

St Andrew's Curriculum

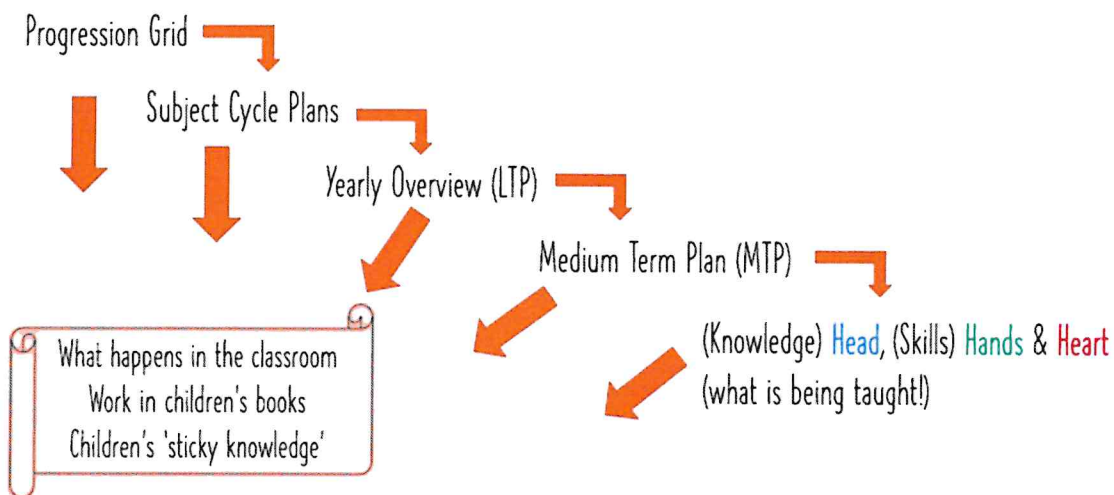
Our intent is to provide our children with a creative, captivating and challenging curriculum that equips them for today and tomorrow. As Jesus said to Andrew, "Push Out into the Deep" (Luke 5:4), we encourage children to take risks and build their resilience in all aspects of school life.

Our 6 whole school topics reinforce our key values – Celebrating our Community, Being Brave, Keeping Healthy, Making a Difference, Embracing Diversity and Exploring the World.

At St Andrew's C of E Primary and Nursery School, we ensure that our children receive a full and enriched curriculum that is underpinned by the school's Christian Values. As a staff we have given careful consideration to our children and tailored a curriculum to meet their needs; offering additional experiences and activities which complement their current opportunities and statutory rights.

Ultimately, our curriculum intent is to help us to fulfil our school's vision of helping all of our children to believe in themselves, push the boundaries of their learning and to reach their full potential in order that they are well prepared for the next step in their education and life beyond school. We inspire our children with whole school topics and interesting, challenging lessons and projects so that they enjoy learning and develop high aspirations for the future.

Our curriculum is structured for phases as they progress through the school. Teachers plan from a set of central documents for each subject. We regularly review these documents to ensure that our curriculum continues to meet the needs of all children, including our disadvantaged children and those with Special Educational Needs.



Our Curriculum Journey starts with the progression grids that have been created by subject leaders. For each curriculum subject area, we have identified the progression of key skills and knowledge which was informed by the national curriculum and the school's curriculum intent. We believe that learning should be planned and sequenced so that new knowledge and skills build on previous learning.

Subject Aspect	By the end of EYFSP will know	By the end of KS1 will know		By the end of KS2 will know		By the end of KS3 will know	
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computer Science	Computational Thinking and Programming	Know that an algorithm is a set of instructions that a computer program can follow to solve a problem. Know that a computer program can be broken down into smaller parts that can be solved individually.	Know that an algorithm is a set of instructions that a computer program can follow to solve a problem. Know that a computer program can be broken down into smaller parts that can be solved individually.	Know that an algorithm is a set of instructions that a computer program can follow to solve a problem. Know that a computer program can be broken down into smaller parts that can be solved individually.	Know that an algorithm is a set of instructions that a computer program can follow to solve a problem. Know that a computer program can be broken down into smaller parts that can be solved individually.	Know that an algorithm is a set of instructions that a computer program can follow to solve a problem. Know that a computer program can be broken down into smaller parts that can be solved individually.	Know that an algorithm is a set of instructions that a computer program can follow to solve a problem. Know that a computer program can be broken down into smaller parts that can be solved individually.
	Communication and Computer Networks	Know that a computer network is a group of computers that are connected together. Know that a computer network can be used to share information and resources.	Know that a computer network is a group of computers that are connected together. Know that a computer network can be used to share information and resources.	Know that a computer network is a group of computers that are connected together. Know that a computer network can be used to share information and resources.	Know that a computer network is a group of computers that are connected together. Know that a computer network can be used to share information and resources.	Know that a computer network is a group of computers that are connected together. Know that a computer network can be used to share information and resources.	Know that a computer network is a group of computers that are connected together. Know that a computer network can be used to share information and resources.

These progression grids have been clearly split into knowledge (HEAD) and skills (HANDS). Each subject has also been split into strands or areas of learning within that subject.

From these progression grids, subject leaders have developed subject cycle plans (Year A and Year B) to ensure complete coverage across a two-year cycle due to our mixed age classes.

Curriculum 22 Overview Cycle A (Computing)						
Topic	Celebrating Our Community		Keeping Healthy		Being Brave	
Projects (Aspects)	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
KSI	PM Unit 1.1 – Online Safety and Exploring Purple Mash Digital Media, Digital Citizenship, Healthy Safe Online PM Unit 2.1 – Questioning Software, Hardware, Tools for the Real World		PM Unit 1.7 – Coding Computational Thinking and Programming PM Unit 2.6 – Creating Pictures Software, Hardware, Creation, Tools for the Real World PM Unit 1.9 – Technology Outside School Communication and Computer Networks, Healthy Safe Online, Tools for the Real World, Digital Media		PM Unit 2.1 – Coding Computational Thinking and Programming PM Unit 1.8 – Postgraduate Software, Tools for the Real World PM Unit 2.2 – Online Safety Digital Media, Digital Citizenship, Healthy Safe Online	
LKS2	PM Unit 3.1 – Coding Computational Thinking and Programming PM Unit 3.2 – Online Safety Digital Media, Digital Citizenship, Healthy Safe Online PM Unit 4.1 – Effective Searching Digital Literacy and the Internet, Digital Citizenship, Healthy Safe Online		PM Unit 4.2 – Coding Computational Thinking and Programming PM Unit 3.5 – Email Communication and Computer Networks, Tools for the Real World, Digital Media, Digital Citizenship, Healthy Safe Online		PM Unit 5.1 – Touch Typing Hardware, Software, Tools for the Real World PM Unit 4.6 – Animation Hardware, Software, Creation PM Unit 3.8 – Graphing Software, Tools for the Real World PM Unit 4.8 – Hardware Investigation Communication and Computer Networks, Hardware	
UKS2	PM Unit 5.1 – Coding Computational Thinking and Programming PM Unit 6.6 – Networks Communication and Computer Networks, Hardware PM Unit 6.2 – Online Safety Digital Media, Digital Citizenship, Healthy Safe Online		PM Unit 6.1 – Coding Computational Thinking and Programming PM Unit 5.6 – 3D Modelling Software, Creation, Tools for the Real World		PM Unit 5.4 – Database Software, Tools for the Real World PM Unit 6.4 – Blogging Communication and Computer Networks, Tools for the Real World, Digital Media, Digital Citizenship, Healthy Safe Online	

Units in bold MUST be completed to ensure full curriculum coverage, other units can be used for depth and breadth.

Not all lessons in the PM unit may need to be completed to cover the necessary knowledge and skills.

Appendix B

These subject cycle plans provide teachers with the units/projects to be covered within each term/half term of each cycle and also link the units/projects to the specific strands/areas of learning in that subject. Teachers can then refer to those specific strands/areas for learning on the progression grids to see the key knowledge and skills they will need to cover in that unit. Subject leaders have ensured that all strands/areas for learning within their subject is covered at least once in the two-year cycle, with many strands/areas for learning covered more than once to reinforce key learning and provide children with further opportunities to apply and develop their knowledge and skills.

Alongside these cycle plans, for each unit/project, subject leaders have created a sticky knowledge mat detailing the key sticky knowledge and vocabulary children are expected to know and remember by the end of the unit/project.

Cycle A Summer

Purple Mash 4.6 Animation

Key Vocabulary and Definitions:

- animation** (the process of adding movement to still objects)
- frame** (a single image in an animation)
- FPS (Frames Per Second)** (the number of frames played per second)
- onion skinning** (a process where the shadow image of the previous frame is present to help you line up the objects of the animation correctly)
- pause** (to temporarily stop the animation)
- stop motion** (a technique whereby the camera is repeatedly stopped and started, for example to give animated figures the impression of movement)



2Animate

Non-Negotiable Sticky Knowledge:

- Some animations are created by hand and others with the help of technology.
- Onion skinning is a term used in animation and can make the animation process more efficient.
- Sound can be added to animation to enhance the finished product.
- The term stop frame animation refers to animation where the stopping and starting of a camera gives an object the impression of movement.



Open, close or share animation.



Add or delete a frame from the animation.



Play the animation.



Switch onion skinning on or off.



Add a background picture to the animation.



Insert a photograph from a webcam into the animation.



Insert a sound file into the animation.



Number of frames in the animation.

[illegible]

Materials Equipment & Tools	Community Site Visit and Rural Site Survey of Santa Madalen Community	Fieldwork Trip	to Instituto Tecnológico Superior de Ciencia y Tecnología	"Intercambio" de la familia Lind y de la de la familia Lind	Intercambio de la familia Lind y de la de la familia Lind	Intercambio de la familia Lind y de la de la familia Lind
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The next stage of the Curriculum Journey involves teachers using the progression grids, subject cycle plans and yearly overviews to create MTPs (medium term plans) for each subject (except for Maths as we use WRM and the maths progression grids to plan and sequence lessons for this subject).

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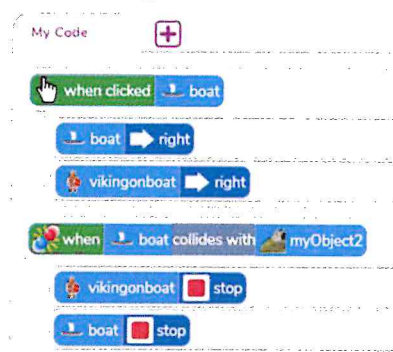
National Curriculum Objectives • select and combine a variety of software including internet services in a range of digital devices to design and create a range of programs, systems and content that accomplish goals on tasks including analyzing, illustrating, investigating and generating data and information • use technology safely, respectfully and responsibly, recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	Key Vocabulary <i>animation frame, FPS, frames per second, video editing, mouse, live motion</i> <i>Use Sticky Knowledge Mat for definitions!</i>
Previous Learning (PPL) • know technology is used in many ways to do different jobs • can recognise the ways digital technology can be used in the classroom, home and community	Future Learning (PPL) • know a range of technology can be combined to achieve a particular outcome • know a range of technologies can be selected, used and combined, such as using different hardware and software to create a solution that will have an impact on others • can combine a range of technologies to achieve a particular outcome
Key Sticky Knowledge (by the end of the project, you MUST know...)	
• some animations are created by hand and others with the help of technology • <i>Chain</i> meaning is a term used in animation and can make the animation process more efficient • <i>Spools</i> can be added to animation to enhance the finished product • The term <i>stop frame animation</i> refers to animation where the stopping and starting of a camera gives an effect the impression of movement	
Common Misconceptions • <i>Chain</i> meaning is about real world! • The way animations can be made using stop motion will probably be difficult for children to undertake so spend time on supporting children's understanding of this concept	
Links to whole school topic/school intent Sustaining, creative and challenging curriculum – creating their own animation Being Bold – trying new things, new software	
Real-Life Applications Animators need to use this technique to create their films – future careers	
Assessment Purple Math Data Collection	

Lesson	Lesson Info	Knowledge LO	Skill LO
1	<i>FB: Computing 7B: Summer 1 2022 Slide 1</i> Purple Mash Unit 4: Lesson 1 <i>Work as independently as possible – SEND to work with a partner</i> <i>Students will be fully set up before lesson</i> <i>Watch the YouTube video of the mission animation using paper to show how it can be done without technology</i>	I know some animations are created by hand and others with the help of technology	I can use digital technology in different ways in the classroom, home, and community to achieve a set goal
2	<i>FB: Computing 7B: Summer 1 2022 Slide 3</i> Purple Mash Unit 4: Lesson 2 <i>Work as independently as possible – SEND to work with a partner</i> <i>Students will be fully set up before lesson</i>	I know motion drawing is a term used in animation and can make the animation process more efficient	I can use the Onion Skin tool to create an animation image
3	<i>Purple Mash Unit 4: Lesson 3</i> <i>Work as independently as possible – SEND to work with a partner</i> <i>Students will be fully set up before lesson</i>	I know the terms stop frame animation refers to animation where the stopping and starting of a camera gives an object the impression of movement I know sound can be added to animation to enhance the finished product	I can create and enhance a computer animation using features in software such as backgrounds and sounds

These MTPs are created by teaching staff and are shared in their phase teams so that there is a consistency across the three mixed-age classes. Links to National Curriculum coverage is detailed on these MTPs, as well as key sticky knowledge that children need to know by the end of the unit/project and any common misconceptions children may have. Understanding pupils' possible misconceptions about the unit being studied is also an important consideration that teachers must make to ensure, where at all possible, misconceptions are not allowed to form in a child's grasp of a concept, knowledge, understanding or skill. Key vocabulary is also clearly identified on these MTPs. Staff are expected to think about the progression of lessons too, thinking about how the knowledge and skills best progress to support the children's learning. By using the subject cycle plans to identify the strands/areas for learning within the subject and then referring to the progression grids, teaching staff identify the key knowledge objectives and the key skill learning objectives for each lesson on the MTP. When looking at these objectives, staff look at the previous and future learning objectives on the progression grids to see where the learning 'fits'. This also allows staff to understand the previous knowledge and skills the children have and build on these. Differentiation is also supported by these previous and future learning links and 'Flashbacks' used at the start of the lesson are also informed by these identified links. For example, a teacher would look at the previous learning linked to that specific lesson and use a flashback to review this knowledge/skill to ensure the learning will 'build'. Flashbacks also allow the identification of children who do not have the required previous knowledge or skill and enable staff to support them during the lesson.

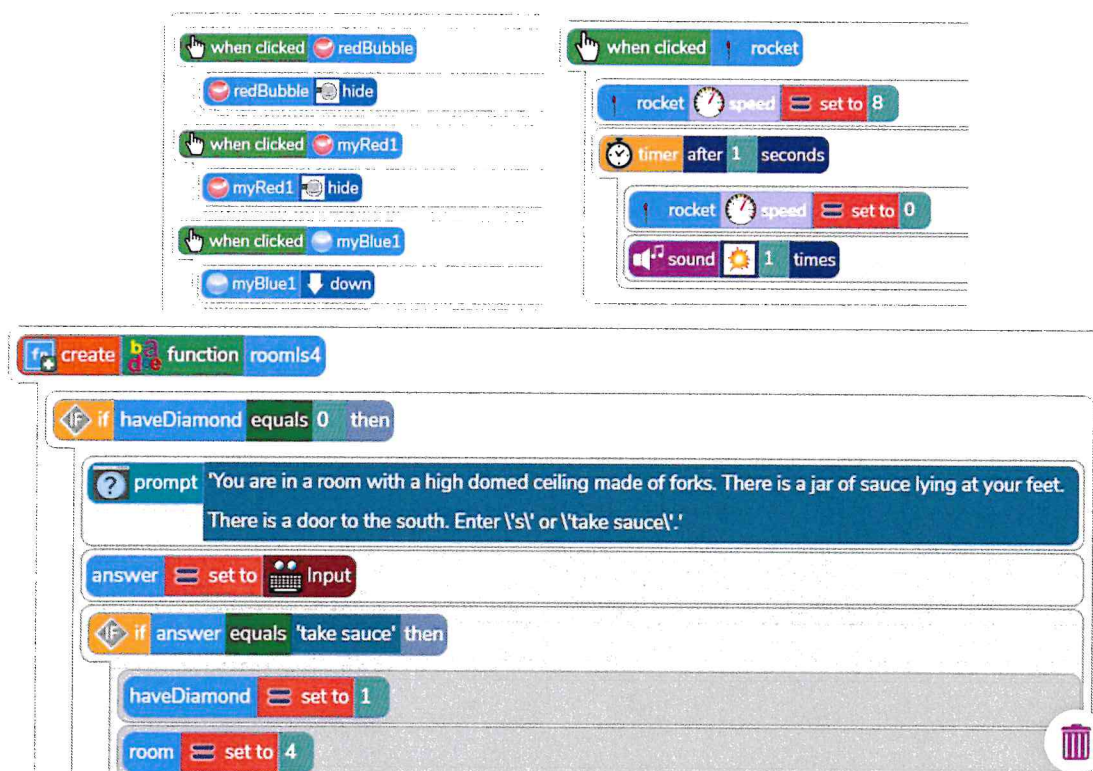
Flashback! (Computing)

What will happen when we run this code?



The MTPs also show links/opportunities to our whole school curriculum intent, for example the current whole school topic, Christian and British Values, resilience, equipping children for today and tomorrow, etc. Any current key 'ideas' that the school is focusing on are also added to these MTPs, e.g., outdoor and well-being learning opportunities. Real-life application is also considered on these MTPs so that children begin to understand how what they are learning 'today' will 'equip them for tomorrow'. To ensure assessment is consistent and clear, how the learning will be assessed for each unit/project is also added to our MTPs. These MTPs are then used to deliver the sequence of lessons to the children, with the Head (knowledge) and Hands (skills) shared with the children each lesson.

The Curriculum Journey ends with the children acquiring these key knowledge and skills that have been detailed on the progression grids. This acquisition is evidenced in a wide variety of ways, including exercise books, online portfolios (such as Purple Mash or Seesaw) and teacher observation.



To support parents in understanding what their child is learning in each unit/project across a half term, we have developed Parent Curriculum Overviews. They detail the name of the unit/project for each subject, alongside a Widgit symbol to ensure accessibility. Each subject also has a key word and its meaning added to the overview to support parents and home learning.

Subject Vocab Check		
English	conjunction	a word used to connect clauses or sentences
Maths	decimal point	a point or a dot which is used to separate a whole number from the fractional part of a number
Science	reflection	the process where light hits the surface of an object and bounces back into our eyes
Geography	coastal	something on the shore or seaside
History	Vikings	name given to people from Scandinavia who raided, traded and settled in Britain between the 9 th and 11 th centuries
RE	Gospel	it means 'good news' in the Bible and it is the section about the teaching of Jesus
PE	relay	when runners take turns and pass something to each other on the way to the finish
Computing	onion skinning	a process where the shadow image of the previous frame is present to help you line up the objects of the animation correctly
Art	collage	a piece of art made by sticking various materials such as photographs and pieces of paper or fabric onto a backing
Music	theme tune	a piece of music that is specifically written to represent a particular television show, radio program, film, or video game
PSHE	friendship	a close relationship between people who care about and support each other
French	la salle de classe	classroom

St Andrew's C of E Primary School
Summer (1) 2024
LKS2

English Arthur and the Golden Rope (Narrative) 	Maths Money & Decimals 	Science Light 
Geography What's it like in Whitley? 	History Anglo-Saxons and Viking Invasion 	RE Gospel 
Art Camouflage Collage 	Music Doctor Who Theme Tune 	PE Athletics 
French Our School 	Computing Animation 	PSHE Relationships Friends 

Appendix E

Information Technology	Communication and Computer Networks	I know some of this digital technology can be used to connect with others locally, such as sharing digital work in the classroom, or globally, such as using Skype on a computer to speak to a friend overseas. I know digital technology is used in all parts of everyday life. I know some technology is used to communicate with others.	I know when work is saved electronically, it can be stored on a hard drive, a shared drive called a server or online so that it can be opened on the same device or another device later.	I know different parts make up a computer. I know when work is saved, it is stored on a storage device, such as the computer's hard drive, a USB flash drive, a shared server or online. This work can then be retrieved from another device (except if it is saved on the computer's hard drive).	I know a school network has computers that are connected so they can share hardware, software, and data.	I know different forms of communication are best used for specific purposes. I know that privacy and personal boundaries are important when communicating and collaborating with others online. I know the positives of communicating online include the speed, low cost, and ability to communicate globally. I know the negatives of communicating online include the threat to privacy, influencing of others, access to technology and anonymity. I know the world wide web or web for short, are the pages you see when you're at a device and you're online. But the internet is the network of connected computers that the web works on. I know a LAN (Local Area Network) is a network that covers a small geographical area such as homes, offices, and groups of buildings. Whereas a WAN (Wide Area Network) is a network that covers larger geographical areas that can span the globe.	
	Hardware	I know hardware is the parts of a computer that you can touch, such as a mouse, tablet, or floor robot.	I know hardware, such as cameras and scanners, can be used to collect data.	I know that several pieces of hardware can be used together to complete one task, such as using a camera to take a photograph, uploading it to a computer and then printing it using a printer.	I know that interacting regularly with hardware enables users to recognise common features and become confident in working with new or unfamiliar hardware.	I know some hardware is more effective than others in particular contexts, such as using virtual reality or a touchscreen rather than a mouse to meet a specific need.	
	Software	I know software is the programs we use on computers and mobile devices, and these include the games we play on using this computing hardware.	I know each type of software, such as word processing, presentation, and image editing, can be used for different purposes, including writing reports and creating slide shows or posters. I know there are keyboard shortcuts for copy, paste and cut. I know a spreadsheet will automatically work out how much various items will cost when bought. I know databases are a computerised system that make it easy to search, select and store information. I know digital content can be presented in many forms.	I know several pieces of software can be used together to complete one task, such as adding a video to a word processed document. I know cells all have their own individual address. They are referenced using letters and numbers. I know a database is a collection of data organised in a way that it can be searched, and information found easily. I know presentation software is a way of creating and displaying information to an audience that is clear and engaging.	I know new computing software commonly has features that should be familiar to users, such as icons or terminology (e.g., the links between Purple Mash programs and Microsoft Office programs).	I know using prior knowledge and experience of computing skills can be applied to create content using unfamiliar programs or apps. I know databases can be created to cover a range of topics or themes. I know a game design program has specific functions for the designer to use. I know a word processing tool can be used to create a range of documents. I know some software or apps are designed to help increase creativity by saving time or making tasks easier, such as being able to combine text, images, audio, or video content into one place. I know formulae can be entered into a spreadsheet, and this can save time and make working more efficient. I know Excel can make complex data clear by manipulating the way it is presented. I know a spreadsheet program can display a variety of graphs and charts.	

	Creation	I know what a spreadsheet program environment looks like including cells, rows and columns. I know the totalling tool counts all the cells behind the tool. I know palettes are the range of colours or shapes available to the users. I know computer drawing programs may have a choice of painting effects. I know the size of an onscreen painting tool brush stroke can be manipulated. I know fill tools speed up the process of colouring enclosed areas on a painting.	I know text, images, animation, audio and video clips can be combined using tools within a piece of software. For example, an image could be inserted into a word processing document, or a video could be inserted into a presentation. I know graphs can be generated from data within a sheet and if data is changed on the sheet, then the graph automatically updates to recognise these amendments. I know branching databases can be created using programs such as 2Question. I know it is important to test and debug if needed when creating branching databases so that they work as intended. I know presentations can include additional slides, video and audio. I know animations can be incorporated within a Microsoft PowerPoint presentation. I know transitions can be applied between slides. I know timings can be added to transitions and animations.	I know manipulating a range of text, images, sound or video clips and animation may include changing their style, size, colour, effect, shape, location or format. I know sound can be added to animation to enhance the finished product.	I know creating, selecting and combining a range of texts, images, sound clips and videos for given purposes could include creating a web page, slide show presentation, short film or an animation. I know the design of characters and quest items is a key aspect of game creation. I know a finished game must be playable and possible for the player to complete. I know moving points changes the appearance of a 3D model. I know a 3D design program can be used to meet a design brief. I know various features within the program will enhance the documents look and usability. I know a template can be used to create a document.	I know a variety of software, such as word processing software, image editing software or internet services, can be selected, used and combined to meet a goal. I know evaluation is important so a game can be improved and made more playable and exciting.	Digital Searching
		I know what is meant by 'image', 'text', and 'sound' when creating digital content, e.g. e-books. I know that data is a collection of information, used to help answer questions. I know software and hardware can be used to create images, videos, and sounds.	I know that the information requested in an online search can be displayed as text, images or videos. I know searches can be refined so it is easier to find something. I know search engines use millions of people's digital footprints to help provide more accurate results.	I know the names of well-known and popular search engines. I know that after entering data into software it can be more easily analysed and searched than looking at raw paper-based data.	I know that when searching online they do not need to use grammar and how using a Boolean search can improve the effectiveness of their search.	I know that when using search engines the user can search for specific types of information e.g. images, videos and from the news and that these are called filters.	

	Digital Citizenship	I know when work is saved electronically, it needs to have a name that identifies it and is easily remembered	I know the term digital footprint relates to information that a user puts online, and that this footprint may remain even when we think we have removed the information.	I know as with face-to-face communication, online communication should be done respectfully and responsibly, considering the impact on others.	I know appropriate behaviour when contributing to collaborative online projects includes consideration towards others, awareness of copyright and keeping personal data safe. I know copying the work of others and presenting it as their own is called 'plagiarism'.	I know citing sources is giving credit to the person or website that created the information. I know using someone else's work without citing it is called plagiarism.	I know digital content may have been edited online by anyone, and so it is important to verify content against other independent or reputable sources. I know a digital footprint leaves a trail online to show their behaviour and this can have a negative impact.
	Staying Safe Online	I know it is important to log in to a site safely and the importance of keeping passwords safe. I know that private information includes names, addresses, dates of birth or schools and this information should not be shared online. I know any concerns or worries should be reported to a trusted adult.	I know some websites are not age-appropriate and so it is important to tell a trusted adult about any concerns or worries	I know the importance of having a secure password and not sharing it with others. I know images and data should not be shared online without the permission of the owner. I know not everything online is factually correct, and some websites can be referred to as spoof websites. I know PEGI/ BBFC ratings exist to keep young people safe. I know there are a range of ways to report inappropriate content and contact	I know information put online by users could be used for identity theft. I know what is meant by the term 'reliable'. I know some news reports online are classed as 'fake news' and are designed to misinform.	I know that digital content can affect others and be available to anyone. I know digital content is traceable, which means it can be tracked to the person who created it. I know I have a right to privacy both on and offline. I know what is meant by appropriate and inappropriate text, photographs and videos.	I know the benefits and risks of devices broadcasting the user's location and passing on personal information. I know secure sites will have industry standard seals of approval.

Key Skills Progression Grid – Computing

Subject Aspect	By the end of EYFS I will be able to...		By the end of KS1 I will be able to...		By the end of LKS2 I will be able to...		By the end of UKS2 I will be able to...	
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6		
Computational Thinking and Programming	I can work out what is wrong when the steps are out of order in instructions. I can try and fix my code if it isn't working properly. I can make good guesses of what is going to happen in a program. I can use the additional direction keys within 2Code as part of an algorithm. I can use an event to control an object.	I can create a computer program from a given design. I can design an algorithm that follows a timed sequence. I can find and correct some errors in my program. I can say what will happen in a program. I can spot something in a program that has an action or effect (does something).	I can use a flowchart to create a computer program. I can change attributes/properties of any objects in a program I have made. I can design a program thinking logically about the sequence of steps required. I can experiment with timers in my programs, using the correct timer option for the given purpose. I can experiment with the effect of using repeat commands. I can read programs with several steps and predict what it will do. I can run, test and debug my own programs. I can input simple instructions in Logo language environment. I can transfer code from the coding environment onto a micro bit. I can code the micro bit using Free Code for LED outputs and sound outputs.	I can use selection (decision) in my programming e.g., using an 'if' statement. I can use co-ordinates in computer programming. I can use variables within my program and how to change the value of variables. I can create a playable game using a block coding environment. I can identify errors in my code by using different methods, such as stepping through lines of code and fixing them. I can read programs that contain several steps and predict the outcomes with increasing accuracy. I can create letter shapes using Logo. I can use the repeat function in Logo to create shapes such as squares. I can code the micro bit using Free Code so it can receive inputs from its buttons and accelerometer. I can code the micro bit to create events such as playing a tune when an input is detected.	I can test and debug my programs as I work. I can simplify code in order to make own programming more efficient. I can use a function in own program to make it more efficient. I can set and change variable values in code. I can use sequence, selection, repetition, and some other coding structures in my code. I can create a simple simulation using 2Code. I can organise my code carefully for example, naming variables and using tabs. I can use infinite loops in control systems to monitor real-world environment changes.	I can test and debug my program as I work on it and use logical methods to identify a cause of a bug. I can identify a specific line of code that is causing a problem in my program and attempt a fix. I can use inputs and outputs within my coded programs such as sound, movement and buttons. I can interpret (understand) a program in parts and can make logical attempts to put the separate parts together in an algorithm to explain the program as a whole. I can use multiple functions in my own program. I can arrange code in multiple tabs. I can code the micro bit using Free Code and use a range of commands.		
	Communication and Computer Networks	I can use digital technology appropriately to communicate and connect with others locally and globally. I can name and save my work.	I can explain that computers can be linked to share resources and digital content can be stored, organised, and retrieved. I can find, name, and save my work.	I can identify different ways that the internet can be used for communication. I can name the different parts of a computer such as Hard Drive, RAM, Network Card etc.	I understand that network and communication components can be found in many different devices which allow them to join the internet. I can describe the function of the different parts of a computer and network.	I can use the most appropriate form of online communication according to the digital content.	I can explain the difference between the Internet and the World Wide Web. I can explain what a WAN and LAN is and describe the process of how access to the internet in school is possible.	

Information Technology							
Hardware	I can be aware of a range of computing hardware and begin to explore using them (e.g. tablets, floor robots, laptops).	I can use a range of computing hardware for different purposes.	I can use computing hardware in different ways to collect data.	I can use familiar computer hardware to successfully complete a task.	I can use new and unfamiliar computing hardware.	I can apply computing skills using unfamiliar hardware to solve a problem successfully.	I can identify how using different hardware can increase creativity and productivity.
	I can use age-appropriate software independently, including some of the programs on Purple Mash.	I can use different types of software.	I can use different types of software and identify their purposes. I can copy, cut and paste in spreadsheet software. I can use some tools within a spreadsheet to support calculations. For example, using the equals tool in 2Calculate to check calculations.	I can use a range of different software to successfully complete a project. I can use a spreadsheet program to automatically create charts and graphs from data. I can find specified locations in a spreadsheet.	I can apply computing skills to use new computing software. I can use various features within a spreadsheet to support solutions to calculations. For example, 'more than', 'less than', and 'equals'.	I can apply computing skills to create content using unfamiliar programs or apps. I can navigate around a spreadsheet using cell references. I can use a spreadsheet to carry out basic calculations including addition, subtraction, multiplication and division formulae.	I can identify how a new piece of software, or an app can increase creativity. I can use more advanced formulae effectively. I can create formulae that deals with percentages, averages, max and min.
Software							
Creation	I can use age-appropriate software and hardware to create images and record sounds and videos.	I can add sound, images, and text to a program such as 2Create a Story. I can add animation to an interactive story. I can change content on a file such as text, sound, and images. I can use a software such as 2Count to record results of an experiment into a pictogram format. I can enter data into a spreadsheet. I can use some tools within spreadsheets e.g. lock cell, move cell, speak and count.	I can include images, text, and sound in my creations. I can create a manual block graph within a spreadsheet from data. I can use painting software to recreate different styles of artwork. I can add images such as clipart and photos to presentational software. I can collect, organise and present data and information in digital format.	I can collect data and input it into software. I can create tables of data within a spreadsheet. I can complete a branching database. I can edit and adapt a branching database. I can add pages/slides, text and shapes to pages, and also format them. I can use effects and features such as animations and slide transitions in my presentations. I can consider what the most appropriate software to use when given a task by my teacher. I can create purposeful (appropriate) content and attach this to emails.	I can work collaboratively to create content and solutions. I can share digitally created content using a variety of applications such as 2Blog, 2Email and Display Boards. I can create and enhance a computer animation using features in software such as background and sounds.	I can make appropriate improvements to digital work I have created. I can comment on how successful a digital solution is that I have created. For example, a program built in 2Code that sorts decimals numbers. I can use collaborative modes such as within 2Connect to create work with others and share it. I can create new records. I can create my own database. I can create a playable game. I can incorporate media such as sound and images into my playable game. I can successfully evaluate games. I can design a 3D model to fit certain criteria. I can create a word processing document. I can alter page layout including heading and columns. I can add features to enhance look and usability within a document. For example: textboxes, hyperlinks, contents pages.	I can consider the intended audience carefully when I design and make digital content. I can design and create my own online blogs. I can use criteria to evaluate the quality of my own and others digitally created solutions, suggesting refinements. I can manipulate the way data is presented.

Digital Literacy (also see PSHE/RSE curriculum)	Digital Searching	I can seek support from adults to retrieve digital content including online.	I can find my work on Purple Mash.	I can attempt to refine my searches to get fewer results. I can navigate a web search results page. I can use a search feature at a basic level when trying to locate data within a database such as 2Investigate.	I can carry out searches to find digital content on a range of online systems, such as within Purple Mash or on an internet search engine.	I understand the purpose of a search engine and the main features within it.	I can select keywords and search techniques to find relevant information to increase reliability. I can search precisely when using a search engine. For example, I know I can add additional words or removes words to help find better results. I can search for information within a database.	I can use filters when searching for digital content.
	IT in the Real World	I can talk about and use digital technology with confidence and independence, giving examples of how it is used in the home, at school and beyond.	I can recognise the ways digital technology can be used in the classroom, home, and community.	I can recognise why digital technology is used in the classroom, home, and community. I can use a spreadsheet to perform calculations for purpose. For example, adding and totalling money. I can sort objects using just YES/NO.	I can use digital technology in different ways in the classroom, home, and community. I can construct a binary tree to identify items. I can effectively present to an audience using presentation software. I can utilise artificial intelligence to create media such as images and music.	I can use digital technology in different ways in the classroom, home, and community to achieve a set goal. I can think critically about artificial intelligence including its use in the future.	I can select, use, and combine appropriate technology to create a solution that will have an impact on others. I can refine and print a model.	I can combine a range of technology to achieve a particular outcome.
	Digital World	I can talk about things that people do on digital devices, such as playing games, communicating with others, and watching online videos.	I can understand that there are online tools that can help people to create content and communicate.	I can recognise some uses of the internet, in simple terms and some of its benefits and drawbacks. I can open and send simple online communications in the form of email.	I can open and respond to email. I can add attachments to an email. I can use an email environment safely.	I can use appropriate tools (software, websites, and apps) to collaborate and communicate safely online.	I can exchange online communications, making use of a growing range of available features and being aware of security settings.	I can create an online collaborative project for a specific purpose, sharing documents and appropriately setting permissions for other group members. I can make more informed choices of how free time is used. I can name effects on individual health when having too much screen time. I can contribute to others' blogs.
	Digital Citizenship	I can engage safely with age-appropriate hardware and software.	I can save my work in a safe place such as 'My Work' folder.	I can recognise the information that I put online which leaves a digital footprint.	I can use communication tools such as 2Email respectfully and use good etiquette.	I can identify appropriate behaviour when contributing to collaborative online projects for learning.	I can cite all sources when researching and explain why sources should be provided.	I can find ways to check that online digital content is reputable.

	Staying Safe Online	I can describe what they would do if they saw something online that made them sad, scared, or worried.	I know how to log in safely. I can discuss the online safety rules (SMART). I can keep my login information safe. I can tell a trusted adult if something online makes me feel sad.	I can report unkind behaviour and things that upset me online, to a trusted adult.	I can clearly use and explain the simple online safety rules (SMART), including for sharing images and data safely. I can create a secure password. I can contribute to a blog with clear and appropriate messages.	I can identify the positive and negative influences of technology on health and the environment. I can look at information on a webpage and make predictions about the accuracy of information contained within it.	I can discuss the impact that digital content can have and why it is important to discuss their use of technology with an adult. I can explain in detail how accurate, safe, and reliable the content is on a webpage. I can evaluate the impact of sharing media such as photographs and videos online.	I can identify the benefits and risks of devices broadcasting the user's location and of giving personal information to different organisations. I can demonstrate the safe and respectful use of a range of different technologies, referring to the SMART rules.
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Key Vocabulary Progression Grid – Computing

By the end of EYFS I will know...	By the end of KS1 I will know...	By the end of LKS2 I will know...	By the end of UKS2 I will know...
tablet laptop computer mouse monitor speakers keyboard keypad touch screen button image video sound instructions internet online	log in log out username password tools save avatar data collate algorithm program debug undo right turn left turn animation e-book font file sound effect action code background command event execute input output collision detection design mode predict timer test scale internet email attachment sharing digital footprint search binary tree database search engine template presentation animated node run properties when clicked columns cells rows cursor spreadsheet	blocks of command procedure repeat values background timer blog website webpage PEGI rating copy and paste advance mode home row keys top row keys bottom row keys posture formatting address book draft CC compose branching database field graph nesting code block variable value selection copyright cookies identity theft malware phishing spam formula charts bold italic LOGO spoof website internet browser motherboard CPU RAM graphics card network card slide slideshow text box media A.I.	decomposition abstraction function physical system sequence tab plagiarism citations bibliography statistics and reports table screenshot customise playability interactive texture perspective 3D printing CAD merge cells readability developer launch command string icon sprite World Wide Web local area network (LAN) wide area network (WAN) router

Curriculum 22 Overview Cycle A (Computing)						
Topic	Celebrating Our Community		Keeping Healthy		Being Brave	
Projects (Aspects)	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
KSI	PM Unit 1.1 – Online Safety and Exploring Purple Mash <i>(Digital World, Digital Citizenship, Staying Safe Online)</i> PM Unit 2.4 – Questioning <i>(Software, Hardware, IT in the Real World)</i>		PM Unit 1.7 – Coding <i>(Computational Thinking and Programming)</i> PM Unit 2.6 – Creating Pictures <i>(Software, Hardware, Creation, IT in the Real World)</i> PM Unit 1.9 – Technology Outside School <i>(Communication and Computer Networks, Staying Safe Online, IT in the Real World, Digital World)</i>		PM Unit 2.1 – Coding <i>(Computational Thinking and Programming)</i> PM Unit 1.3 – Pictograms <i>(Software, IT in the Real World)</i> PM Unit 2.2 – Online Safety <i>(Digital World, Digital Citizenship, Staying Safe Online)</i>	
LKS2	PM Unit 3.1 – Coding <i>(Computational Thinking and Programming)</i> PM Unit 3.2 – Online Safety <i>(Digital World, Digital Citizenship, Staying Safe Online)</i> PM Unit 4.7 – Effective Searching <i>(Digital Searching and the Internet, Digital Citizenship, Staying Safe Online)</i>		PM Unit 4.1 – Coding <i>(Computational Thinking and Programming)</i> PM Unit 3.5 – Email <i>(Communication and Computer Networks, IT in the Real World, Digital World, Digital Citizenship, Staying Safe Online)</i> PM Unit 3.8 – Graphing <i>(Software, IT in the Real World)</i>		PM Unit 3.4 – Touch Typing <i>(Hardware, Software, IT in the Real World)</i> PM Unit 4.6 – Animation <i>(Hardware, Software, Creation)</i> PM Unit 4.8 – Hardware Investigators <i>(Communication and Computer Networks, Hardware)</i> PM Unit 4.10 – Artificial Intelligence <i>(Communication and Computer Networks, Hardware)</i>	
UKS2	PM Unit 5.1 – Coding <i>(Computational Thinking and Programming)</i> PM Unit 6.6 – Networks <i>(Communication and Computer Networks, Hardware)</i> PM Unit 6.2 – Online Safety <i>(Digital World, Digital Citizenship, Staying Safe Online)</i>		PM Unit 6.1 – Coding <i>(Computational Thinking and Programming)</i> PM Unit 5.6 – 3D Modelling <i>(Software, Creation, IT in the Real World)</i>		PM Unit 5.4 – Databases <i>(Software, IT in the Real World)</i> PM Unit 6.4 – Blogging <i>(Communication and Computer Networks, IT in the Real World, Digital World, Digital Citizenship, Staying Safe Online)</i>	

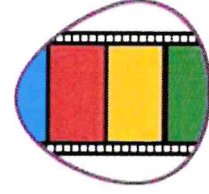
Units in **bold** MUST be completed to ensure full curriculum coverage, other units can be used for depth and breadth.

Not all lessons in the PM unit may need to be completed to cover the necessary knowledge and skills.

Cycle A: Summer Purple Mash 4.6: Animation

Key Vocabulary and Definitions:

- **animation** (the process of adding movement to still objects)
- **frame** (a single image in an animation)
- **FPS (Frames Per Second)** (the number of frames played per second)
- **onion skinning** (a process where the shadow image of the previous frame is present to help you line up the objects of the animation correctly)
- **pause** (to temporarily stop the animation)
- **stop motion** (a technique whereby the camera is repeatedly stopped and started, for example to give animated figures the impression of movement)



2Animate

Non-Negotiable Sticky Knowledge:

- Some animations are created by hand and others with the help of technology.
- Onion skinning is a term used in animation and can make the animation process more efficient.
- Sound can be added to animation to enhance the finished product.
- The term stop frame animation refers to animation where the stopping and starting of a camera gives an object the impression of movement.



Open, close or share animation.



Add or delete a frame from the animation.



Play the animation.



Switch onion skinning on or off.



Add a background picture to the animation.



Insert a photograph from a webcam into the animation.



Insert a sound file into the animation.



Number of frames in the animation.

St Andrew's C of E Primary School 2024–2025 Long Term Plan: LKS2

Whole School Topic	Celebrating Our Community		Keeping Healthy		Being Brave	
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
English	SPaG Focus & Quick Writes	The Write Stuff: Marshmallows (Narrative)	The Write Stuff: Journey (Narrative)	The Write Stuff: Earthquakes/Volcanoes (Non-chronological Report)	The Write Stuff: Arthur and the Golden Rope (Narrative)	The Write Stuff: Holiday Brochure – Sicily (Persuasive Writing) The Write Stuff: The Colour Collector (Poetry)
Maths	Y3: Place Value, Addition & Subtraction, Multiplication & Division Y4: Place Value, Addition & Subtraction, Area, Multiplication & Division		Y3: Multiplication & Division, Length & Perimeter, Fractions, Mass & Capacity Y4: Multiplication & Division, Length & Perimeter, Fractions, Decimals		Y3: Fractions, Money, Time, Shape, Statistics Y4: Decimals, Money, Time, Shape, Statistics, Position & Direction	
Science	Animals, including humans (Digestive System, Y4-)	Living Things & Habitats (Classification, Y4-)	Rocks (Y3)	Working Scientifically and World Science Week	Light (Reflection, The Sun and Shadows, Y3)	Plants (Part Functions, Y3)
Geography	Somewhere to Settle		Extreme Earth	The UK	What's it like in Whitby?	
History	Roman Empire		Time Box Activities		Anglo-Saxons and Viking Invasion	
R.E.	Christianity UC Creation and Fall 2a.1	Christianity UC Incarnation 2a.3	Hinduism, Islam & Christianity NAS 3.3 Worship and Sacred Places	Christianity UC Salvation 2a.5	Christianity UC Gospel 2a.4	Hindu, Islam & Christianity NAS 4.1 Journey of life & death Hinduism NAS 4.4 Hindu Beliefs and Practices PM Unit 4.8 – Hardware Investigators PM Unit 4.10 – Artificial Intelligence
Computing	PM Unit 3.2 – Online Safety	PM Unit 3.1 – Coding	PM Unit 4.2 – Coding	PM Unit 3.5 – Email	PM Unit 4.6 – Animation	
Art & Design	Groundbreaking Graffiti		Amazing Ammonites		Camouflage Collage	
Design & Technology		Making Mini Greenhouses		The Great Bread Bake Off		Pneumatic Toys
Music	Y3 Unit 1: How does music bring us together?	Adapting and Transposing Motifs (The Romans) (Kapow)	Samba with Sergio (Sing Up!)	Easter Service Performance	BBC Ten Pieces: Doctor Who Theme Tune	
P.E.	Gymnastics	Dance	Invasion Games: Netball (Y3) Swimming (Y4)	Net & Wall Games: Tennis	Athletics: Running	Striking & Fielding: Cricket
MFL (French)	Getting to know you	Time	All Around Town	Family and Friends	Our School	What's the time?
PSHE	Being Me In My World & Zones of Regulation	Celebrating Difference (Cultural Diversity & Community)	World of Work (Money Matters)	Healthy Me (First Aid and Staying Safe)	Relationships (Friends)	SRE: Y3 Changing Me SRE: Y4 Changing Me
Memorable Experiences & Trips	Mansfield Museum Workshop (Romans) Y3: Sunita Hinduism Experience	Pantomime Trip	Y4: Southwell Minster Faith Pilgrimage Day	Easter Service World Book Day	Y4: Thornbridge Residential	Trip to Seaside (Cleethorpes)

National Curriculum Objectives - 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	Key Vocabulary <i>animation, frame, FPS (frames per second), onion skinning, pause, stop motion</i> <i>(see Sticky Knowledge Mat for definitions)</i>
Previous Learning (PPLs) - I know technology is used in many ways to do different jobs. - I can recognise the ways digital technology can be used in the classroom, home, and community	Future Learning (FPLs) - I know a range of technologies can be combined to achieve a particular outcome. - I know a range of technologies can be selected, used, and combined, such as using different hardware and software to create a solution that will have an impact on others. - I can combine a range of technology to achieve a particular outcome.
Key Sticky Knowledge (by the end of the project, chn. MUST know...) - Some animations are created by hand and others with the help of technology. - Onion skinning is a term used in animation and can make the animation process more efficient. - Sound can be added to animation to enhance the finished product. - The term stop frame animation refers to animation where the stopping and starting of a camera gives an object the impression of movement.	
Common Misconceptions - Onion skinning is about real onions! - The way animations can be made using stop motion will probably be difficult for children to understand so spend time on supporting children's understanding of this concept.	
Links to whole school/topic/school intent Captivating, creative and challenging curriculum – creating their own animations Being Brave – trying new things/new software	
Real-Life Applications Animators need to use this technique to create their films – future careers.	
Assessment Purple Mash Data Dashboard	

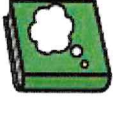
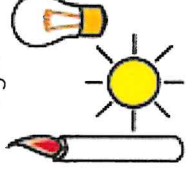
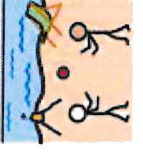
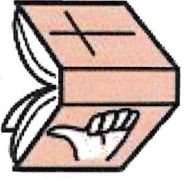
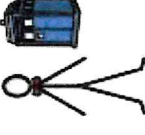
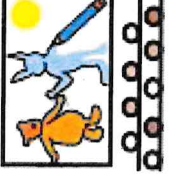
Lesson	Lesson Info	Knowledge LO	Skill LO
1	<i>FB: Computing FBs Summer 1 2025, Slide 1</i> <i>Purple Mash Unit 4.6: Lesson 1</i> <i>Work as independently as possible – SEND to work with a partner.</i> <i>Ensure 2Dos are fully set up before lesson.</i> <i>Watch YouTube video of stop motion animation using paper to show how it can be done without technology!</i>	I know some animations are created by hand and others with the help of technology.	I can use digital technology in different ways in the classroom, home, and community to achieve a set goal.
2	<i>FB: Computing FBs Summer 1 2025, Slide 3</i> <i>Purple Mash Unit 4.6: Lesson 2</i> <i>Work as independently as possible – SEND to work with a partner.</i> <i>Ensure 2Dos are fully set up before lesson.</i>	I know onion skinning is a term used in animation and can make the animation process more efficient.	I can use the Onion Skin tool to create an animated image.
3	<i>Purple Mash Unit 4.6: Lesson 3</i> <i>Work as independently as possible – SEND to work with a partner.</i> <i>Ensure 2Dos are fully set up before lesson.</i>	I know the term stop frame animation refers to animation where the stopping and starting of a camera gives an object the impression of movement. I know sound can be added to animation to enhance the finished product.	I can create and enhance a computer animation using features in software such as background and sounds.

St Andrew's C of E Primary School

Summer (I) 2024

LKS2

Subject Vocab Check		
English	conjunction	a word used to connect clauses or sentences
Maths	decimal point	a point or a dot which is used to separate a whole number from the fractional part of a number
Science	reflection	the process where light hits the surface of an object and bounces back into our eyes
Geography	coastal	something on the shore or seaside
History	Vikings	name given to people from Scandinavia who raided traded and settled in Britain between the 9 th and 11 th centuries
R.E.	Gospel	it means 'good news' in the Bible and it is the section about the teaching of Jesus
P.E.	relay	when runners take turns and pass something to each other on the way to the finish
Computing	onion skinning	a process where the shadow image of the previous frame is present to help you line up the objects of the animation correctly
Art	collage	a piece of art made by sticking various materials such as photographs and pieces of paper or fabric onto a backing
Music	theme tune	a piece of music that is specifically written to represent a particular television show, radio program, film, or video game
PSHE	friendship	a close relationship between people who care about and support each other
French	la salle de classe	classroom

English Arthur and the Golden Rope (Narrative) 	Maths Money & Decimals 	Science Light 
Geography What's it like in Whitby? 	History Anglo-Saxons and Viking Invasion 	R.E. Gospel 
Art Camouflage Collage 	Music Doctor Who Theme Tune 	P.E. Athletics 
French Our School 	Computing Animation 	PSHE Relationships: Friends 