Computing Long Term Plan – Buckstones

Year Group	Autumn Term		Spring Term		Summer Term	
Reception	**E Safety**					
Year 1 **Key vocab:** **Passwords –** a string of characters that allows access to a computer **Search engine –** a programme that searches key words against a data base typically to find websites **Algorithm –** a set of written instructions to solve a problem. **Program –** an algorithm that has been translated into commands the computer can understand. **Debug** – identify and fix errors in a program.	**E Safety (continuous)** SMART staying SMART online My Personal Information Twinkl How to act if find inappropriate content *Smartie Penguin (Yr1)*	**Using technology** Use keyboard skills to type in simple usernames and passwords. Launch appropriate programmes to task. Open and close a piece of equipment safely. *Purple Mash*	**Algorithms and programs** Plan a journey for a programmable toy *Bee Bots* Create a series of instructions to move around a course *Bee Bots app on ipads* Know that commands affect algorithms. Create and debug a simple program. *Using the internet (Google)* *i pads*		The difference between e-books and story books. Share e-books with class. *Scratch Junior - Computer Science* Add animation. Add sound. Position new sprites edit sprites and add and remove them Program a car/sprite to move/repeat actions and change speed *Paint 3D Editing and Applying Skills(Twinkl)*	
	Passwords **Search engine**	**Passwords**	**Algorithm** **Program** **Debug**			
	E Safety – revisit and reinforce at the start of each term. **Communicating and presentation - ongoing progressive skills throughout the year - cross curricular**					
	Using technology – reinforce across the curriculum. Explore technology in a range of jobs and look at the purposes of their uses and why they are needed for a variety of roles.					

Year 2 **Key vocab:** **Event –** an action that is recognised by the computer e.g. key stroke, mouse, click **Devices –** a unit of physical hardware or equipment e.g. mobile phone, laptop, tablet. **Physical network –** a system of computers that connect physically to each other by cables. **Wireless Network –** a system of computers that connect without cables, using wi-fi for example. **Mobile Network -** a system similar to wireless, but involving mobile/portable devices. **Search Engine -** a programme that searches key words against a data base typically to find websites	**How do we communicate safely online, including sending emails?** Purple Mash Unit 2.2 **Algorithms and Programs** Espresso Coding Start Level 2 (including refresher lessons Level 1)	**Control and Input** Purple Mash 2 Go Challenges (1-8) Use of the Probot to travel across a floor grid **Data Retrieving and Organising** How can we use effective questioning to find out information? Purple Mash Unit 2.4 including the use of binary trees	**Algorithms** **Espresso Coding** **(**Continuation of Level 2) **Communicating and Presentation** Know digital content can be represented in many forms. Add clip art. Add photos. Structure information in a table. Manipulate and present digital content and information. Purple Mash – 2.8 Presenting ideas
	E Safety – revisit and reinforce at the start of each term.		
	Using technology – reinforce across the curriculum. Save work to a folder and retrieve when needed. Understand how to edit and copy information. Capture a digital image, retrieve and manipulate. Explore technology in a range of jobs and look at the purposes of their uses and why they are needed for a variety of roles.		
	Event **Devices** **Physical network** **Wireless Network** **Mobile Network**		

Links – an object that if you click on it, it will take you somewhere else in the page or to a new page/website. **Password –** a string of characters that allows access to a computer **Debug –** identify and fix errors in a program.					
Year 3 **Key vocab:** **Identify –** information about you (the user) that is gathered and stored online **Social Networking - the** use of websites/applications to interact with others **Social Media –** websites and applications that allow users to participate in social networking **Emoji –** a small digital icon used to express an idea or an emotion **Text Speak –** shortened forms of words, can include	**E Safety to include emails** Use technology safely, respectfully and responsibly; recognise acceptable and unacceptable behaviour. Think before you share. Understand once an online message has been sent it can't be taken back How to respond if being asked for	**Data retrieving and organising** Use a database to identify objects, sort and classify data. Create a graph from a database *Smart Learning: Introduction to Databases*	**Communicating and Presentation** Use a publishing tool to create a poster or a leaflet. *Desktop publishing*	**Algorithms and Programs** Create basic applications, investigating how different variables can be changed. Explore simulations and discuss benefits Use simulations to make and test predictions. *Espresso Coding*	**Communicating and Presentation** Sequence short pieces of music using pre-recorded sounds *Smart Learning: Manipulating Sounds*

| the use of numbers when texting

Autocomplete – a software function that completes words without the user needing to type the whole word

Branching database – also known as a Binary Tree. Is a way of classifying objects using Yes/no questions.

Sequencing – a list of instructions given in a particular order.

Acronym – an abbreviation of a word e.g. PDF | personal information.

Twinkl Year 3 Online Safety Unit, Lessons 1, 3, 4 and 5

You tube – I don't want everybody to see my bum.

Azoome – Search it up 'I've Won'

Use email address book

Open and send an attachment

Purple mash – Unit 3.5 Emails, Lessons 2 and 5. | | | | | |
|---|---|---|---|---|---|---|
| | **Identify Social Networking Social Media Emoji Text Speak Autocomplete** | **Databases** | **Desktop Publishing** | **Coding** | **Coding** | **Manipulating Sounds** |
| | **E Safety – revisit and reinforce at the start of each term.** | | | | | |

	Using technology – reinforce across the curriculum.				
	Use technology to suit a particular purpose.				
	Navigate the internet.				
	Find relevant information by browsing a menu.				
	Search by keyword, using child friendly search engine.				
	Bookmark a page into favourites				
	Acronym				
Year 4 **Key vocab:** **Decomposition –** a way of thinking about problems or algorithms in smaller parts. **Abstraction –** filtering out unnecessary detail to simplify. **Tabs -** a marker that allows you to view multiple webpages. **Browser -** a computer programme used to navigate the world wide web **Domain Name –** a sequence of letters and /or numbers separated by 1 or more **.** that act as a pointer to a unique address on a computer network. A web domain always ends in an	**E Safety to include emails** Social networking sites and gaming sites carry risks. Benefits of a nickname for online use. Behave appropriately online. Cyber bullying and reporting. *Twinkl: Cyberbullying* Identify when attachments may not be safe.	**Data retrieving and organising** Explain what a spreadsheet is. Use terms colon, cells, rows and columns. *Teach Computing: Spreadsheets.* Enter data to create a graph. *Purple Mash –Unit 4.3*	**Algorithms and Programs** Design/write a program to achieve a specific goal. Create variables and If/Else statements. Debug a program. Make a control simulation. To understand decomposition and abstraction. *Espresso Block Coding Level 4 - Variables* Explore some simulations and evaluate them. *Lego WeDo –goal kicker and Goal keeper*	**Communicating and Presentation** Create presentation using powerpoint Use cc and bcc. Send work to class teacher. *Purple Mash* Adding transitions. Insert sound recordings. Choose and insert images. *Powerpoint*	**Communicating and Presentation** Animation frames. Onion skin tool. Add backgrounds and sounds. Stop Motion animation. *Purple Mash –Unit 4.6 Animation* Create an extended piece of music using pre-recorded sample for specific audience and evaluate.

						Garage band app
extension or 2 or 3 characters e.g. .uk, .com.	**Domain Name Search Engine**		**Decomposition Abstraction**		**Hyperlink Loop URL**	
Search Engine – a program that searches for and identifies items in a data base that corresponds to key words or characters specified by the user, used especially for finding particular sites on the world wide web. **Hyperlink –** a link to another location by clicking on a word or image. **Loop –** repetition of a fragment of code to complete an action multiple times. **URL -** Uniform Resource Locator – the address of a world wide web page.						

E Safety – revisit and reinforce at the start of each term.

Using technology – reinforce across the curriculum. Do they know what a browser is and use it to navigate a variety of programs? Use tabbed browsing to open 2 or more web pages at the same time. Can they open a variety of links and use them? Can they use a range of digital devices and combine a variety of software?

	Browser Tab

Year 5 **Key vocab:** **Mis-information –** Inaccurate information distributed by accident.	**E Safety** Understand privacy settings on social media sites. Dangers of communicating on	**Spreadsheets** Use a spreadsheet to: Convert unit of measurements; model a real life	**3d Modelling** Design a building for a purpose. Print a design as a 2D net.	**Algorithms and Programs** Design/write a program to achieve a specific goal.	**Algorithms and Programs** Plan a game. Create a game environment and quest.	**Communicating and Presentation** Plan a storyboard

Dis-information – Inaccurate information distributed deliberately and intended to mislead. **Hoax** – A deception or trick. **Geolocation** – The process of identifying the geographical location of a person/device by means of digital information. **Profile** – a short article giving information about a person or organisation.	devices such as x-box, PSP, phones. Can they verify information they have researched using more than one site. Discuss positive and negative impacts of using IT. Understand they should not publish other people's pictures or tag them on the internet. Do they know content put online is extremely difficult to remove? Create a strong password and realise they need to be regularly updated. Know where they can access support regarding online incidents. *Azoome – Search it up-My Pop Star Disaster* *Azoome – You're Not Laughing Cat*	problem; plan a cake sale; use the count tool to answer hypotheses; create simple formulae. *Smart Learning Spreadsheets*	Explore possibilities of 3D printing. *Purple Mash –Unit 5.6 Modelling* *(link with DT)*	Simulate a physical system. Introduce variables. Create and improve a game. Create a programme linked to internet safety. *Espresso Coding Year 5 (a)*	Evaluate own and others game. *Espresso Coding Year 5 (b)* Design a program which interacts with external controllers. *Lego WeDo (taught through D&T module)*	for a video or animation. Create, edit and refine. Incorporate filming techniques, sound effects, music. *Create a film on a topical subject. (C.c. English/Science)* *Via English-see English planning*

	Newsround – Caught in the web –Internet Safety				
	Mis-information Dis-information Hoax Geolocation Profile				
	E Safety – revisit and reinforce at the start of each term.				
	Using technology – reinforce across the curriculum. Download a document and save it to a computer or given device. Decide which sections are appropriate to copy and paste from a variety of web pages.				
Year 6 **Key vocab:** **PEGI –** Pan European Game Information – video game content rating. **BBFC –** British Board of Film Classification – an organisation that classifies films, videos and games. **Influence –** to have effect on someone- e.g. encourage them to buy something. **Manipulation –** controlling someone to your advantage – often unfairly or dishonestly.	**E-Safety** Use and amend own privacy settings to keep themselves safe**.** *Revisit Fakebook (Year 5).* Can they understand that some malicious adults may use various techniques to make contact and elicit personal information? Understand dangers of chatting/meeting up with online 'friend'. Can they understand the term peer	**Data retrieving and organising** Use spreadsheets in a real life situation to investigate probability, calculate discounts/final e.g. prices in a sale, plan how to spend pocket money, plan a school charity day. *Purple Mash – Unit 6.3 Spreadsheets/Excel*	**Algorithms and Programs** Design and write a more complex program. Introduce functions. Introduce variables. Use flow charts to test and debug a program. Create and improve a game. *Purple Mash – Unit 6.1 Coding Espresso* *Lego WeDo – Plan and design a game – spinner, flying bird, cheerful fans, aeroplane rescue, giant escape, sailboat storm.*	**Communicating / Presentation** Create a non-linear presentation. Make quizzes with different question types. Make a quiz that requires a player to search a database. *Purple Mash 6.7 – Quizzing.*	**Communicating / Presentation** Create a multimedia presentation. Confidently use text formatting tools. Explore menu bar and experiment with images. Presentation to include: Sound, animation, video, buttons to navigate.

Password Managers – used to store and manage a person's passwords. **Scams –** an illegal plan for making money by tricking people. **Phishing –** the fraudulent practice of sending emails purporting to be from reputable companies to encourage individuals to reveal personal information such as password and credit card numbers. **Screen Grab –**an image that you create by capturing and copying part or all of a computer display at a particular moment.	pressure and how powerful the emotion of 'feeling left out' can be? Can they explain why people may publish content on the internet that is not accurate? Can they identify and recognise the potential risks of scamming and phishing? Do they understand the concept of being a good digital citizen? Can they access support surrounding incidents online? *Revisit: Azoome Search it up clips. Purple Mash – Unit 6.2 Online safety*			*(Quiz/who wants to be a millionaire?)*	Consider design principles, make independent choices about the best media to use considering needs of the audience and the impact the presentation will have.
	PEGI BBFC Influence Manipulation Password Managers Scams Phishing				**Screen Grab**

	E Safety – revisit and reinforce at the start of each term.
	Using technology – reinforce across the curriculum. Use tabs to make a comparison of a website.