

Pudsey Bolton Royd Primary School Computing Long-Term Plan

Year 3

| <i>Autumn 1</i> | <i>Autumn 2</i> | <i>Spring 1</i> |
|---|---|--|
| Enquiry Questions | | |
| How can information be presented interactively? | How can databases help me explore questions? | How does my input affect other things? |
| Outcomes | | |
| <p>I can create a presentation with all the skills previously learnt.</p> <p>I can add features and effects which make my presentation more engaging.</p> <p>I can edit my presentation to make it more interactive.</p> <p>I can email my work (or where to find my work) to my teacher - this may use the Purple Mash messaging system or use Google Classroom uploading.</p> | <p>I can research information to input into a simple database.</p> <p>I can input data into a database.</p> <p>I can sort information in a database.</p> <p>I can search information in a database.</p> <p>I can use a branching database.</p> | <p>I can create algorithms which follow logic</p> <p>I can debug algorithm to find the mistakes in logic</p> <p>I can use timers in coding</p> <p>I can use repeat commands in coding</p> |
| Linked Texts | | |
| N/A | N/A | N/A |
| Linked Experiences | | |
| N/A | N/A | N/A |
| Overview | | |
| <p>This builds on the KS1 presentation skills, aiming to become fluent in them and creating more engaging material. Children should also explore online safety where they search for resources to add and use the internet in order to send their presentation as a precursor to the Online Learning skills they will hone through homework submission in KS2.</p> | <p>Children are reintroduced to databases. They utilise research and safer searching concepts taught through online learning to gain information for their work where necessary. They learn about data input and how to then access the information within the database, Purple Mash 3.8 - graphing</p> | <p>Children will look at a simple block-coding environment. They will be introduced to timers and be to the repeat command and there will be the opportunity to take a further look at debugging mistakes. This unit will be key in developing language the children will use in subsequent years and developing the perseverance needed to be an effective coder.</p> <p>Purple Mash 3.1 Coding</p> |
| Knowledge and/or Skills Covered | | |
| <p>Perform a keyword search e.g. within Word or on a search engine.</p> <p>Start to select and order information according to relevance.</p> <p>Increased speed with a qwerty keyboard, e.g. can type several sentences in a lesson without struggling.</p> <p>Highlight, drag, right-click and double-click.</p> | <p>Perform a keyword search e.g. within Word or on a search engine.</p> <p>Start to select and order information according to relevance.</p> <p>Able to list some forms of personal data (e.g. home address, date of birth).</p> | <p>Write programs that accomplish a simple purpose</p> <p>Start breaking problems into smaller parts, e.g. input and output or background and sprite)</p> <p>Debug a simple program independently, and start to identify bugs in their own work.</p> <p>Explain how some simple algorithms work.</p> |
| National Curriculum Attainment Targets | | |
| <p>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.</p> | <p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.</p> <p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify</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</p> |

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| <p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.</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>a range of ways to report concerns about content and contact.</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>use sequence, selection, and repetition in programs; work with variables and various forms of input and output</p> <p>use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p> |
| <p>Important Vocabulary</p> | | |
| <p>“Control alt”, cursor, short cut, drag, drop, cut, copy, paste, crop, rotate, flip, top-and-tail, screengrab, minimise, maximise.</p> | <p>Relevance, retrieve, content, numerical, clarify, opinion, communication.</p> | <p>algorithm sequence series programming language purpose value</p> |

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| <u>Spring 2</u> | <u>Summer 1</u> | <u>Summer 2</u> |
|---|---|--|
| Enquiry Questions | | |
| How can an animation be improved by using multiple resources? | How can editing be improved by using multiple resources? | How can different programmes be used for the same purpose? |
| Outcomes | | |
| I can create/find images to use in an animation I can edit images to use in an animation I can add text to an animation I can audio to an animation I can present a finished animation | I can create/find appropriate images I can edit images - including cropping and rotating. I can drag images to appropriate places on screen. I can share and present this work through digital methods. | I can explain the difference between an input and an output. I can create algorithms involving an input. I can create an output based upon an input. I can create different outputs based on different inputs. |
| Linked Texts | | |
| N/A | N/A | N/A |
| Linked Experiences | | |
| N/A | N/A | N/A |
| Overview | | |
| This unit of work will look to combine a range of skills children have begun to develop in KS1. Children will begin to focus on the interconnectivity of computing. Parallels can be drawn to their online activities, but the unit will focus on animation. Children will ideally look to combine picture, text and audio to create animations, and ideally look to do so using more than one programme. Children will need to see images changing incrementally to create an animation frame-by-frame. Purple Mash 4.6 Animation available if needed, as unused by Year 4. | Progressing from animation, children look to improve their presentational skills. Children will look to present work from their wider curriculum (art work being a good idea). They will need to focus on editing (and combining a photo editing programme) to capture, insert, crop, rotate and drag images whilst still combining with text and (potentially) audio. Children will also bring together their safer searching skills and use copy and pasting and downloading skills. Children should, through Google Classroom, have developed the skill to send messages online and video conferencing already this year. If this is not the case, uploading the presentation to share in Google Classroom and sharing through a video conference would be an acceptable task to finish the unit of work. | Children will recap their block coding skills and look to progress them using a more complicated block editor - Scratch. Children should become familiar with the Sprites and backgrounds and pick up misconceptions, such as coding the background by accident. Children progress from their Year 2 block-coding introduction to look at inputs and outputs. Children can reflect on physical inputs and outputs before moving onto their virtual environment. Ultimately, children may create a rudimentary game and can use examples available on Scratch to magpie. See: https://cdn.scratch.mit.edu/scratchr2/static/_709da8e5f3d72129538a4ccdbcbf5f2a_/pdfs/help/Getting-Started-Guide-Scratch2.pdf |
| Knowledge and/or Skills Covered | | |
| Deliver a short presentation with digital content to a single child or adult Copy and paste Manipulate more digital content, e.g. extending to resizing or cropping of images Save files appropriately without support. Perform a keyword search e.g. within Word or on a search engine. | Deliver a short presentation with digital content to a single child or adult Copy and paste Manipulate more digital content, e.g. extending to resizing or cropping of images Save files appropriately without support. Perform a keyword search e.g. within Word or on a search engine. | Write programs that accomplish a simple purpose Start breaking problems into smaller parts, e.g. input and output or background and sprite) Debug a simple program independently, and start to identify bugs in their own work. Explain how some simple algorithms work. |
| National Curriculum Attainment Targets | | |

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| Important Vocabulary | | |
| <p>“control alt” cursor short cut drag drop cut copy paste crop rotate flip top-and-tail screengrab minimise maximise</p> | <p>“control alt” cursor short cut drag drop cut copy paste crop rotate flip top-and-tail screengrab minimise maximise</p> | <p>algorithm sequence series programming language purpose value</p> |