

Pudsey Bolton Royd Primary School Computing Long-Term Plan

Year 6

<i>Autumn 1</i>	<i>Autumn 2</i>	<i>Spring 1</i>
Enquiry Questions		
How can spreadsheets make a user's life easier?	How can spreadsheets help solve real world problems?	How can audio be edited to create a product?
Outcomes		
I can enter information into a spreadsheet. I can use the function button. I can independently select the correct function and data to be included in the function. I can retrieve simple answers quickly from my data.	I can apply my spreadsheets skills to different spreadsheet programmes. I can create spreadsheets from blank. I can solve real-world problems using spreadsheets.	I can record audio I can edit clips of audio together seamlessly I can edit audio to be clear I can present a finished product to a wider audience
Linked Texts		
N/A	N/A	N/A
Linked Experiences		
N/A	N/A	N/A
Overview		
Children use a simple spreadsheet programme to consolidate their spreadsheet knowledge before they move to a more complex programme in Autumn 2. Children look at how spreadsheets can contain data, how they are organised efficiently and formulas can help get answers from data saving them manually completing the work. Purple Mash 6.3 - Spreadsheets	Children move to a more complicated real-word spreadsheet programme and look to attack a problem - planning a school trip. This can include spreadsheets for attendance, projecting costs, counting income/expenditure, chasing debt and ultimately making organising and funding the trip easier. Reflect on Residential experience as recent event to help planning.	Building on from the creation of adverts in Year 5, children in Year 6 will look at another form of medium. To this point, editing has focused largely on the visual and should look to focus on auditory editing now. Using a suitable programme, children will record a podcast (with links to WW2 or Residential based learning making the most sense) in which they can record their audio in parts, edit it together to ensure a good flow of audio and edit out background noises and/or distortions. They can potentially look at sound waves. Audacity and Freesound.org are useful resources for this unit of work. Ideally a product should be made which can be disseminated to the rest of the class to listen to - explored and shared electronically.
Knowledge and/or Skills Covered		
Solve problems they identify themselves, designing and writing programs to address this. Carefully select and move content within and between applications. Confident use of a mouse, including the burgeoning ability to touch-type and/or reach a standard of more than one word per second. Seamless use of a mouse.	Solve problems they identify themselves, designing and writing programs to address this. Carefully select and move content within and between applications. Confident use of a mouse, including the burgeoning ability to touch-type and/or reach a standard of more than one word per second. Seamless use of a mouse.	Carefully select and move content within and between applications. Present videos to the widest audience possible - ideally whole class - and take questions. Thoughtfully and politely critique their peers' rationale for selection / sorting.
National Curriculum Attainment Targets		

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<p>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.</p>	<p>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.</p>	<p>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</p>
<p>Important Vocabulary</p>		
<p>Binary, functionality, aesthetics, user, interface, deterministic, simultaneous, cumulative, concentric, radial.</p>	<p>Binary, functionality, aesthetics, user, interface, deterministic, simultaneous, cumulative, concentric, radial.</p>	<p>controversy prejudice authentic plausible analyse discern copyright plagiarism</p>

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<i>Spring 2</i>	<i>Summer 1</i>	<i>Summer 2</i>
Enquiry Questions		
How can a fiction film be created for a specific audience?	How can a game be developed from scratch?	How can an external device be controlled?
Outcomes		
I can plan a story I can act and record a story I can edit the smaller pieces together I can use visual effects relevant to a story I can add audio effects relevant to a story I can show a title I can show ending credits	I can create a custom background and character I can have inputs which alter outputs I can have a score which changes when a specific event occurs I can use a timer to limit the length of a game I can provide others the chance to play my finished game	I can identify a motherboard I can identify and explain what is connected to that motherboard I can alter what is attached to the motherboard I can create an algorithm for a specific purpose I can explain, in detail, how this algorithm will work I will use this algorithm to control an external device
Linked Texts		
N/A	N/A	N/A
Linked Experiences		
N/A	N/A	N/A
Overview		
<p>Children will work towards a movie screening, where they show their films as a class. Children should create a short action film (based on their Journey to the centre of the Earth reading) which allows them to act and record work they can later add effects too - such as adding audio in they could not realistically play in filming. Children may attempt to master the sound quality based on the previous unit's work. This should be a celebration of the media skills they have developed.</p>	<p>Children will look to create a game in Scratch. Children looking to work within the greater depth at Year 5 will have explored a game in scratch in its simplest form, but most learners will not. Children can explore the games on the Scratch site and look to magpie one for ideas, but ultimately need to complete their own game and not an edited version of another. Children who worked on this in Year 5 are welcome to build upon that project (but create a copy so a difference can be seen). Inputs, outputs, repetition, if, background and costume changes, timers and scores are all options children will know to increase the complexity of their work. Code should be well organised.</p> <p>Ultimately, a game should be produced which can be tested by another child and (for the most part) work successfully.</p> <p>Purple Mash 6.1 - coding is available if Scratch is inaccessible for certain learners</p>	<p>Children will finish their Year 6 experience by applying their coding to a physical device such as the crumble controllers or the BBC Microbits. This is about the children being show they understand the concepts of coding and now have a breadth of experience in a wide range of programmes and physical devices. Children should be able to explore connecting a device which is a clear and distinctive motherboard, ensuring they understand the workings of a computer (attaching peripherals such as motors or LEDs and a power source). Children should programme their device to achieve a specific purpose.</p>
Knowledge and/or Skills Covered		
Carefully select and move content within and between applications.	Solve problems they identify themselves, designing and writing programs to address this.	Solve problems they identify themselves, designing and writing programs to address this.

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<p>Present videos to the widest audience possible - ideally whole class - and take questions. Thoughtfully and politely critique their peers' rationale for selection / sorting.</p>	<p>Work confidently with sequence, selection, and repetition; work with variables and various forms of input and output. Alter and improve their own and others' programs, explaining why, and predicting and/or describing the effect.</p>	<p>Work confidently with sequence, selection, and repetition; work with variables and various forms of input and output. Alter and improve their own and others' programs, explaining why, and predicting and/or describing the effect.</p>
National Curriculum Attainment Targets		
<p>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</p>	<p>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</p>	<p>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</p>
Important Vocabulary		
<p>controversy prejudice authentic plausible analyse discern copyright plagiarism</p>	<p>binary functionality aesthetics user interface deterministic simultaneous cumulative concentric radial</p>	<p>binary functionality aesthetics user interface deterministic simultaneous cumulative concentric radial</p>