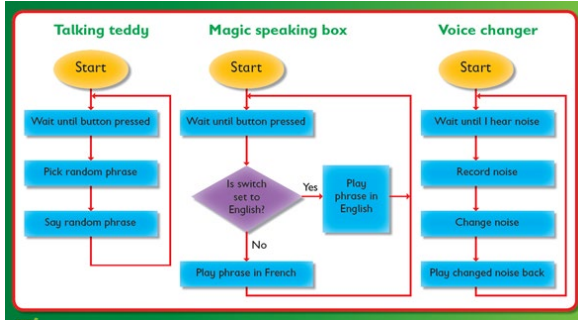





Year 4 We Are Toy Designers.

Subject Specific Vocabulary		Software and Tools	Sticky Knowledge about prototyping an interactive toy.
Algorithm	A set of instructions designed to perform a specific task.	Scratch 1.4 (free and open source): http://scratch.mit.edu/scratch_1.4 or Scratch 2.0: http://scratch.mit.edu .  	<ul style="list-style-type: none"> I can design a toy with computer-controlled input and output. I can write a program to show how my toy would produce output. I can use Scratch to test how input and output would work in my toy. I can use Scratch to work out why my toy may not work as expected. I can use Scratch to create a version of my toy with computer-controlled input and output. I can use Scratch to create a version of my toy using both mouse and keyboard input. I can find and correct 'bugs' in my program. I can explain how I find and correct 'bugs' in my program. I can work out ways around problems by breaking them into smaller steps.
Debug	Locating and removing computer program bugs, errors or abnormalities		
Input	Any information or data that is sent to a computer for processing.		
Interactive	Software which accepts input from the user as it runs.		
Prototype	An early sample, model, or release of a product built to test a concept or process or to act as a thing to be replicated or learned from.		
Pitch	A speech or act that attempts to persuade someone to buy or do something.		
Simulation	An imitation or enactment of something.		
Output	Data generated by a computer.	E- Safety	
Unit Overview: In this unit, the children work together to design a simple toy that incorporates sensors and outputs and then create an on-screen prototype of their toy in Scratch. Finally, they pitch their toy idea to a Dragons' Den-style panel.		Pupils can incorporate images and sound effects that they download from the web, but should respect any licence conditions when doing so.	

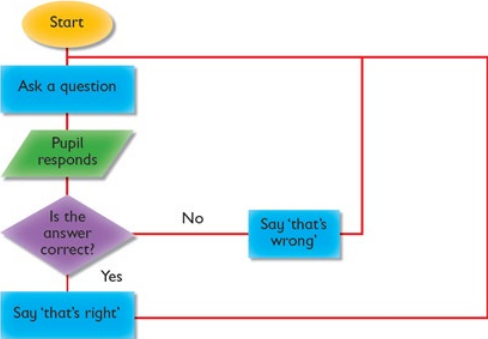
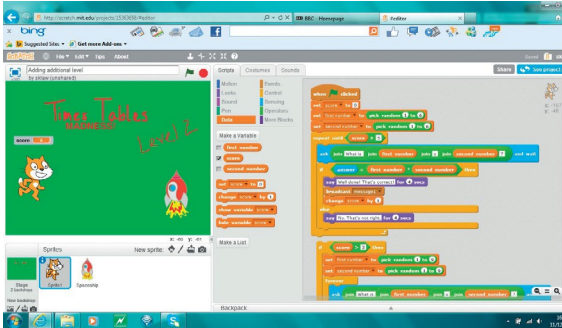
Year 4 We Are Co Authors

Subject Specific Vocabulary		Software and Tools	Sticky Knowledge about Producing a wiki.
Edit	To make changes or correct mistake.	Wikipedia help: http://en.wikipedia.org/wiki/Help:Contents .	<ul style="list-style-type: none"> I can find and read an article on Wikipedia I can create content for a wiki. I can edit the content on my wiki. I can edit the HTML for a web page. I can show where I found information I used in my research. I can work with others to plan a project. I can work out if an article is accurate and reliable. I can edit another person's content. I can edit content on Wikipedia. I can plan a project by breaking it into smaller parts. I can see how important it is that content is fair and balanced. I can see how important Wikipedia's Five pillars are.
Information	Facts provided or learned about something or someone.	Editing Wikipedia: http://simple.wikipedia.org/wiki/Wikipedia:Student_tutorial	
Mind Map	A diagram in which information is represented visually, usually with a central idea placed in the middle and associated ideas arranged around it.		
Wiki	A website or database developed collaboratively by a community of users, allowing any user to add and edit content.		
Style	A distinctive appearance.		
Reliable	Able to be trusted.	E- Safety	
Wikipedia's Five Pillars	<ul style="list-style-type: none"> Wikipedia is an encyclopedia Wikipedia is written from a neutral point of view Wikipedia is free content that anyone can use, edit, and distribute Wikipedia's editors should treat each other with respect and civility Wikipedia has no firm rules 	<p>The children may disagree over details of wikis, or use the shared workspace to bring up matters not related to the subject of the wiki. Keep an eye on activity logs, and intervene when appropriate to help children work through problems.</p>	
Unit Overview: Wikipedia is a free online encyclopaedia that anyone can view and edit. In this unit, the pupils collaborate to create a 'mini Wikipedia'. They then go on to add or amend content on the real Wikipedia.			

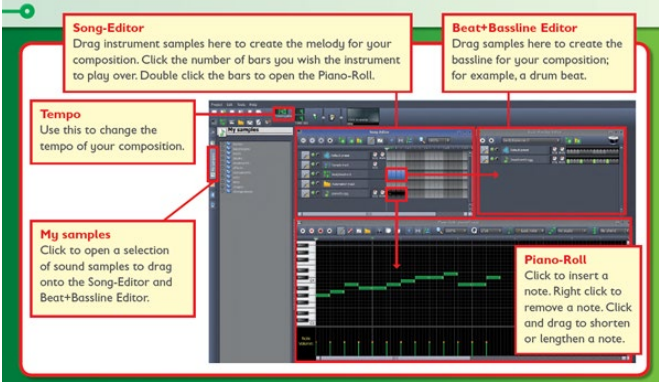

Year 4 We Are Meteorologists.

Subject Specific Vocabulary		Software and Tools	Sticky Knowledge about presenting the weather.
Chart	A sheet of information in the form of a table, graph, or diagram.	 <p>The education portal of the Royal Meteorological Society: www.metlink.org.</p> <p>The LGfL/NEN weather monitoring system: http://weather.lgfl.org.uk.</p> <p>Weather Underground: www.wunderground.com.</p> <p>Information on setting up a weather station: www.weatherforschools.me.uk.</p> <p>BBC Radio 4 shipping forecast: www.bbc.co.uk/programmes/b006qfvv.</p> 	<ul style="list-style-type: none"> • I can use weather measurement equipment safely. • I can enter weather data in a spreadsheet. • I can take digital photos. • I can create simple charts. • I can make predictions about the weather. • I can create a presentation for my weather forecast. • I can use weather measurement equipment accurately. • I can describe the weather. • I can make sensible predictions about the weather. • I can add measurements and descriptions to photos. • I can present an interesting and useful weather forecast to my classmates. • I can spot weather data that looks unusual. • I can make accurate predictions. • I can see what some of the problems are in predicting the weather.
Data-logging	Data logging is the process of collecting and storing data over a period of time in order to analyse.		
Forecast	A statement of what is judged likely to happen in the future, especially in connection with a particular situation, or the expected weather.		
Graph	A diagram showing the relation between variable quantities, typically of two variables, each measured along one of a pair of axes at right angles.		
Measurement	The size, length, or amount of something, as established by measuring.		
Prediction	A statement about what you think will happen in the future.		
Spreadsheet	An electronic document in which data is arranged in the rows and columns of a grid and can be manipulated and used in calculations.		
Temperature	A measure of the warmth or coldness.		
<p>Unit Overview: This unit brings together data measurement, analysis and presentation, as the children take on the role of meteorologists and weather presenters.</p>			


We are Software Developers.

Subject Specific Vocabulary		Software and Tools	Sticky Knowledge about developing a simple educational game.
Debug	To identify and remove errors.	Scratch is free open source software. Download Scratch 1.4 from: http://scratch.mit.edu/scratch_1.4 or use Scratch 2 online at: http://scratch.mit.edu/projects/editor . 	<ul style="list-style-type: none"> • I can design an interactive educational game. • I can develop an interactive educational game. • I can put Scratch blocks in the right order. • I can use the if/then/else block correctly. • I can use the random number block and use variables to work out the score. • I can include sound in my game. • I can correct mistakes in my game. • I can plan my own way to program my game. • I can use a countdown timer. • I can use the mouse to control my game. • I can explain how the algorithm of my game works
Input	Any information or data that is sent to a computer for processing.		
Interface	An interface is a program that allows a user to interact with the computer or another computer over a network.		
Output	Data generated by a computer.		
Program	A computer program is a collection of instructions that performs a specific task when executed by a computer.		
Prototype	An early sample, model, or release of a product built to test a concept or process or to act as a thing to be replicated or learned from.		
Repetition	Repeating a sequence of instructions a certain number of times, or until some specific result is achieved		
Variable	A value that can change, depending on conditions or on information passed to the program.	<h3>E- Safety</h3> <p>Pupils should respect licence conditions and intellectual property rights when incorporating images and sound effects that are downloaded from the web.</p> 	
<p>Unit Overview: The pupils start by playing and analysing educational computer games, identifying those features that make a game successful. They then plan and design a game, with a clear target audience in mind. They create a working prototype, and then develop it further to add functionality and improve the user interface. They test their game and make any necessary changes.</p>			

We are Musicians.

Subject Specific Vocabulary		Software and Tools	Sticky Knowledge about producing digital music.
Audio	Relating to sound.	Isle of Tune: http://isleoftune.com GarageBand: www.apple.com/uk/ilife/garageband 	<ul style="list-style-type: none"> • I can explain how technology can be used to create music. • I can use sequencing software to create a piece of music. • I can record my own sound samples. • I can mix sound samples to create a piece of music. • I can export the file of my piece of music in a standard, compressed format. • I can explain how people listen to and buy music through technology. • I can edit sound samples. • I can work on and make my piece of music better. • I can edit my final piece of music. • I can use software that uses staff notation. • I can compare creating a piece of music to creating a program. • I can respect other people's copyright.
Composition	An original piece or work of music.		
Copyright	Copyright is a legal means of protecting an author's work.		
Digital	Relating to computer technology, especially the internet.		
Instruments	An object, such as a piano, guitar, or drum that is played to produce musical sounds.		
Pitch	How high or low a sound or musical note is.		
Sample	Sampling is the reuse of a portion or sample of a sound recording in another recording.		
Sequencing	Sequencing means programming a sequence of musical instructions so that they can be played back later to create music.		
Software	The programs and other operating information used by a computer.	E- Safety Discuss illegal downloading and file sharing of copyrighted music, as well as more positive ideas, such as collaboration, remixing and Creative Commons licences. 	
Unit Overview: In this unit, the children produce music suitable for any purpose they choose.			

We are HTML Editors.

Subject Specific Vocabulary		Software and Tools	Sticky Knowledge about Editing and writing HTML.
Code	The language understood by the computer	<p>A quick guide to viewing source code on various web browsers: www.wikihow.com/View-Source-Code.</p> <p>Learn to Code HTML & CSS: https://learn.shayhowe.com/html-css/</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: left;"> <p>HTML</p> <pre><h1>The beach</h1> <h4>By Alice and Vanisha</h4> <p>The waves were crashing on the shore.</p> </pre> </div> <div style="text-align: left;"> <p>Preview</p> <p>The beach</p> <p>By Alice and Vanisha</p> <p>The waves were crashing on the shore.</p>  </div> </div>	<ul style="list-style-type: none"> • I can see how the internet and the web are different. • I can see that web pages are written in HTML. • I can use some HTML tags. • I can edit the HTML for a web page. • I can create web pages that keep another person's details private. • I can explain the parts of a URL. • I can see how important links are for the web. • I can use the ... tag correctly. • I can create a web page by writing HTML. • I can be safe and responsible when I create a web page. • I can show I understand how HTTP works. • I can show I know about the history of the web. • I can use the and <iframe>...</iframe> tags.
HTML	Hypertext Markup Language is a standardised system for tagging text files to achieve font, colour, graphic, and hyperlink effects on World Wide Web pages		
HTTP (hyper text transfer protocol)	HTTP is the underlying protocol used by the World Wide Web.		
Hyperlink	A link from a hypertext document to another location, activated by clicking on a highlighted word or image.		
Tag	A tag is a keyword or term assigned to a piece of information.		
URL	A uniform resource locator is the address of a resource on the Internet.		
Web Page	A web page is a document commonly written in HTML that is accessible through the Internet	E- Safety	
<p>Unit Overview: the children learn about the history of the web, before studying HTML (hypertext mark-up language), the language in which web pages are written. They learn to edit and write HTML, and then use this knowledge to create a web page.</p>		<p>Ensure the usual safe search settings and filters are in place while the pupils are working on the web. Precautions over the protection of the children's identities and contact details should be in place if the children publish any of their material on the open web. It is vital that the pupils learn to keep themselves safe when online, as well as knowing how to use the web responsibly. Encourage the pupils to let you know if they have any concerns or see anything inappropriate. Remind them that they can also report concerns to Childline on 0800 1111 or via www.childline.org.</p>	