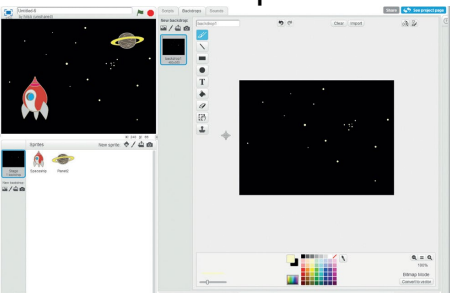


Year 2 We Are Astronauts.

Subject Specific Vocabulary		Software and Tools	Sticky Knowledge about Programming on Screen.
Algorithm	An algorithm is a clear sequence of instructions that allows a computer to solve a problem.	<ul style="list-style-type: none"> Scratch is available from http://scratch.mit.edu. It is free to use online without registration. Introductory Scratch tutorials: http://info.scratch.mit.edu/Video_Tutorials. Alternative programming toolkits for this work include Kodu and Daisy the Dinosaur. Pyonkee is available to download on ipads. 	I can plan a route from one place to another then to more than one place.
Robot	A machine capable of carrying out a complex series of actions automatically, especially one programmable by a computer.		I can programme a toy. I can programme a sprite to move in Scratch using blocks.
Predict	To say or estimate that a specified thing will happen in the future or will be a consequence of something.		I can predict where the instructions will take a person, toy or sprite.
Problem	A matter or situation regarded as unwelcome or harmful and needs to be dealt with and overcome		I can record instructions to move a toy or sprite from one place to another.
Sprite	A computer graphic which may be moved on-screen and otherwise manipulated as a single entity.		I can spot and correct mistakes in a program.
Program	To provide (a computer or other machine) with coded instructions for the automatic performance of a task.		I can solve problems.
Instructions	Detailed information about how something should be done.		I can consider the most efficient solution to a problem.
Scratch / Pyonkee	An online programme (Scratch) / App (Pyonkee) for coding where you can create your own games and animations.	Remind the children about what to do if they encounter inappropriate material when using the web.	
Unit Overview: In this unit, the children will build on work from <i>Unit 1.1 – We are treasure hunters</i> to program a sprite (such as a spaceship) to move around the screen. This unit acts as a springboard for programming in Year 3.		E- Safety School operates a ‘turn the screen off/ turn the tablet over and tell an adult’ system.	

Year 2 We Are Detectives.

Subject Specific Vocabulary		Software and Tools	Sticky Knowledge about collecting clues.
Address	A string of characters that identifies a destination for email messages or the location of a website.	<ul style="list-style-type: none"> Outlook® (email for Windows) Excel (spreadsheet for Windows) Mail (email for iOS) Numbers (spreadsheet for iOS) <p>Information and ideas</p> <ul style="list-style-type: none"> CEOP guidance for children on using email: www.thinkuknow.co.uk/8_10/control/email. Advice on 'netiquette' (online etiquette): http://dotsafe.eun.org/www.eun.org/eun.org2/eun/en/ds_main_/content2459.html and www.learnthenet.com/learn-about/netiquette. The Story of Send (how email works from a Google perspective): www.google.com/green/storyofs end/desktop. 	<ul style="list-style-type: none"> I can read and write emails and write a reply. I can check my email for mistakes before I send it. I can see if an email and an attachment are from someone I know and trust. I can read and understand headers of emails. I know how important it is to type an email address correctly and know the address has two parts. I can create a spreadsheet. I can organise a spreadsheet so it shows me the information I need.
Attachment	A computer file added to an email.		
Database	A structured set of data held in a computer, especially one that is accessible in various ways.		
Evidence	The available facts or information indicating whether a belief or proposition is true.		
Email	The system of sending messages by electronic means		
Fact File	A collection of information about a particular subject or product.		
Safety	To be protected from danger, risk, or injury.	E- Safety	
Header	The part of an email before the message, containing information such as the subject and sender.	<ul style="list-style-type: none"> In school all emails are sent and received via a single class email address. At home, if the children use individual accounts, they'll need to keep their account details private and share their email address only with people they know and trust. Stress to the children that they should never open email attachments that are unexpected or from unknown sources, they should be very wary of links in emails, and they should not give out personal information. 	
<p>Unit Overview: In this unit, the children are challenged to solve a mystery by reading, sending and replying to emails, and by listening to a witness statement. They use a fact file sheet to create a table and identify the culprit.</p>			

Top email tips

Emails aren't always from who they claim to be. Look out for 'junk' or 'spam' emails.

Take great care clicking the links in an email and when opening files attached to an email. They may not always be what they appear.

If you receive an email from someone you don't know, tell a parent, carer or teacher.



Always check that you have typed an email address correctly.

The subject line of an email should be short and to the point.

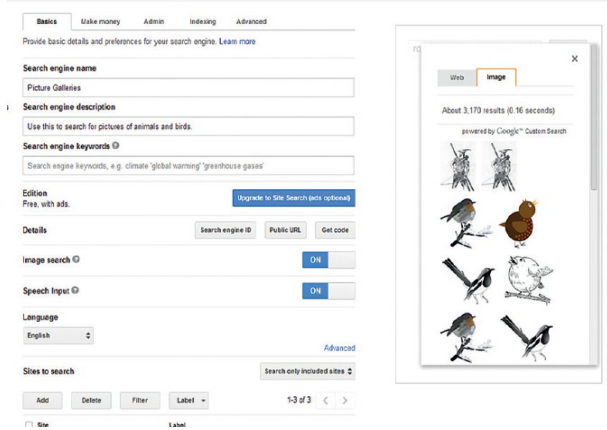
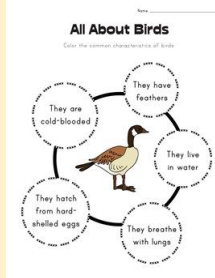

Re-read your email message before you send it, to check for mistakes.

Always be polite in an email.

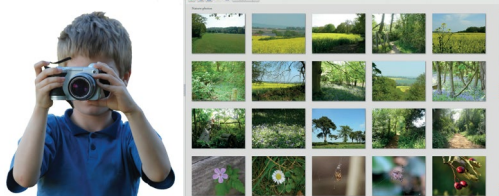

Year 2 We Are Game Testers.

Subject Specific Vocabulary		Software and Tools	Sticky Knowledge about.
Algorithm	An algorithm is a clear sequence of instructions that allows a computer to solve a problem.	Scratch: available online at http://scratch.mit.edu , or downloadable via http://scratch.mit.edu/scratch_1.4 . 	<ul style="list-style-type: none"> • I can talk about what happens in a computer game. • I can see that a computer game works by following instructions. • I can see how computer games are similar. • I can predict what will happen in a computer game. • I can test a computer game. • I can find and understand the code for a computer game. • I know that some games are for older children. • I can see why it can be hard to stop playing computer games. • I know that I need to limit the time I spend playing computer games.
Predict	To say or estimate that a specified thing will happen in the future or will be a consequence of something.		
Rules	A set of understood regulations or principles governing conduct or procedure within a particular area of activity.		
Scratch / Pyonkee	An online programme (Scratch) / App (Pyonkee) for coding where you can create your own games and animations.		
Test	A procedure intended to establish the quality, performance, or reliability of something, especially before it is taken into widespread use.		
Unit Overview: In this unit, the pupils will try to work out how some simple Scratch games work. They also look at free online or open source games and share their favourite games with the class. 		E- Safety Take care when choosing games for children to play, that PEGI (www.pegi.info/en/index) age restrictions are observed. Ensure that your browser's ad block filters (if available) are switched on. The pupils can access the Scratch website, including the example games, without registration.	

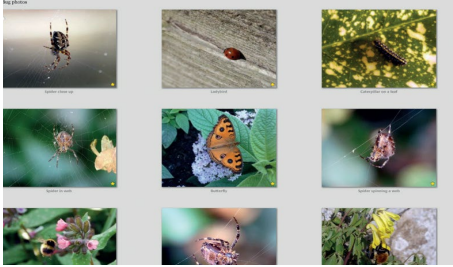
Year 2 We Are Researchers.

Subject Specific Vocabulary		Software and Tools	Sticky Knowledge about researching a topic.
Google	An internet search engine.	<ul style="list-style-type: none"> • PowerPoint: • Google Custom Search: www.google.co.uk/cse. Image galleries: <ul style="list-style-type: none"> • Openclipart: http://openclipart.org • Flickr: www.flickr.com/search/advanced 	<ul style="list-style-type: none"> • I can add and organise questions on a mind map. • I can find information to add to my mind map. • I can use search engines. • I can use the web to find information. • I know that it is important to say where I found information. • I know that there are some images I can copy and some that I can't. • I can find images and add them to my presentation. • I can create a presentation that shows my research. • I can use my presentation to teach others about a topic.
Mind Map	A diagram in which information is represented visually, usually with a main idea placed in the middle and other linked ideas arranged around it.		
Presentation	A speech or talk in which a new idea or piece of work is shown and explained to an audience.		
Research	The systematic study of books, pictures, the internet and other sources in order to establish facts and find new things.		
Search Engine	A program that searches for and identifies items in a database that correspond to keywords or characters specified by the user. Used especially for finding particular sites on the internet.		
Search	To look for information. For example on the internet.	<h2 style="text-align: center;">E- Safety</h2> <ul style="list-style-type: none"> • Ensure that Google (or other search engines) filters and safe search options are turned on. • It is strongly advised to discuss with children what they should do if they encounter inappropriate material. School operates a 'turn the screen off/turn the tablet over and tell an adult' system. 	
<p>Unit Overview: The children research a topic – safely, effectively and efficiently – using a structured approach (mind mapping). They share their findings with others through a short multimedia presentation.</p>			 

Year 2 We Are Photographers.

Subject Specific Vocabulary		Software and Tools	Sticky Knowledge about taking better photos.
Camera	A device for recording visual images in the form of photographs or film.	<ul style="list-style-type: none"> iPhoto (iOS): Pixlr (online): http://pixlr.com. Snapseed <p>Online photo galleries:</p> <ul style="list-style-type: none"> Flickr: http://flickr.com, 500px: http://500px.com/popular Pixabay: http://pixabay.com/en 	<ul style="list-style-type: none"> I can take high quality photos that are in focus. I can decide if a photo is worth keeping. I can edit photos to make them look better. I can choose my best photos for our class collection. I can talk about how I took, edited and chose my best photos. I can give helpful feedback to my friends. I know that there are some photos I shouldn't put on the web.
Image	A visible impression taken by a camera.		
Pixel	A minute area of illumination on a display screen, one of many from which an image is composed.		
Portfolio	A large, thin, flat case for loose sheets of paper such as drawings or maps.		
Theme	The subject or topic of a talk, piece of writing, exhibition, etc.		
		E- Safety	
<p>Unit Overview: In this unit, the children review photos online, practise using a digital camera, take photos to fit a given theme, edit their photos, and then select their best images to include in a shared portfolio.</p>		<ul style="list-style-type: none"> Ensure appropriate safeguards are in place to filter inappropriate content, and that any safe search or safe mode settings are enabled. Talk to the children about what it is acceptable and unacceptable to photograph. It is not a good idea to take or share photographs in which children can be identified, or that might reflect badly on the children, you or the school. If the children upload work they create for others to see, make sure their identity and contact details are protected. 	

Year 2 We Are Zoologists.

Subject Specific Vocabulary		Software and Tools	Sticky Knowledge about collecting data.
Chart	A sheet of information in the form of a table, graph, or diagram.	<ul style="list-style-type: none"> • Excel • Numbers • Google Maps Engine https://mapsengine.google.com/map. <p>Information and ideas Bugs Count (a national survey of bugs): www.opalexplornature.org/bugscount. iSpot (identifying wildlife): www.ispotnature.org.</p> 	<ul style="list-style-type: none"> • I can take photos of animals that are in focus and are of high quality. • I can edit, label and rate my photos. • I can move photos onto the computer. • I can use 'yes' or 'no' questions to decide which group an animal fits into. • I can create a chart. • I can add a title and label the axes of my chart. • I can change the way my chart looks. • I can show my results in different types of charts. • I can use a digital map to find a place. • I can use GPS to show where I found my animals.
Photograph	A picture made using a camera.		
Data	Facts and statistics collected together for reference or analysis		
Database	A structured set of data held in a computer, especially one that is accessible in various ways.		
Classification Key	A key is a set of questions about the characteristics of living things. You can use a key to identify a living thing or decide which group it belongs in by answering the questions.		
Tick chart.	A tick chart is one method of collecting data using tick marks to show a valuable data set.		
Tally chart	A tally chart is one method of collecting data using tally marks to show a valuable data set.		
<p>Unit Overview: In this unit, the children go on a bug hunt, recording and identifying the small animals they find. They then organise the data they have collected, record it using a graphing package, and interpret the graph to answer questions about the animals.</p>		<p style="text-align: center;">E- Safety</p> <ul style="list-style-type: none"> • Take precautions to protect the children's identity if they upload work they create, particularly if it includes photographs or video of themselves or each other. • Establish rules for using digital equipment when out of the classroom – to ensure the equipment is kept safe and that the children are not so focused on using it that they become unaware of risks around them. 	<p style="text-align: center;">A classification key for invertebrates</p> 