



## Computing Objectives

	KS1	KS2
<b>Computer Science CS</b>	<ol style="list-style-type: none"> <li>1. Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</li> <li>2. Create and debug simple programs</li> <li>3. Use logical reasoning to predict the behaviour of simple programs</li> </ol>	<ol style="list-style-type: none"> <li>1. Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> <li>2. use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li>3. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> <li>4. Understand computer networks including the internet; how they can provide multiple services such as the World Wide Web</li> <li>5. Appreciate how [search] results are selected and ranked</li> </ol>
<b>Information Technology IT</b>	<ol style="list-style-type: none"> <li>1. Use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> </ol>	<ol style="list-style-type: none"> <li>1. Use search technologies effectively</li> <li>2. 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</li> </ol>
<b>Digital Literacy DL</b>	<ol style="list-style-type: none"> <li>1. Recognise common uses of information technology beyond school</li> <li>2. Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies</li> </ol>	<ol style="list-style-type: none"> <li>1. Understand the opportunities [networks] offer for communication and collaboration</li> <li>2. Be discerning in evaluating digital content</li> <li>3. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</li> </ol>



Year 1

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Term:	Term/Topic:	Computing PPA aims/outcomes:	Possible in class outcomes:
Autumn 2018	Transition (RF)	<ul style="list-style-type: none"> <li>Basics of using EdTech in school: login, USO, PIN codes, keyboard skills</li> <li>LGfL, PurpleMash, Seesaw</li> <li>Hardware/Software</li> <li>Tech around us (local walk inc Oyster if possible)</li> <li>LGfL Big Day Out</li> </ul>	<ul style="list-style-type: none"> <li>Use Balloon Stickies + or Typorama to create 'Who am I' posters</li> <li>Combine video with QR codes to make digital postcards about themselves</li> </ul>
	London (NG)	<ul style="list-style-type: none"> <li>Basics of using EdTech in school: login, USO, PIN codes, keyboard skills</li> <li>LGfL, PurpleMash, Seesaw</li> <li>Hardware/Software</li> <li>Tech around us (local walk inc Oyster if possible)</li> <li>LGfL Big Day Out</li> </ul>	<ul style="list-style-type: none"> <li>Tourist Guide to London including green screening using Sway (with support) or Book Creator</li> <li>3D bus design (link to DT) and construction - PurpleMash</li> </ul>
Spring 2019	Special People (RF)	<ul style="list-style-type: none"> <li>Image creation using J2e (mouse control, file navigation)</li> <li>Keyboard skills labelling (PurpleMash)</li> <li>Animation using Scratch Jr</li> <li>Simulations</li> </ul>	<ul style="list-style-type: none"> <li>Mashcams using PurpleMash</li> <li>Digital Art using PurpleMash or Paint 3D</li> <li>Green Screening with special people</li> <li>Posters using Typorama</li> </ul>
	Weather (NG)	<ul style="list-style-type: none"> <li>Non-Fiction eBook using Book Creator (online or iPad) and green screening</li> <li>Beebots (&amp; Fakebots)</li> <li>Data handling – pictogram J2e</li> </ul>	<ul style="list-style-type: none"> <li>Weather forecasting including iMovie and green screening</li> <li>BBC Weather Watchers</li> </ul>
Summer 2019	How is it made? (RF)	<ul style="list-style-type: none"> <li>Non-Fiction eBook using Book Creator (online or iPad) and green screening</li> <li>Beebots (&amp; Fakebots)</li> <li>Data handling – pictogram J2e</li> <li>technology use in the community - voting</li> </ul>	<ul style="list-style-type: none"> <li>Creating a digital advert for their toy using J2e or PurpleMash</li> <li>Computer Aided Design – linked to DT – Paint 3D</li> <li>Digital photography/filming shared on Seesaw</li> </ul>
	It's Alive! (NG)	<ul style="list-style-type: none"> <li>Technology use in the community – medical equipment</li> <li>Image creation using J2e (mouse control, file navigation)</li> <li>Keyboard skills labelling (PurpleMash)</li> <li>Animation using Scratch Jr</li> <li>Simulations</li> </ul>	<ul style="list-style-type: none"> <li>Mashcams</li> <li>Green Screening</li> </ul>



Year 2

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Term:	Term/Topic:	Computing PPA aims/outcomes:	Possible in class outcomes:
Autumn 2018	Fire (RF and NG)	<ul style="list-style-type: none"> <li>Create an animation of Fire of London (J2e)</li> <li>Technology use in the community (999 calls)</li> <li>Create an Acrostic poem poster inc images (Word)</li> </ul>	<ul style="list-style-type: none"> <li>Green screening opportunities including new reports</li> <li>Writing a newspaper report</li> <li>Interactive display using QR codes to video content</li> </ul>
	"How are you?"		<ul style="list-style-type: none"> <li>Use Audacity to create audio books</li> <li>Create an eBook using Book Creator</li> <li>Publish information leaflet about Anthony Browne using PurpleMash</li> <li>Write and blog book reviews using a template in J2e</li> </ul>
Spring 2019	Into Africa (RF)	<ul style="list-style-type: none"> <li>Create a silhouette image (PowerPoint)</li> <li>Share learning using Sway inc video</li> <li>Create a story using Scratch Jr or Book Creator</li> </ul>	<ul style="list-style-type: none"> <li>Create tourist info posters using Typorama</li> <li>Data Handling – using J2e or PurpleMash</li> <li>Use Beebots to travel around Africa on a map</li> <li>Explore Africa using digital maps</li> <li>Use Google Expeditions to 'visit' Africa – eg Safari</li> </ul>
	Habitats (NG)	<ul style="list-style-type: none"> <li>Data handling – charts/graphs (J2e and Excel)</li> <li>Explore/create a Branching Database</li> <li>Create a silhouette image (PowerPoint)</li> <li>Create a quiz (PurpleMash)</li> </ul>	<ul style="list-style-type: none"> <li>Create a Non-Fiction book using Book Creator or J2e</li> <li>Green screening into habitats – appsmash with Clips or iMovie for example</li> <li>Use Google Expeditions to 'visit' a variety of habitats worldwide eg Polar regions</li> </ul>
Summer 2019	Nocturnal Animals (RF)	<ul style="list-style-type: none"> <li>Data handling – charts/graphs (J2e and Excel)</li> <li>Explore/create a Branching Database</li> <li>Create a quiz (PurpleMash)</li> </ul>	<ul style="list-style-type: none"> <li>Create digital artwork inc layering</li> <li>Make word clouds to support vocabulary</li> </ul>
	The Stories People Tell (NG)	<ul style="list-style-type: none"> <li>Explore 'The parrots and the Raja' interactives</li> <li>Retell a traditional tale using Sway inc video</li> <li>Create a story using Scratch Jr or Book Creator</li> </ul>	<ul style="list-style-type: none"> <li>Green screening to retell stories</li> <li>Use audacity to create an audio book</li> <li>Explore Toontastic to tell a story</li> </ul>



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**Year 3**

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<b>Term:</b>	<b>Term/Topic:</b>	<b>Computing PPA aims/outcomes:</b>	<b>Possible in class outcomes:</b>
<b>Autumn 2018</b>	Opposites (RF and NG)	<ul style="list-style-type: none"> <li>Explore Servers and Networks</li> <li>Investigate Web searches</li> <li>Send/receive email using PurpleMash or O365</li> <li>Explore algorithms using Beebots</li> </ul>	<ul style="list-style-type: none"> <li>Create a quiz using Kahoot! or 2Quiz (PurpleMash)</li> <li>Write an author fact file using PurpleMash</li> <li>Share Book Reviews using FlipGrid</li> </ul>
	The Big Dig		<ul style="list-style-type: none"> <li>Augmented and Virtual Reality using LGfL Romans resource</li> <li>Create a basic PowerPoint</li> <li>Google Expeditions</li> </ul>
<b>Spring 2019</b>	Oceans and Seas (RF)	<ul style="list-style-type: none"> <li>Create a word search - Properties of tables in Word</li> <li>Digital versus analogue mapping to identify seas and oceans</li> <li>Possible Minecraft (if subscribed) or Paint 3D/Mixed Reality</li> </ul>	<ul style="list-style-type: none"> <li>Google Expeditions</li> <li>Green Screening into a scene from Flotsam</li> <li>Create an underwater animation using J2e, Scratch or Kodu</li> </ul>
	Our Island Home (NG)	<ul style="list-style-type: none"> <li>Create a word search - Properties of tables in Word</li> <li>Digital versus analogue mapping to identify locations around the UK</li> <li>Possible Minecraft (if subscribed) or Paint 3D/Mixed Reality</li> </ul>	<ul style="list-style-type: none"> <li>Google Expeditions</li> <li>Green Screening into a scene from 'Way Home'</li> <li>Create an animation using J2e, Scratch or Kodu</li> </ul>
<b>Summer 2019</b>	How Does Your Garden Grow? (RF)	<ul style="list-style-type: none"> <li>Stop Motion animation of a plant growing inc iMovie</li> <li>Explore using data loggers</li> <li>Data handling – tables/charts</li> </ul>	<ul style="list-style-type: none"> <li>Create travel brochure using PurpleMash, J2e, PowerPoint or Sway</li> </ul>
	Light and Dark (NG)	<ul style="list-style-type: none"> <li>Interactive Scratch topic page</li> <li>Explore using data loggers</li> <li>Data handling – tables/charts</li> <li>Create a sunrise/sunset animation (PurpleMash)</li> </ul>	<ul style="list-style-type: none"> <li>Create digital newspaper article using a template</li> <li>Create interactive newsletter using Sway – inc video content</li> <li>Green screening on location</li> </ul>



Year 4

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Term:	Term/Topic:	Computing PPA aims/outcomes:	Possible in class outcomes:
Autumn 2018	Chocolate (RF and NG)	<ul style="list-style-type: none"> <li>Computer Aided Design using Paint 3D</li> <li>Explore costings using Excel and formulae</li> <li>Conduct market research using Forms</li> </ul>	<ul style="list-style-type: none"> <li>Create a digital advert using Microsoft Sway inc appsmashing</li> <li>Create audio advert using Audacity or GarageBand</li> <li>Record poems using Green screening and iMovie</li> <li>Use the LGfL resource 'Maya' for Augmented Reality opportunities</li> </ul>
	Food, Glorious Food!		<ul style="list-style-type: none"> <li>Green screen in historical or biological setting</li> <li>MashCams using PurpleMash</li> <li>Write digital diary using J2e or PurpleMash</li> <li>Google Expeditions linked to digestion etc</li> <li>Produce a leaflet/information booklet using PurpleMash or Book Creator</li> </ul>
Spring 2019	Inventors (RF and NG)	<ul style="list-style-type: none"> <li>Introduction to the Micro:bit</li> <li>Create a doorbell for the deaf inc using Paint 3D to design</li> <li>Option of method to present to peers – eg PowerPoint, Book Creator, iMovie, Sway</li> </ul>	<ul style="list-style-type: none"> <li>Create a quiz using Kahoot!</li> <li>Write an algorithm as a series of instructions</li> <li>Green Screening and appsmashing</li> <li>Produce an explanation text about hearing using Book Creator</li> <li>Skype an inventor</li> </ul>
Summer 2019	Save Our Planet (RF)	<ul style="list-style-type: none"> <li>Create a Non-Fiction PowerPoint (non-linear) highlighting the 3Rs</li> <li>Create and code an environment using CoSpaces</li> </ul>	<ul style="list-style-type: none"> <li>Write a film review using PurpleMash</li> <li>Create a movie trailer/review using iMovie</li> <li>Skype an environmentalist</li> <li>Retell the story using TextingStory</li> </ul>
	Circus (NG)	<ul style="list-style-type: none"> <li>Create a Non-Fiction PowerPoint (non-linear) about the circus inc history</li> <li>Create and code a circus using CoSpaces</li> </ul>	<ul style="list-style-type: none"> <li>Create a story using Book Creator</li> <li>Write a 'pick your path' story using Forms (Branching)</li> <li>Share experiences using FlipGrid</li> </ul>



**Year 5**

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<b>Term:</b>	<b>Term/Topic:</b>	<b>Computing PPA aims/outcomes:</b>	<b>Possible in class outcomes:</b>
<b>Autumn 2018</b>	Space (RF and NG)	<ul style="list-style-type: none"> <li>■ Create a quiz using loops and variables linked to space</li> <li>■ Blogging inc sharing via social media</li> <li>■ Create 'Top Trump' cards based on planet data using j2e database</li> </ul>	<ul style="list-style-type: none"> <li>■ Explore the Space Adventures (inc VR) by LGfL inc maths, literacy and science links</li> <li>■ Google Expeditions</li> <li>■ Produce explanation text using Sway or Book Creator</li> <li>■ Use Kahoot! to create a quiz</li> <li>■ Create a space environment using CoSpaces</li> <li>■ Skype an astronaut</li> </ul>
	Vikings and Saxons		<ul style="list-style-type: none"> <li>■ Augmented and Virtual Reality using LGfL resource 'Sigurd and the dragon'</li> <li>■ Write newspaper articles or produce news report using Word/PurpleMash/iMovie</li> <li>■ Green Screening</li> </ul>
<b>Spring 2019</b>	Egyptians (RF)	<ul style="list-style-type: none"> <li>■ 'Operation' style game project using Makey Makey, image manipulation, Scratch</li> <li>■ Document the project using Book Creator, Sway or iMovie</li> <li>■ Use forms to create a feedback method inc QR code</li> </ul>	<ul style="list-style-type: none"> <li>■ Retell 'The Highwayman' by creating a trailer or short movie using iMovie</li> <li>■ Record poetry using iMovie and Green Screening</li> <li>■ Create a quiz using Kahoot!</li> <li>■ Google Expeditions</li> </ul>
	Jungle (NG)	<ul style="list-style-type: none"> <li>■ 'Operation' style game project using Makey Makey, image manipulation, Scratch</li> <li>■ Document the project using Book Creator, Sway or iMovie</li> <li>■ Use Forms to create a feedback method inc QR code</li> </ul>	<ul style="list-style-type: none"> <li>■ Use Sway or Word to create a travel brochure/leaflet</li> <li>■ Use Book Creator to create persuasive content to support endangered animals</li> <li>■ Skype an environmentalist linked to animals</li> </ul>
<b>Summer 2019</b>	The Olympics (RF)	<ul style="list-style-type: none"> <li>■ Explore flowcharts using traditional playground games</li> <li>■ Create and code an Olympic village/stadium environment using CoSpaces</li> <li>■ Olympic Torch/Flame - CAD using Google SketchUp or Paint 3D</li> </ul>	<ul style="list-style-type: none"> <li>■ Use green screening and iMovie to create a news report about 'The Iron Man'</li> <li>■ Produce an audio retelling of 'The Iron Man' using GarageBand and sound effects</li> <li>■ Google Expeditions</li> <li>■ Explore Excel linked to medals and results</li> </ul>
	Build It High (NG)	<ul style="list-style-type: none"> <li>■ House design – CAD using Google SketchUp or Paint 3D</li> <li>■ Create and code a town/city environment using CoSpaces</li> <li>■ Explore flowcharts using traditional playground games</li> </ul>	<ul style="list-style-type: none"> <li>■ Use green screening and iMovie to create a news report about 'King Kong'</li> <li>■ Produce an audio retelling of 'King Kong' using GarageBand and sound effects</li> <li>■ Create a housing advert using J2e5, Word or Sway</li> </ul>





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Year 6

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Term:	Term/Topic:	Computing PPA aims/outcomes:	Possible in class outcomes:
<b>Autumn 2018</b>	Migration (RF and NG)	<ul style="list-style-type: none"> <li>▪ Analogue versus digital questionnaires</li> <li>▪ Create a questionnaire for the public using Forms – Branching option</li> <li>▪ Data analysis using Excel (via Forms)</li> <li>▪ Create a presentation using a variety of apps and programs of choice inc green screening and audio/visual</li> </ul>	<ul style="list-style-type: none"> <li>▪ Green Screening opportunities throughout linked with digital diary writing – Sway, Word, PurpleMash, J2e</li> <li>▪ Google Expeditions</li> <li>▪ Skype an expert</li> <li>▪ Create key quotes/concept posters using Typorama</li> </ul>
<b>Spring 2019</b>	The Tudors (RF and NG)	<ul style="list-style-type: none"> <li>▪ Explore website design using Mozilla X-Ray goggles</li> <li>▪ Introduction to HTML</li> <li>▪ Create a website about the Tudors using method of choice:- HTML or J2e5 inc embedded content</li> <li>▪ Send/Receive email in character using O365 or PurpleMash mail</li> </ul>	<ul style="list-style-type: none"> <li>▪ Google Expeditions</li> <li>▪ Produce a news report using iMovie and green screening</li> <li>▪ Retell parts of the story using TextingStory</li> <li>▪ Create an author fact file using PurpleMash or Sway</li> </ul>
<b>Summer 2019</b>	Changes (RF and NG)	<ul style="list-style-type: none"> <li>▪ Appsmash to create 'All about my time at primary school'</li> <li>▪ Presentation method of choice</li> <li>▪ Virtual Tour of school using CoSpaces or Scratch</li> </ul>	<ul style="list-style-type: none"> <li>▪ Write alternative 'pick your path' story using Forms – branching</li> <li>▪ Record a diary entry and share using FlipGrid</li> </ul>