

## Multiple Year Long term planning for Computing

The KS1 and KS2 national curriculum (remembering we have half of KS2)

|  |   |   |  |  |  |  |
|--|---|---|--|--|--|--|
|  | <b>Understand algorithms</b> <ul style="list-style-type: none"> <li>How they are implemented and</li> <li>how programs execute by following precise and unambiguous instructions.</li> </ul>                    | <b>Create and debug simple programs</b>   | <b>Use logical reasoning to predict the behaviour of simple programs</b>   | <b>Using IT to</b><br>create,<br>organise,<br>store,<br>manipulate and retrieve digital content.   | <b>Recognise common uses of IT beyond school</b>   | <b>Use technology safely and respectfully</b> <ul style="list-style-type: none"> <li>keep personal info private,</li> <li>identify where to go for help and support about content or contact</li> </ul>                      |
| <b>Understand computer networks</b><br>Including the internet, how they provide service and opportunities for communication and collaboration. | <b>Design, write and debug programs that accomplish specific goals</b> <ul style="list-style-type: none"> <li>controlling physical systems</li> <li>solve problems by decomposing into smaller parts</li> </ul> | <b>Use sequence, selection and repetition in programs, work with variables and various forms of input and output.</b> | <b>Use logical reasoning</b> <ul style="list-style-type: none"> <li>to explain how some simple algorithms work,</li> <li>detect and correct errors in algorithms and programs</li> </ul> | <b>Select, use and combine a variety of software on a range of devices</b> to design & create programs<br>System and content that accomplish given goals including collecting, analysing, evaluating and presenting data / info. | <b>Use search technologies effectively</b> <ul style="list-style-type: none"> <li>how results are ranked</li> <li>be discerning in evaluating content</li> </ul> | <b>Use technology safety, respectfully and responsibly</b> <ul style="list-style-type: none"> <li>recognise unacceptable behaviour</li> <li>identify a range of ways to report concerns about content and contact</li> </ul> |

| Year                              | Autumn 1  | Autumn 2   | Spring 1   | Spring 2  | Summer 1  | Summer 2   |
|-----------------------------------|---|--|--|---|---|--|
| Computing topic for the half term | E-safety<br>Use IT  | Common uses /<br>understand networks /<br>Use IT | Use IT / & search<br>effectively   | E-safety refresher<br>Algorithms  | Programming<br>/ physical systems   | Programming<br>E-safety refresher  |
| 2021/22<br>and<br>2023/24         | E-safety first. Penguins<br>KS1: logging in and off the computers / how to save and find files on our system<br><br>Theme in 2021: Asia/ <b>history of writing</b> includes Tim Berners-Lee and www/ blogging (seesaw class blog).<br>Theme in 2023: <b>London</b> : digital tour of London sequenced on ppt.   |  | Creating spreadsheets & graphs to present information<br>KS1: j2data – pictogram creator | KS1: Digi-duck<br>KS1: algorithms lessons from barefoot computing:<br><ul style="list-style-type: none"> <li>Crazy characters</li> <li>Bee-bot iPad app</li> <li>Blue Bot simple algorithms / programs</li> </ul> | Simple algorithms <ul style="list-style-type: none"> <li>De-bugging</li> <li>Predictions</li> <li>Daisy the Dinosaur</li> </ul>       | KS1: who can you tell?<br>Simple programs <ul style="list-style-type: none"> <li>School360 little pirate ship</li> <li>Hour of code</li> </ul>   |
|                                   | KS2: childnet SMART e-safety Refresher on how to save and find files on our system.<br>Create e-safety posters using Publisher.<br>Explain how networks work.<br>Explain how the internet works.<br>2021: <b>History of writing</b> includes Tim Berners-Lee and www/ blogging (seesaw class blog).<br>2023: <b>London</b> : mini blog 'live tweets' of the great fire – put onto ppt and animated. |  | KS2: excel spreadsheets with charts.   | KS2: think u know e-safety<br>KS2: inputs and outputs – theory and practical <ul style="list-style-type: none"> <li>Intro to scratch</li> <li>Makey makey game controllers</li> </ul>                             | KS2: inputs and outputs <ul style="list-style-type: none"> <li>Classroom volume monitor using scratch / laptop microphone.</li> </ul> | KS2: reporting concerns<br>KS2: programming <ul style="list-style-type: none"> <li>Off line programming work i.e. How to make a jam sandwich (debugging &amp; predicting)</li> <li>Hour of code</li> </ul> |
| 2022/23<br>and<br>2024/25         | E-safety first. Penguins<br>KS1: Common uses of technology<br>KS1: recap on how to save and find files on our system, then<br>Busy Things KS1 paint and publisher linked to <b>Farming and Food theme (2022)</b><br>Or film video on iPad to fit with <b>That's Entertainment (2024)</b>  |  | KS1: J2data Chart (bar / pie)  | KS1: Digi-duck<br>KS1: <ul style="list-style-type: none"> <li>offline algorithms (barefoot) Sharing sweets</li> <li>Blue-Bot</li> </ul>   | KS1: <ul style="list-style-type: none"> <li>Busy Things through school360 for sequencing monster grid</li> <li>JIT turtle</li> </ul>  | KS1: who can you tell?<br>KS1: junior scratch  |
|                                   | KS2: childnet SMART e-safety<br>KS2: understand search technology, then use the internet effectively and safely to research for:<br>A ppt presentation linked to the topic <b>Farming and Food</b> Or create iMovie trailers to fit with <b>That's entertainment (2024)</b>   |  | KS2: J2data Branching databases  | KS2: think u know e-safety <ul style="list-style-type: none"> <li>Algorithms A.L.E.X. / lightbot</li> <li>Hour of code</li> </ul>   | KS2: physical systems Crumble?  | KS2: reporting concerns<br>KS2: create a maze game in scratch  |