

## Overview of units

| Unit                                                                           | Expectations                                                                                                                                                                                                                                                                                                                                                                       | Computing PoS                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Software/Apps                                                                                                                                    | Hardware                                                                                                 |
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| <b>2.1</b><br><b>We are astronauts</b><br>Programming on screen                | <ul style="list-style-type: none"> <li>• Have a clear understanding of algorithms as sequences of instructions.</li> <li>• Convert simple algorithms to programs.</li> <li>• Predict what a simple program will do.</li> <li>• Spot and fix (debug) errors in their programs.</li> </ul>                                                                                           | <ul style="list-style-type: none"> <li>• Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.</li> <li>• Create and debug simple programs.</li> <li>• Use logical reasoning to predict the behaviour of simple programs.</li> </ul>                                                                                                                       | <b>Software:</b> Scratch, Kodu, Scratch Jr<br><b>Apps:</b> Hopscotch, Daisy the Dinosaur                                                         | Programmable toy, such as a Bee-Bot or Roamer Too                                                        |
| <b>2.2</b><br><b>We are games testers</b><br>Exploring how computer games work | <ul style="list-style-type: none"> <li>• Describe carefully what happens in computer games.</li> <li>• Use logical reasoning to make predictions of what a program will do.</li> <li>• Test these predictions.</li> <li>• Think critically about computer games and their use.</li> <li>• Be aware of how to use games safely and in balance with other activities.</li> </ul>     | <ul style="list-style-type: none"> <li>• Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.</li> <li>• Use logical reasoning to predict the behaviour of simple programs.</li> <li>• Recognise common uses of information technology beyond school.</li> <li>• Use technology safely and respectfully, keeping personal information private.</li> </ul> | <b>Software:</b> Scratch, Screencast-o-matic, web-based or open source games, pupils' games<br><b>Apps:</b> Snap! in the browser; free game apps | Desktop/laptop computers, IWB, internet connection; optionally, MP3 recorders, pupils' own game consoles |
| <b>2.3</b><br><b>We are photographers</b><br>Taking better photos              | <ul style="list-style-type: none"> <li>• Consider the technical and artistic merits of photographs.</li> <li>• Use a digital camera or camera app.</li> <li>• Take digital photographs.</li> <li>• Review and reject or rate the images they take.</li> <li>• Edit and enhance their photographs.</li> <li>• Select their best images to include in a shared portfolio.</li> </ul> | <ul style="list-style-type: none"> <li>• Use technology purposefully to create, organise, store, manipulate and retrieve digital content.</li> <li>• Recognise common uses of information technology beyond school.</li> <li>• Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</li> </ul>           | <b>Software:</b> Picasa, Pixlr<br><b>Apps:</b> iPhoto, Snapseed                                                                                  | Desktop or laptop computers and digital cameras/tablets/smartphones                                      |

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| <p><b>2.4</b><br/><b>We are researchers</b><br/>Researching a topic</p>       | <ul style="list-style-type: none"> <li>• Develop collaboration skills through working as part of a group.</li> <li>• Develop research skills through searching for information on the internet.</li> <li>• Improve note-taking skills through the use of mind mapping.</li> <li>• Develop presentation skills through creating and delivering a short multimedia presentation.</li> </ul>                                             | <ul style="list-style-type: none"> <li>• Use technology purposefully to create, organise, store, manipulate and retrieve digital content.</li> <li>• Recognise common uses of information technology beyond school.</li> <li>• Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</li> </ul> | <p><b>Software:</b> FreeMind, Bitly, Google Custom Search, web browser, Microsoft PowerPoint®</p> <p><b>Apps:</b> iThoughtsHD, Safari, Keynote</p>             | <p>Laptop or desktop computers or tablets, internet connection</p>                   |
| <p><b>2.5</b><br/><b>We are detectives</b><br/>Collecting clues</p>           | <ul style="list-style-type: none"> <li>• Understand that email can be used to communicate.</li> <li>• Develop skills in opening, composing and sending emails.</li> <li>• Gain skills in opening and listening to audio files on the computer.</li> <li>• Use appropriate language in emails.</li> <li>• Develop skills in editing and formatting text in emails.</li> <li>• Be aware of e-safety issues when using email.</li> </ul> | <ul style="list-style-type: none"> <li>• Use technology purposefully to create, organise, store, manipulate and retrieve digital content.</li> <li>• Recognise common uses of information technology beyond school.</li> <li>• Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</li> </ul> | <p><b>Software:</b> Your school's email system, Microsoft Excel®</p> <p><b>Apps:</b> Mail, Numbers</p>                                                         | <p>Desktop or laptop computers or tablets; network access</p>                        |
| <p><b>2.6</b><br/><b>We are zoologists</b><br/>Collecting data about bugs</p> | <ul style="list-style-type: none"> <li>• Sort and classify a group of items by answering questions.</li> <li>• Collect data using tick charts or tally charts.</li> <li>• Use simple charting software to produce pictograms and other basic charts.</li> <li>• Take, edit and enhance photographs.</li> <li>• Record information on a digital map.</li> </ul>                                                                        | <ul style="list-style-type: none"> <li>• Use technology purposefully to create, organise, store, manipulate and retrieve digital content.</li> <li>• Recognise common uses of information technology beyond school.</li> <li>• Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</li> </ul> | <p><b>Software:</b> Microsoft Excel®/ IWB software, Picasa/Photo Gallery, Google Maps Engine/Google Earth</p> <p><b>Apps:</b> Numbers, Snapseed, RunKeeper</p> | <p>Desktop or laptop computers with digital cameras/tablets, internet connection</p> |