



Palfrey Junior School Computing Curriculum Map

National Curriculum Key stage 2 Programme of Study

Pupils should be taught to:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and

correct errors in algorithms and programs

- **understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for**

communication and collaboration

- **use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content**

- **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**

- **use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact**

YEAR 3 Computing and Online Safety Overview

Year 3	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer1	Summer2
Computing	<p>Familiarisation with keyboard (2Type PM, Dance Mat Typing http://www.bbc.co.uk/guides/z3c6tfr)and logging in to network/LP/PurpleMash/Bug Club/Ed City etc</p> <p>Presentations - PP/2Publish 2Animate 2DIY</p> <p>Using the Internet – research skills, and e-safety skills.</p> <p>Word Processing skills (keyboard shortcuts etc) including copy and paste images, or save as images. Be aware plagiarism</p>	<p>Using the Internet - research skills, and e-safety skills.</p> <p>Presentations - PP/2Publish 2Animate 2DIY</p> <p>Algorithms and Programs - see Barefoot resources http://barefootcas.org.uk/</p> <p>2Code Chimp level</p> <p>SWOC for year 3: programming unit</p> <p>Data Retrieving and Organising 2Count and 2Graph before going onto Excel etc. Survey tool on the Learning Platform.</p>	<p>Ongoing keyboard/logging in familiarisation</p> <p>Using the Internet research skills, and e-safety skills.</p> <p>Presentation - PP/2Publish 2Animate 2DIY</p> <p>Upload and save work to ICT proud folder/Learning Platform</p> <p>2Code Chimp level</p> <p>Ongoing</p>	<p>Spreadsheets – 2Calculate in Purple Mash (Teachers Tools/Year 3 Planning/Spreadsheets)</p> <p>Communicating (sending messages using the Learning Platform) PurpleMash 2Email Different ways to communicate online http://www.bbc.co.uk/guides/z9r72hv</p> <p>Networks- see Barefoot resources http://barefootcas.org.uk/ Network Activity Hunt https://barefootcas.org.uk/programme-of-study/understand-computer-networks-including-internet/ks2-network-hunt-activity/</p> <p>What is the Internet (BBC- KS1) http://www.bbc.co.uk/guides/zg</p>	<p>Using the Internet research skills, and e-safety skills.</p> <p>SWOC - Comic Writer Comic Life App Book creator App</p> <p>2Code Chimp level</p> <p>Ongoing</p>	

				wnsbk How does the Internet work (BBC –KS2) http://www.bbc.co.uk/guides/z3tbgk7 2Code Chimp level Ongoing		
Online Safety	Acceptable use policy and logging in Discuss the Acceptable Use Policy with the pupils and ask them to sign a copy for their class book. Pupils to practise logging onto the computer and into Bug club. <i>I can explain why spending too much time using technology can sometimes have a negative impact on me; I can give some examples of activities where it is easy to spend a lot of time engaged (e.g. games, films, videos).</i>	Powerful Passwords (Privacy and Security) Pupils and students explore reasons why people use passwords, learn the benefits of using passwords, and discover strategies for creating and keeping strong, secure passwords. <i>I can give reasons why I should only share information with people I choose to and can trust. I can explain that if I am</i>	Writing Good emails (Relationships and Communication) Pupils and students learn how to communicate effectively by email, taking into account the purpose and audience of their message, and the tone	Showing respect online (Relationships and communication) Pupils and students explore the similarities and differences between in-person and online communications, and then learn how to write clear and respectful messages. <i>I can describe ways people who have similar likes and interests can get together online. I can give examples of technology specific forms of communication (e.g. emojis, acronyms, text speak).</i> <i>I can explain some risks of communicating online with others I don't know well. I can explain how my and other people's feelings can be hurt by</i>	Things for sale (Information Literacy) Pupils and students examine product websites and understand that the purpose of the site is to encourage buying the product. Pupils and students learn methods used to promote products on these sites.	My online community (Relationships and communication) Pupils and students explore the concept that people can connect with one another through the Internet. They understand how the ability for people to communicate

		<p>not sure or I feel pressured, I should ask a trusted adult. I understand and can give reasons why passwords are important.</p> <p>I can describe simple strategies for creating and keeping passwords private. I can describe how connected devices can collect and share my information with others.</p>	<p>they want to convey.</p> <p>I can describe rules about how to behave online and how I follow them.</p> <p>I can explain what bullying is and can describe how people may bully others</p>	<p>what is said or written online. I can explain why I should be careful who I trust online and what information I can trust them with. I can explain why I can take back my trust in someone or something if I feel nervous, uncomfortable or worried. I can explain what it means to 'know someone' online and why this might be different from knowing someone in real life. I can explain what is meant by 'trusting someone online'. I can explain why this is different from 'liking someone online'.</p>	<p>I can use key phrases in search engines. I can explain how the internet can be used to sell and buy things. I can explain the difference between a 'belief', an 'opinion' and a 'fact'. I can explain what autocomplete is and how to choose the best suggestion.</p> <p>I can search for information about myself online</p> <p>I can recognise I need to be careful find. before I share anything about</p>	<p>online can unite a community.</p> <p>I can explain what is meant by the term 'identity'. I can explain how I can represent myself in different ways online. I can explain ways in which and why I might change my identity depending on what I am doing online (e.g. gaming; using an avatar; social media).</p>
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					myself or others online. I know who I should ask if I am not sure if I should put something online.	
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Year 4 Computing and Online Safety Overview

Year 4	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer1/2
Computing	<p>Familiarisation with keyboard (2Type PurpleMash) Dance Mat Typing http://www.bbc.co.uk/guides/z3c6tfr</p> <p>Presentations – Power Point Lesson on PP skills before creating real PP</p> <p>Using the Internet research skills, and e-safety skills http://www.bbc.co.uk/guides/ztbjq6f</p> <p>- see Barefoot resources</p>	<p>Algorithms - see Barefoot resources http://barefootcas.org.uk/</p> <p>2D shape drawings</p> <p>Also BBC Primary Computing - http://www.bbc.co.uk/guides/zqrg7ty</p> <p>Presentations and using the Internet - ongoing</p> <p>Programming – 2Code Chimp Level to carry on in Scratch Jr</p>	<p>SWOC We are Travel Presenters – Tamworth Castle</p> <p>2Create a Story and then publish on the LP in the form of a discussion.</p> <p>Programmin g – 2Code to carry on in Scratch Jr</p>	<p>Databases (animals and habitats)</p> <p>PurpleMash 2Investigate http://www.bbc.co.uk/guides/z8yk87h</p> <p>Communicating (benefits of using ICT to send messages and communicate- Use Learning Platform/ messages) Think about what it would be like without these forms of communication.</p> <p>History of communication?</p> <p>Programming –</p>	<p>How does the Internet work? http://www.bbc.co.uk/guides/z3tbgk7</p> <p>- see Barefoot resources http://barefootcas.org.uk/</p> <p>Network Activity Hunt</p> <p>We are Co-Authors (refer to SWITCHED ON ICT) Use Pages in LP as Wikis.</p> <p>Plenary after learning about wikis http://www.bbc.co.uk/guides/zt9thyc</p> <p>Programming – 2CodeChimp/Gibbon level to</p>

	http://barefootcas.org.uk/ Selecting Search Results			2CodeChimp/Gibbon level to carry on in Scratch Jr	carry on in Scratch Jr	
Online Safety	Acceptable use policy and logging in Discuss the Acceptable Use Policy with the pupils and ask them to sign a copy for their class book. Pupils to practise logging onto the computer and into Bug club. I can explain what a strong password is.	Private and personal information (Privacy and security, Information Literacy) How can you protect yourself from online identity theft? Pupils and students think critically about the information they share online. I can describe strategies for safe and fun experiences in a	Rings of responsibility (Self-image and identity, Relationships and communication) Pupils explore what it means to be responsible	The power of words (Internet safety and cyberbullying) Pupils and students consider that they may get online messages from other kids that can make them feel angry, hurt, sad, or fearful. Pupils and students identify actions that will make them upstanders in the face of cyberbullying. I can identify some online	The key to keywords – (Digital Literacy) Pupils and students learn strategies to increase the accuracy of their keyword searches and make inferences about the	Whose is it anyway? (Creative credit and copyright, Information Literacy) Pupils and students learn that copying the work of others and presenting it as one's own

	<p>I can describe strategies for keeping my personal information private, depending on context. I can explain that others online can pretend to be me or other people, including my friends. I can suggest reasons why they might do this. I can explain how internet use can be monitored.</p>	<p>range of online social environments.</p> <p>I can give examples of how to be respectful to others online.</p>	<p>to and respectful of their offline and online communities as a way to learn how to be good digital citizens</p> <p>I can explain how my online identity can be different to the identity I present in 'real life'.</p> <p>Knowing this, I can describe the right decisions about how I</p>	<p>technologies where bullying might take place.</p> <p>I can describe ways people can be bullied through a range of media (e.g. image, video, text, chat). I can explain why I need to think carefully about how content I post might affect others, their feelings and how it may affect how others feel about them (their reputation).</p>	<p>effectiveness of the strategies.</p> <p>I can describe how others can find out information about me by looking online.</p> <p>I can explain ways that some of the information about me online could have been created, copied or shared by others.</p>	<p>is called plagiarism. They also learn about when and how it's ok to use the work of others.</p> <p>I can analyse information and differentiate between 'opinions', 'beliefs' and 'facts'. I understand what criteria have to be met before something is a 'fact'. I can describe how I can search for information within a wide</p>
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			interact with others and how others perceive me.			group of technologies (e.g. social media, image sites, video sites). I can describe some of the methods used to encourage people to buy things online (e.g. advertising offers; in-app purchases, pop-ups) and can recognise some of these when they appear online. I can explain that some people I 'meet online' (e.g. through social media) may be
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						computer programmes pretending to be real people. I can explain why lots of people sharing the same opinions or beliefs online does not make those opinions or beliefs true.
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Year 5 Computing and Online Safety

Year 5	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Computing	<p>Presentations Power Point skills, transitions, animations, hyperlinks to websites or pages in PP</p> <p>Compare and contrast with another presentation tool like keynote (ipad) Book Creator app</p> <p>Using the Internet research skills and e-safety</p> <p>How do search engines work?</p> <p>http://www.bbc.co.uk/guides/ztbq6f</p> <p>- see Barefoot resources</p> <p>http://barefootcas.org.uk/</p> <p>Modelling the Internet no extension</p>	<p>Databases</p> <p>Look at 2Investigate – Purple Mash then move onto Excel</p> <p>SWOICT We are statisticians</p> <p>Algorithms</p> <p>What is an algorithm</p> <p>http://www.bbc.co.uk/guides/zgrq7tv</p> <p>- see Barefoot resources</p> <p>http://barefootcas.org.uk/</p> <p>2D shape drawing activity</p> <p>Programming</p> <p>2Code – PurpleMash start with Chimp level</p> <p>Take program ideas into Scratch Jr or Scratch</p>	<p>We are bloggers SWOICT</p> <p>Use ItsLearning for discussion areas as blogs to start.</p> <p>Look at PurpleMash 2Blog and set up a class blog</p> <p>Communication</p> <p>http://www.bbc.co.uk/guides/z9r72hv</p> <p>Programming</p> <p>2Code – PurpleMash start looking at Gibbon level activities</p> <p>Take program ideas into Scratch</p>	<p>Presentation - ongoing</p> <p>Using the Internet research skills and e-safety</p> <p>- see Barefoot resources</p> <p>http://barefootcas.org.uk/</p> <p>Selecting Search results</p> <p>Word Processing top up skills – knowledge of cut copy paste, keyboard familiarisation 2Type PurpleMash</p> <p>Topic themes for ready-made writing activities or use 2Publish Extra.</p>	<p>SOICT- We are Advertisers</p> <p>Create a jingle – Audacity/iMovie/2Sequence(Purple Mash)</p> <p>Programming</p> <p>2Code – PurpleMash start looking at Gibbon level activities</p> <p>Take program ideas into Scratch Jr or Scratch or Pyonkee (free ipad app)</p>	<p>Communicating (send instant messages and video chat to another class- ItsLearning, 2Email on PurpleMash)</p> <p>We are Architects – Sketch Up</p> <p>*Marc Richardson to teach an introductory lesson.</p> <p>mrichardson@walsall.gov.uk</p>

<p>Online Safety</p>	<p>Acceptable use policy and logging in</p> <p>Discuss the Acceptable Use Policy with the pupils and ask them to sign a copy for their class book.</p> <p>Pupils to practise logging onto the computer and into Bug Club.</p> <p>I can create and use strong and secure passwords.</p> <p>I can explain how many free apps or services may read and share my private information (e.g. friends, contacts, likes, images, videos, voice, messages, geolocation) with others. I can explain how and why some apps may request or take payment for additional content (e.g. in-app purchases) and explain why I should seek permission from a trusted adult before purchasing.</p>	<p>Strong passwords (Privacy and security)</p> <p>Pupils and students learn how to create secure passwords in order to protect their private information and accounts online. Pupils change their passwords.</p> <p>I can explain why I need to think carefully before I forward anything online. I can explain why some information I find online may not be honest, accurate or legal. I can explain why information that is on a large number of sites may still be inaccurate or untrue. I can assess how this might happen (e.g. the sharing of misinformation either by accident or on purpose).</p>	<p>Digital citizen pledge (Relationships and communication, Self-image and identity)</p> <p>Pupils work together to outline common expectations in order to build a strong digital citizenship community. Each member of the class signs a We the Digital Citizens Pledge.</p> <p>I can explain that there are some people I communicate with online who may want to do me or my friends harm. I can recognise that this is not my/our I can give examples of technology- fault.</p> <p>I can make positive contributions and be part of online communities.</p> <p>I can describe some of the communities in which I am involved and describe how I collaborate with others positively.</p>	<p>You've won a prize (Privacy and security)</p> <p>Pupils learn what spam is, the forms it takes, and then identify strategies for dealing with it.</p> <p>(Hectors World, Play like share resources, Spot the tactics in workbook 1 – CEOP resources)</p> <p>I can recognise when someone is upset, hurt or angry online.</p> <p>I can describe how to get help for someone that is being bullied online and assess when I need to do or say something or tell someone. I can</p>	<p>How to cite a site (Information Literacy)</p> <p>Pupils reflect on the importance of citing all sources when they do research. They then learn how to write bibliographical citations for online sources.</p> <p>I can search for information about an individual online and create a summary report of the information I I can recognise I need to be careful find.</p> <p>I can describe ways that information about people online can be used by others to make judgments about an individual.</p> <p>I can evaluate digital content and can explain how I make choices from search results. I can explain key concepts including: data, information, fact, opinion belief, true, false, valid, reliable and evidence. I understand the difference</p>	<p>Picture perfect (Creative Credit & Copyright, Information Literacy, Self-image and identity)</p> <p>Pupils and students learn how photos can be altered digitally. They will consider the creative upsides of photo alteration, as well as its power to distort our perceptions of beauty and health.</p> <p>(Consequences in later life e.g. police, uni/college)</p> <p>I can explain how identity online can be copied, modified or altered.</p> <p>I can demonstrate responsible choices about my online identity, depending</p>
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	<p>I can describe ways technology can affect healthy sleep and can describe some of the issues.</p> <p>I can describe some strategies, tips or advice to promote healthy sleep with regards to technology.</p>			<p>explain how to block abusive users. I can explain how I would report online bullying on the apps and platforms that I use. I can describe the helpline services who can support me and what I would say and do if I needed their help (e.g. Childline).</p>	<p>between online mis-information (inaccurate information distributed by accident) and dis-information (inaccurate information deliberately distributed and intended to mislead). I can explain what is meant by 'being sceptical'. I can give examples of when and why it is important to be 'sceptical'. I can explain what is meant by a 'hoax'</p>	<p>on context.</p>
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Year 6 Computing and Online Safety

Year 6	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer6
Computing	<p>Using the Internet research skills and e-safety</p> <p>How does the search engines work?</p> <p>http://www.bbc.co.uk/guides/ztbjq6f</p> <p>see Barefoot resources</p> <p>http://barefootcas.org.uk/Selecting Search Activity</p> <p>Presentation skills</p> <p>Developing Power Point skills including adding hyperlinks to other pages in Power Point.</p> <p>Look at other</p>	<p>Algorithms - see Barefoot resources</p> <p>http://barefootcas.org.uk/</p> <p>Logical Number Sequence</p> <p>http://www.bbc.co.uk/guides/zqrq7ty</p> <p>Programming</p> <p>2Code – PurpleMash start with Gibbon level</p>	<p>SOICT – We Are Game Developers – Power Point</p> <p>2DIY – PurpleMash</p> <p>Scratch- Pyonkee iPad alternative</p> <p>Look at basic game lesson plans.</p> <p>Keyboard Skills/familiarisation</p> <p>2Type</p> <p>Keyboard shortcuts</p>	<p>We Are Explorers - Google Earth – look at geographical data.</p> <p>Where does the information come from?</p> <p>Is it a good idea for all your devices to know where you are?</p> <p>Create a video tour of where food/clothes have originated from?</p>	<p>Modelling the Internet- see Barefoot resources</p> <p>http://barefootcas.org.uk/</p> <p>How does the Internet work?</p> <p>http://www.bbc.co.uk/guides/z3tbgk7</p> <p>Programming</p> <p>2Code – PurpleMash look at Gorilla level</p> <p>Take program ideas into Scratch</p> <p>End of Year project – presentation, PP Movie Maker, Book Creator or other.</p>	

	<p>presentation packages and compare and contrast.</p> <p>Keynote (iPad)</p> <p>2 Publish extra Slideshows – PurpleMash.</p>				Publish to LP	
Online Safety	<p>Acceptable use policy, logging in and changing passwords</p> <p>Discuss the Acceptable Use Policy with the pupils and ask them to sign a copy for their class book.</p> <p>Pupils to practise logging onto the computer and into Bug club.</p> <p>Discuss the need for secure and updated passwords. Pupils change their</p>	<p>Talking safely online (Internet safety, relationships and communication)</p> <p>Pupils learn that the Internet is a great place to develop rewarding relationships. But they also learn not to reveal private information to a person they know only online</p> <p>I can show I understand my responsibilities for the well-being of others in my online social group. I can</p>	<p>Super digital citizen (Relationships and communication, self-identity)</p> <p>Pupils explore Spiderman’s motto, "with great power comes great responsibility" through the lens of digital citizenship. They create comic strips show a digital superhero who witnesses an act of poor digital citizenship, and</p>	<p>Privacy rules (Privacy and Security)</p> <p>Pupils learn that children’s websites must protect their private information. They learn to identify these secure sites by looking for their privacy policies and privacy seals of approval.</p> <p>I can explain how I am developing an online</p>	<p>What is cyberbullying – (Cyberbullying, relationships and communication)</p> <p>Pupils explore how it feels to be cyberbullied, how cyberbullying is similar to or different than in-person bullying, and learn strategies for handling</p>	<p>Selling stereotypes (Information Literacy and Self-image and identity)</p> <p>Pupils explore how the media can play a powerful role in shaping our ideas about girls and boys. They practice identifying messages about gender roles in</p>

	<p>passwords.</p> <p>I can describe effective strategies for managing those passwords (e.g. password managers, acronyms, stories). I can explain what app permissions are and can give some examples from the technology or services I use. I can describe simple ways to increase privacy on apps and services that provide privacy settings. I can describe ways in which some online content targets people to gain money or information illegally; I can describe strategies to help me identify such content (e.g. scams, phishing). I know what to do if my password is lost or stolen. use different passwords for a range of online services.</p>	<p>explain how impulsive and rash communications online may cause problems (e.g. flaming, content produced in live streaming). I can demonstrate how I would support others (including those who are having difficulties) online.</p> <p>I can demonstrate ways of reporting problems online for both myself and my friends.</p>	<p>then helps resolve it. (Comic Life app)</p> <p>I can describe common systems that regulate age-related content (e.g. PEGI, BBFC, parental warnings) and describe their purpose.</p> <p>I can describe common systems that regulate age-related content (e.g. PEGI, BBFC, parental warnings) and describe their purpose.</p> <p>I can explain the importance of selfregulating my use of technology; I can demonstrate the strategies I use to do this (e.g. monitoring my time online, avoiding accidents).</p>	<p>reputation which will allow other people to form an opinion of me.</p> <p>I can describe some simple ways that help build a positive online reputation.</p>	<p>cyberbullying when it arises.</p> <p>I can describe how to capture bullying content as evidence (e.g screen-grab, URL, profile) to share with others who can help me.</p> <p>I can identify a range of ways to report concerns both in school and at home about online bullying.</p>	<p>two online activity zones for children.</p> <p>I can identify messages about gender roles and make judgements based on them. I can describe issues online that might make me or others feel sad, worried, uncomfortable or frightened. I know and can give examples of how I might get help, both on and offline. I can explain why I should keep asking until I get the help I need. can challenge and explain why it is important to reject</p>
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							inappropriate messages about gender online. I can describe ways in which media can shape ideas about gender.
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