth The animation follows the storyboard Make some improvements Add some additional media Evaluate how successful they were	Use a search engine to find appropriate information and check its reliability. Use text, photo, sound and video editing tools to refine work. Review and improve own work and support others to improve their work.	Can identify conditions in a program. Can identify the condition and outcomes in an 'if… then… else…' statement. Can create a program that uses selection to produce different outcomes.	Construct a wiring diagram showing how components will be connected Combine appropriate blocks to implement their algorithm Suggest a strategy to fix the code when it is not working Test their code using the device	Add and remove objects to create a drawing Use copy and paste to maintain consistency within the drawing Manipulate an object's size, colour, and proportion Purposefully position and rotate objects Move objects to

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		in meeting the task requirements			Evaluate how successfully they met the task	different layers to create a specific aspect of a drawing Manipulate multiple objects concurrently Group objects to make them easier to work with
GDS	I can compare results from different search engines I can recognise the role of web crawlers in creating an index. I can explain that computer systems communicate with other devices	Storyboard indicates what is needed to create the animation Movement is consistent throughout The animation Includes flying objects Identify improvements and make those changes Use additional media to enhance the animation	Recognise and evaluate different types of information I find on the World Wide Web. Select, use and combine the appropriate technology tools to create effects that will have an impact on others.	Can identify conditions in a program. Can modify a condition in a program. Can use selection in an infinite loop to check a condition.	Explain to others any bugs found and how they were fixed Identify how their project could be enhanced	Enhance the drawing by adding additional objects, for example to represent light and shade Manipulate objects in order to achieve desired effects to create a drawing with consistent proportions Trial placing objects in different places to see what suits the overall image Position objects to

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		Identify how and why their project could be improved				make more complex shapes Combine grouped objects together to form bigger groups Ungroup to make a change and then regroup as necessary