Y1

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|  | **Autumn 1** | **Autumn 2** | **Spring 1** | **Spring 2** | **Summer 1** | **Summer 2** |
| **Suggested Theme/Links**  | **Where do I live? -** **Geography** | **Who am I? - History****Food - DT** | **Wonderful Weather - Geography****Art Day - Art** | **Everyday Materials****Manmade or Natural** | **Wheels and Wings****At the Farm** | **RE/End of year****Father’s Day etc.** |
| **Unit** | **We are treasure hunters/Bee bot****Using programmable toys** | **We are TV chefs****Filming the steps of a recipe/instruction** | **We are painters****Illustrating an eBook** | **We are collectors****Finding images using the web** | **We are storytellers****J2E to find and insert images and sounds****(Use add page to create whole book)** | **We are celebrating** |
| **Main Resource** | **Bee Bot & App** | **iMovie on iPad.** | **JIT5** | **J2E to find and insert images****JIT5 to make branching diagrams** | **J2E to find and insert images and sounds****(Use add page to create whole book)** | **JIT5 Paint** |
| **Overview** | **In this unit, the children will program a toy to move around a map to find buried treasure. They will start by****thinking of algorithms for their routes, then input these as stored programs for the robot. They predict how the robot will move and will debug their programs.** | **In this unit, pupils produce short videos of themselves making a healthy meal or snack. They also decompose****a complex problem into smaller parts – an important idea from computer science.** | **This unit will particularly engage children who love****the illustrations in the books they read. It is a great opportunity for the children to work creatively.** | **In this unit, the pupils will use web search engines to****collect pictures of different types of animals and then****explore ways in which those pictures can be organised.** | **In this unit, the children create a talking book that they can share with others.** | **In this unit, pupils will have the opportunity to create a digital greetings card, which could be used for a religious festival such as Diwali or Christmas, pupils’****birthdays, or simply to say thank you or good luck.** |
| **Online Safety** | **- Accessing the internet****- Filming Permission** | **- Filming Permission****- Consider how video files are stored, shared and then deleted****- Accessing the internet** | **- Accessing the internet****- Password safety – JIT****- Being respectful online** | **- Accessing the internet****- Revisit AUP****- Children’s online identity****- Copyright** | **- Filming Permission****- Consider how video files are stored, shared and then deleted****- Accessing the internet** | **- Accessing the internet****- Password safety – JIT****- Being respectful online** |
| **Computing Focus** | **Computer Science** | **Computer Science/****Information Technology** | **IT/Digital Literacy** | **Information Technology** | **IT/Digital Literacy** | **Creating a card electronically** |

Y2

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|  | **Autumn 1** | **Autumn 2** | **Spring 1** | **Spring 2** | **Summer 1** | **Summer 2** |
| **Suggested Theme/Links** | **Home Grown Hero** | **United Kingdom** | **Living Things and their Habitats - Science** | **Continents and Oceans****Science** | **Panic on Pudding Lane****History** | **Living Things/Plants****Science** |
| **Unit** | **We are astronauts****Programming on screen****A Scratch (or similar) program in which a sprite moves around the screen**  | **We are games testers****Exploring how computer games work****Notes on how games work, as text, audio or screencast video** | **We are photographers****Taking, selecting and editing digital images****A class portfolio of original photographs**  | **We are researchers****Researching a topic****Mind maps and a two-minute multimedia presentation for a specific audience**  | **We are detectives****Communicating clues via email or messages****Class emails requesting information to solve a mystery**  | **We are zoologists****Recording bug hunt data****Charts and maps showing bugs found in different locations**  |
| **Main Resource** | **J2Code – Year 1/2** | **Scratch** | **J2E Camera OR****JIT5 Paint** | **J2E to find and insert images and sounds****(Use add page to create whole book)** | **J2E Write****J2message****Teacher pupil/chat** | **J2E*** **Chart**
* **Pictogram**

**Branch** |
| **Overview** | **In this unit, the children will build on work from Unit 1.1****– We are treasure hunters to program a sprite (such as****a spaceship) to move around the screen. This unit acts as a springboard for programming in Year 3.** | **In this unit, the pupils will try to work out how some simple Scratch games work. They also look at free online or open source games and share their favourite games with the class.** | **In this unit, the children review photos online, practise****using a digital camera, take photos to fit a given theme, edit their photos, and then select their best****images to include in a shared portfolio.** | **The children research a topic – safely, effectively and efficiently – using a structured approach (mind mapping). They share their findings with others****through a short multimedia presentation.** | **In this unit, the children are challenged to solve a****mystery by reading, sending and replying to emails, and by listening to a witness statement. They use a****fact file sheet to create a table and identify the culprit.** | **In this unit, the children go on a bug hunt, recording****and identifying the small animals they find. They****then organise the data they have collected, record it using a graphing package, and interpret the graph to****answer questions about the animals.** |
| **Online Safety** | **- Accounts and passwords****- What to do if they see something inappropriate****- Copyright** | **- Age restrictions****- Personal information****- Accounts and passwords** | **- Safe searching/filtering****- What to do if they see something inappropriate****- Personal information****- Acceptable photos** | **- Safe searching/filtering****- What to do if they see something inappropriate****- T&CS of software****- Copyright** | **- Accounts and passwords****- Dangers of email attachments from unknown people****- Consider parent online safety letter/meeting** | **- Digital equipment rules and expectations****- T&CS of software****- Personal information** |
| **Computing Focus** | **Programming** | **Programming** | **Information Technology** | **Information Technology/****Digital Literacy** | **Information Technology/****Digital Literacy** | **Information Technology** |

Y3

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|  | **Autumn 1** | **Autumn 2** | **Spring 1** | **Spring 2** | **Summer 1** | **Summer 2** |
| **Suggested Theme/Links** | **English – Fiction****Prehistoric Britain** | **English – Fiction****Prehistoric Britain** | **PE – Athletics/Games** | **History – Ancient Egypt****Science - Light** | **PSHE/Music – Bringing Us Together** | **Maths/Favourite Books/End of year transition or review** |
| **Unit** | **We are programmers****Programming an animation****A short, scripted, animated cartoon**  | **We are bug fixers****Finding and correcting bugs in programs****Debugged Scratch scripts and explanatory screencasts (if appropriate)**  | **We are presenters****Videoing performance****One minute of edited video of children performing an activity, with narrated commentary**  | **We are vloggers****Create a video to teach others about a topic****A screencast video of a short narrated presentation on an agreed topic, combining images and audio**  | **We are communicators****Communicating safely on the internet****Emails (both collective and individual), collaborative presentation, video conference**  | **We are opinion pollsters****Collecting and analysing data****Online opinion poll survey, charts showing analysis of data, brief illustrated report**  |
| **Main Resource** | **J2Code – Year 3/4****OR Scratch** | **Scratch** | **iMovie on iPad** | **J2Whiteboard****J2Webby****J2Bloggy** | **J2E Write****J2message****Teacher pupil/chat** | **J2Vote****J2E*** **Chart**
* **Pictogram**
 |
| **Overview** | **In this unit, the children create an animated cartoon using characters they design. They use a paint tool to create characters and backgrounds. They then create an animation by translating a storyboard into a series of scripted instructions (program) for graphic objects.** | **In this unit, the children work with six example****Scratch projects. They explain how the scripts work, finding and correcting errors in them, and explore****creative ways of improving them. The children learn to recognise some common types of programming error, and practise solving problems through logical thinking.** | **Do your children love watching sport or other****performances on TV? This unit gives them a chance to make a short narrated video of themselves practising a sport or other skill, and to use this to help****improve their performance.** | **In this unit, the pupils choose a topic to teach to others. They research this using web-based sources, plan a presentation, source and create visual content and record a spoken commentary.** | **This unit allows the children to learn about a number of e-safety matters in a positive way. They will work with a partner in another class, learning how to use email and video conferencing safely.** | **In this unit, the children create their own opinion poll, seek responses, and then analyse the results.** |
| **Online Safety** | **- Downloading images – follow online safety policy****- What to do if they see something inappropriate****- Personal information** | **- What to do if they see something inappropriate****- Personal information** | **- Parental consent for filming****- Brief children and parents in advance****- follow online safety policy** | **- Digital footprint****- What to do if they see something inappropriate****- Copyright****- Safe search** | **- Personal information****- Accounts and passwords****- AUPs****- follow online safety policy** | **- Personal information****- Accounts and passwords****- Confidentiality****- Appropriate questions** |
| **Computing Focus** | **Programming** | **Programming** | **Information Technology/****Digital Literacy** | **Information Technology/****Digital Literacy** | **Information Technology/****Digital Literacy** | **Information Technology** |

Y4

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|  | **Autumn 1** | **Autumn 2** | **Spring 1** | **Spring 2** | **Summer 1** | **Summer 2** |
| **Suggested Theme/Links** | **English – Fiction****PE - Games** | **English – Fiction****Spanish - vocab** | **Music** | **Web page on anything!** | **Science - Electricity****History – Ancient Arabia****Geography - Tourism** | **Maths****Science** |
| **Unit** | **We are software developers****Developing a simple educational game****‘Drill-and-practice’-style educational software aimed at reinforcing learning in another area of the curriculum, perhaps for a different age group**  | **We are toy designers****Prototyping an interactive toy****Scripts for an on-screen prototype of a computer- controlled toy, *Dragons’ Den*-style presentation**  | **We are musicians****Producing digital music****A piece of backing music to accompany work in another medium** | **We are HTML editors****HTML challenges and a personal homepage** | **We are co-authors****Producing a wiki****Class wiki and amended pages of Wikipedia**  | **We are meteorologists****Presenting the weather****Spreadsheet of weather data collected; charts, maps and graphs of weather data collected; TV-style weather presentation**  |
| **Main Resource** | **Scratch or****J2Code** | **Scratch or****J2Code** | **Isle of Tune app****GarageBand** | **www.khanacademy.org/computing/computer-programming/html-css** | **J2Bloggy** | **J2Data****J2 Lesson Plans?** |
| **Overview** | **The pupils start by playing and analysing educational computer games, identifying those features that****make a game successful. They then plan and design a game, with a clear target audience in mind. They create a working prototype, and then develop it further to add functionality and improve the user****interface. They test their game and make any necessary changes.** | **In this unit, the children work together to design a simple toy that incorporates sensors and outputs and then create an on-screen prototype of their toy in Scratch. Finally, they pitch their toy idea to a Dragons’ Den-style panel.** | **How many children in your class play an instrument? How many of them like singing, or simply enjoy listening to music? In this unit, the children produce****music suitable for any purpose they choose.** | **In this unit the children learn about the history of the web, before studying HTML (hypertext mark-up****language), the language in which web pages are written. They learn to edit and write HTML, and then****use this knowledge to create a web page.** | **Wikipedia is a free online encyclopaedia that anyone can view and edit. In this unit, the pupils collaborate****to create a ‘mini Wikipedia’. They then go on to add or amend content on the real Wikipedia.** | **This unit brings together data measurement, analysis****and presentation, as the children take on the role of meteorologists and weather presenters.** |
| **Online Safety** | **- What to do if they see something inappropriate****- Personal information** | **- What to do if they see something inappropriate****- Personal information****- Copyright** | **- Illegal downloading****- Copyright****- Online Safety Policy****- AUPs** | **- What to do if they see something inappropriate****- Personal information****- Safe search** | **- What to do if they see something inappropriate****- Personal information****- Safe search****- Appropriate posting** | **- Consent and school policy on filming****- Personal information****- Accounts & passwords** |
| **Computing Focus** | **Programming** | **Programming** | **Information Technology/****Digital Literacy** | **Information Technology/****Digital Literacy** | **Information Technology/****Digital Literacy** | **Information Technology** |

Y5

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|  | **Autumn 1** | **Autumn 2** | **Spring 1** | **Spring 2** | **Summer 1** | **Summer 2** |
| **Suggested Theme/Links** | **English – Fiction Books** | **Maths****Science** | **Art Day****Maths - Geometry** | **Online Safety** | **PSHE** | **Art & Design****Design & Technology** |
| **Unit** | **We are game developers****Developing an interactive game****An original computer game, ideally uploaded to Scratch**  | **We are cryptographers****Cracking codes****Morse and semaphore messages, encrypted and decrypted messages in various ciphers**  | **We are artists****Fusing geometry and art****Pieces of geometric art and a Scratch computer program for drawing shapes**  | **We are web developers****Creating a web page about cyber safety****Website offering advice on all aspects of safe and responsible use**  | **We are bloggers****Sharing experiences and opinions****A media-rich online blog**  | **We are architects****Creating a virtual space****A virtual gallery displaying the pupils’ work**  |
| **Main Resource** | **Scratch or****J2Code** | **Scratch****The Black Chamber** | **JIT5** **– Turtle****- Paint** | **J2Whiteboard****J2Webby****J2Bloggy** | **J2Whiteboard****J2Webby****J2Bloggy** | **SketchUp Online****OR****Tinker CAD** |
| **Overview** | **The pupils plan their own simple computer game. They design characters and backgrounds, and create a working prototype, which they develop further based on feedback they receive.** | **The pupils learn more about communicating****information securely through an introduction to cryptography (the science of keeping communication****and information secret). They investigate early methods of communicating over distances, learn about two early ciphers, and consider what makes a secure password.** | **The pupils use vector and turtle graphics to explore geometric art, taking inspiration from the work ofEscher, Riley and traditional Islamic artists, as well as experimenting with complex ‘fractal’ landscapes.** | **In this unit, the pupils work together to create a website explaining e-safety and responsible online behaviour.** | **Blogging provides a worldwide audience for pupils’ work. Commenting on others’ work extends pupils’****sense of membership of a learning community beyond school. In this unit, pupils create a media-rich blog, comment on blogs and respond to comments.** | **In this unit, the pupils research examples of art gallery architecture, before using Trimble SketchUp to create their own virtual gallery. Finally, they use the gallery to exhibit their own artwork.** |
| **Online Safety** | **- What to do if they see something inappropriate****- Personal information****- Copyright** | **- What to do if they see something inappropriate****- Personal information****- Copyright****- Accounts and passwords****- Encrypted connections** | **- Safe search****- What to do if they see something inappropriate****- Personal information****- Copyright** | **- Read online safety and unit carefully and in full before teaching** | **- Locked down/private blogging area****- Digital footprints****- Appropriate posting** | **- Internet research****- Safe search****- What to do if they see something inappropriate****- Personal information****- Copyright** |
| **Computing Focus** | **Programming** | **Programming** | **Information Technology/****Digital Literacy** | **Information Technology/****Digital Literacy** | **Information Technology/****Digital Literacy** | **Information Technology** |

Y6

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|  | **Autumn 1** | **Autumn 2** | **Spring 1** | **Spring 2** | **Summer 1** | **Summer 2** |
| **Suggested Theme/Links** | **Teachers to choose as units are sequential.** | **Teachers to choose as units are sequential.** | **Teachers to choose as units are sequential.** | **Teachers to choose as units are sequential.** | **Teachers to choose as units are sequential.** | **Teachers to choose as units are sequential.** |
| **Unit** | **We are app planners****Planning the creation of a mobile app****A presentation to pitch a smartphone or tablet app**  | **We are project managers****Developing project management skills****A clear and detailed plan for managing the app development project**  | **We are market researchers****Researching the app market****A presentation identifying the market for their app and establishing users’ expectations of it**  | **We are interface designers****Designing an interface for an app****Wireframe designs and media assets for their app**  | **We are app developers****Developing a simple mobile phone app****A working app**  | **We are marketers****Advertising material for the pupils’ apps (printed, online and video)**  |
| **Main Resource** | **App Inventor/ TouchDevelop/ AppShed/ App Lab Google Drive Presentation/ PowerPointCodea, TouchDevelop** | **Google Apps for Education/VLE/GitHub/Basecamp Web browser (Safari)** | **Google Drive applicatons/ Microsoft Office, Microsoft Windows Movie Maker®Web browser, Keynote, iMovie**  | **Justinmind Prototyper/Pencil Project/Microsoft PowerPoint®Balsamiq or iMockups** | **App Inventor/TouchDevelop/AppShed/App Lab TouchDevelop/Codea** | **Microsoft PublisherTM, WordPress/Google Sites, Movie Maker® and other programs chosen bythe pupilsPages, WordPress, iMovie and other apps chosen by the pupils** |
| **Overview** | **The Year 6 units form a sequence, beginning with this one in which the pupils learn about the capabilities of****smartphones, think of a problem that a smartphone or tablet app could solve, and then pitch the idea for****their app.** | **This is the second in a sequence of six Year 6 units in which pupils work collaboratively to develop a smartphone or tablet app. Pupils apply computational****thinking to the task of managing a complex project.** | **The pupils conduct research into the potential market for their app, using an online survey together with interviews or focus groups. They analyse the data and information they obtain and create a presentation****summarising findings.** | **In this unit, the children will start to design the look/feel of their app’s interface. They begin by sketching ideas, planning the different screen layouts for their****app and developing these using a wireframing tool.** | **In this unit, the pupils draw on their work from the previous Year 6 units to create a working app. They****write down their algorithms, and use a programming****toolkit to code them.** | **The pupils work collaboratively to produce marketing****materials for the app they have been developing in the Year 6 units. They create a poster or flyer, develop a simple website, and shoot a short video.** |
| **Online Safety** | **- Internet Research****- GPS/sharing location****- AUP****- Online Safety Policy** | **- Internet Research****- GPS/sharing location****- AUP****- Online Safety Policy** | **- Personal information****- Parental Consent****- Internet Research****- GPS/sharing location****- AUP****- Online Safety Policy** | **- Internet Research****- GPS/sharing location****- AUP****- Online Safety Policy****- Copyright** | **- Personal information****- Internet Research****- AUP****- Online Safety Policy** | **- Personal information****- Parental Consent****- Internet Research****- Copyright****- AUP****- Online Safety Policy** |
| **Computing Focus** | **Programming** | **Programming** | **Information Technology/****Digital Literacy** | **Information Technology/****Digital Literacy** | **Information Technology/****Digital Literacy** | **Information Technology** |