	Computing Scheme of Work							Autumn Term	Year 4
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7		Week 8
Key Learning			• Understands that algorithms are a precise set of instructions and can create and edit own code to achieve a given purpose. • Pupils can talk confidently about inputs and outputs. • Can use 'if' and 'loops' within their programs. • Can detect and correct simple errors in code. • Understands that computers need a precise set of instructions to follow. Discuss the sequence of instructions and the impact changes might have.						• To use a range of software with support to create, store and edit digital content.
Main Lessons	**Basics** Be able to create folders within own area to organise own work. Check pupils name work in a manner that makes it easy to find. Look at how to search for a file. Revisit CloudU, how to log in, save work so that it can be viewed at home.	**Online Safety:** Lesson 1, SWGFL SofW.	**Probots:** Revisit how to make the Probot move. Discuss cm and degrees. How to clear memory. Ask the pupils to draw a square. Do they use the repeat command?	**Probots:** Identify inputs (sensors—microphone, touch and light), outputs (motors, lights on, beeping sound) on the Probot. Demo how to program the cars to react to a front bumper hit. Pupils add own code for front, back hits.	**Probots:** Revisit sensors work from previous lesson. Ask pupils to plan for a course change upon hear a clap or lights on in dark tunnel.	**Probots:** Ask the pupils to complete a challenge: Car to move forward until it hits an object then reverses goes in a different direction reverse. More able could program Procedures for each event.			**Publisher:** Create a poster advertising the Probot car as a present. Include pictures, headings, features of the cars etc. Audience: parents buying a Christmas present for their children. Show parents to get feedback.
Software	Cloudu or J2e		Probot cars / Probot software (could have half class using software)						Publisher
Online Safety		Rings of Responsibility							

	Computing Scheme of Work						Spring Term	Year 4
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
Key Learning		• Can use a range of software to create, store and edit digital content with increasing independence and awareness of audience. • Can talk about their work and make improvements based on feedback. • Can comment on the success of their work. • Can talk about how different software is used for different purposes. • Recognises the audience when designing and creating digital content.						
Main Lessons	**Online Safety:** Lesson 2, SWGFL SofW.	**Online review:** Using Cloudu create an online review. Copy QR code into Word with a title and put up in Library.	**BackDrop.tv:** View examples of green screen technology in use. Plan out task, weather forecast or links to topic. Try standing inform of webcam, laptop and backdrop software to see results on the board.	**BackDrop.tv:** Practice videoing each other in front of a green background. Learn how to import into software and change background.	**BackDrop.tv:** Start recording actual programme. Importing into software, adding background and titles etc. How to save.	**BackDrop.tv:** How to open up work from previous lesson and edit work. Create final draft and export for showing.	**Word:** Using screenshots from own video, create magazine style document about their green screen films. Check pupils centre text correctly, can use bullet points, indent text, add shapes, pictures etc.	**Online Safety:** Lesson 3, SWGFL SofW.
Software		CloudU	BackDrop.tv				Word	
Ongoing activities			Pupils to add one review per week. Could be part of homework and reading slots. Share with each other and put up QR codes in the library.					
Cross Curricula	PSHE							
Online Safety	Private and personal information	Aware of copyright and acknowledging sources of information.						The power of words

	Computing Scheme of Work						Summer Term		Year 4
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
Key Learning	• Understands the difference between data and information. • Understands how data can be filtered and sorted using a database. • Can perform a search of a database. • Know the terminology - record, field, table, cell etc.		• Understands that algorithms are a precise set of instructions and can create and edit own code to achieve a given purpose. • Pupils can talk confidently about inputs and outputs. • Can use 'loops' within their programs. • Can detect and correct simple errors in code. • Understands that computers need a precise set of instructions to follow. Discuss the sequence of instructions and the impact changes might have.			• Understands that computer models are cheaper to setup than alternative methods that could be used to predict what will happen in a system . • Some software, eg PowerPoint uses objects which can be moved after creation unlike a painting program where once drawn is fixed. • Able to create a model using PowerPoint for a particular audience. • Able to evaluate model and amend following presentation to audience.			
Main Lessons	**Databases:** Discuss databases and how they are made up from a set of fields that are consistent for all items entered into them. Eg top trump cards. Following website teaches sorting, searching a database. http://resources.hwb.wales.gov.uk/VTC/ngfl/maths/cynnal/data/index_e.html BBC—What is a database? http://www.bbc.co.uk/guides/z8yk87h View Amazon website, find a children book and try to identify the fields used. Show how filters can be used to narrow results. Children to create own index card for children's book on the site.		**Scratch:** Show the pupils a demo of the cat drawing a regular shape. In pairs list the algorithm required to make this happen. Try own algorithms, identity mistakes, debugging, and correct. Repeat with other shapes.	**Scratch:** Show how to turn and repeat shapes to create own patterns. Demo Pen tools. Discuss angles.	**Scratch:** Explore patterns and changing the sequence. Copy results into Word and write about the results.	**Modelling:** Use online rollercoaster simulation to explore changes before building an expensive ride. www.funderstanding.com/educators/coaster/ www.bbc.co.uk/schools/gcsebitesize/ict/modelling/0spreadsheetsrev5.shtml	**Modelling:** Use PowerPoint to create models of the classroom. Note items are objects and can be moved around and resized unlike a painting program.	**Modelling:** Complete classroom designs by adding carpets, book cases etc. Move furniture around to create a new, improved look. Explain reasons for change.	**Online Safety:** Lesson 4, SWGFL SofW.
Software	Online		Scratch / Word			CloudU	PowerPoint		