Overview of units

Unit	Expectations	Computing PoS	Software/Apps	Hardware
2.1 **We are astronauts** Programming on screen	• Have a clear understanding of algorithms as sequences of instructions. • Convert simple algorithms to programs. • Predict what a simple program will do. • Spot and fix (debug) errors in their programs.	• Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. • Create and debug simple programs. • Use logical reasoning to predict the behaviour of simple programs.	**Software:** Scratch, Kodu, Snap! **Apps:** Hopscotch, Daisy the Dinosaur, Pyonkee	Programmable toy, such as a Bee-Bot or Roamer Too
2.2 **We are games testers** Exploring how computer games work	• Describe carefully what happens in computer games. • Use logical reasoning to make predictions of what a program will do. • Test these predictions. • Think critically about computer games and their use. • Be aware of how to use games safely and in balance with other activities.	• Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. • Use logical reasoning to predict the behaviour of simple programs. • Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private.	**Software:** Scratch, Screencast-o-matic, web-based or open source games, pupils' games, Snap **Apps:** Pyonkee free game apps, Light-bot	Desktop/laptop computers, IWB, internet connection; optionally, MP3 recorders, pupils' own game consoles
2.3 **We are photographers** Taking better photos	• Consider the technical and artistic merits of photographs. • Use a digital camera or camera app. • Take digital photographs. • Review and reject or rate the images they take. • Edit and enhance their photographs. • Select their best images to include in a shared portfolio.	• Use technology purposefully to create, organise, store, manipulate and retrieve digital content. • Recognise common uses of information technology beyond school. • 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.	**Software:** Picasa, Pixlr **Apps:** Photos (iOS), Snapseed	Desktop or laptop computers and digital cameras/tablets/smartphones

2.4 **We are researchers** Researching a topic	• Develop collaboration skills through working as part of a group. • Develop research skills through searching for information on the internet. • Improve note-taking skills through the use of mind mapping. • Develop presentation skills through creating and delivering a short multimedia presentation.	• Use technology purposefully to create, organise, store, manipulate and retrieve digital content. • Recognise common uses of information technology beyond school. • 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.	**Software:** FreeMind, bubbl.us, Google Custom Search, web browser, Microsoft PowerPoint® **Apps:** iThoughtsHD, Safari, Keynote, Popplet Lite, bubbl.us	Laptop or desktop computers or tablets, internet connection
2.5 **We are detectives** Collecting clues	• Understand that email can be used to communicate. • Develop skills in opening, composing and sending emails. • Gain skills in opening and listening to audio files on the computer. • Use appropriate language in emails. • Develop skills in editing and formatting text in emails. • Be aware of online safety issues when using email.	• Use technology purposefully to create, organise, store, manipulate and retrieve digital content. • Recognise common uses of information technology beyond school. • 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.	**Software:** Your school's email system, Microsoft Excel® Google Sheets **Apps:** Mail, Numbers, Google Sheets	Desktop or laptop computers or tablets; network access
2.6 **We are zoologists** Collecting data about bugs	• Sort and classify a group of items by answering questions. • Collect data using tick charts or tally charts. • Use simple charting software to produce pictograms and other basic charts. • Take, edit and enhance photographs. • Record information on a digital map.	• Use technology purposefully to create, organise, store, manipulate and retrieve digital content. • Recognise common uses of information technology beyond school. • 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.	**Software:** Microsoft Excel®/Google Sheets/IWB software, Picasa/Photo Gallery, Google My Maps/ Google Earth **Apps:** Numbers/Google Sheets, Snapseed, RunKeeper	Desktop or laptop computers with digital cameras/tablets, internet connection