

Year 6

Computing and Digital Skills

	Apps:	Web Resources:	LGfL resources:	Digital devices:
Computer Science 	Bee-Bots Kodable Lightbot	Scratch Code for Life Code.org PurpleMash 2Code (subscription) Barefoot BBC Computing/Science Clips	J2e Busy Things J2Code Web Tech Tutor	Makey Makey
Digital Literacy 	Safari Chrome	Switched On Online Safety Thinkuknow (Lee and Kim) BBC KS2 Computing 2Simple 2Email PurpleMash email	US Online CyberPass J2e J2Webby Office 365	Laptops Desktops iPad Tablets
Information Technology 	J2Launch iMovie GarageBand Green Screen by DoInk (subscription) Book Creator Kahoot! Apple Pages/Numbers	Dance Mat typing (BBC) 2Simple 2Type PurpleMash Brown Bear typing Primary Games Arena	JiT Write Picture Book Maker BusyThings J2Webby	Digital camera iPad Tablets Microphones Sound buttons

National Curriculum

- ❖ Solve problems by decomposing them into smaller parts
- ❖ Use logical reasoning to explain how some simple algorithms work
- ❖ Detect and correct errors in algorithms and programs
- ❖ Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems
- ❖ Use sequence, selection and repetition in programs
- ❖ Work with variables
- ❖ Work with various forms of input and output

Key Skills/Objectives

- Record in some detail the steps that are required to achieve an outcome
- Predict the outputs for the steps in an algorithm
- Use the process: plan, program, test and review a program
- Write a program which follows an algorithm to solve a problem and achieve a planned outcome
- Group commands as a procedure to achieve a specific outcome within a program
- Control on screen mimics and physical devices using one or more input and predict the outputs
- Understand how sensors can be used to measure input in order to activate a procedure or sequence and talk about applications in society

Supporting Units of Work

Islington:

- ❖ Scratch Yr 5/6 Games
- ❖ Yr 6 Python Unit A
- ❖ Yr 6 Python Unit B
- ❖ Switched On Computing: Kodu

Barefoot:

- ❖ KS2 Search Engine Rank Results
- ❖ Intro to HTML
- ❖ Intro to HTML with Mozilla Thimble
- ❖ Designing Games with Kodu Lab

Examples of Cross Curricular Links

- Use Scratch to create games, simulations and animations historical events.
- Use scratch to create virtual tours around school, local area, London, or another focus country
- Through science, create animations and diagrams, labelling or sorting activities using scratch
- **BBC Planet Dinosaur Game** - build your own simulation of a planet, adjust the environment to ensure that your dinosaurs will survive
- Use a function machine in mathematics to demonstrate a model exploring input and output (rules and variables)
- Use graphical modelling (Sketchup) tools to support design work

National Curriculum

- ❖ Use technology safely, respectfully and responsibly
- ❖ Recognise acceptable/unacceptable behaviour
- ❖ Identify a range of ways to report concerns about content and contact
- ❖ Understand how computer networks, including the internet, can provide multiple services (such as the World Wide Web) and the opportunities they offer for communication and collaboration
- ❖ Use search technologies effectively
- ❖ Appreciate how search results are selected and ranked

Key Skills/Objectives

- I can explain the differences between a network, the internet and the world wide web
- Decide which online communication tool to use to best suit the purpose
- I know that computers use IP addresses to identify each other
- I use specific vocabulary: server, digital data, binary code, URL
- I can explain how search engines work; finding and ranking pages in order
- I can use range of sources to check validity and recognise different viewpoints.
- Describe possible impact of published content to an audience e.g. the use of advertising Know the meaning of some common website extensions –such as .org, .net, ac, .gov, .co.uk, .fr, .com
- Know that https is used for secure transaction such as on-line banking and identified with a padlock
- Select copyright free images and sounds from sources such as LGFL audio network and google searches

Switched On Online Safety

- ✓ Unit 6.1 - We are online safety ambassadors
- ✓ Unit 6.2 - We will not share inappropriate images
- ✓ Unit 6.3 - We are safe social networkers
- ✓ Unit 6.4 - We are respectful of others
- ✓ Unit 6.5 - We are online safety problem solvers
- ✓ Unit 6.6 - We are safe gaming experts

SWITCHED  **N**
Online Safety

Examples of Cross Curricular Links

- ✓ Use j2e5 to create a presentation, then publish to the school blog so others can comment on their work.
- ✓ Compare Google and Bing searches to see which is most accurate and efficient.
- ✓ Use Barefoot resources to discuss how the internet works
- ✓ Create a poster on Pic Collage and then share data via airdrop or online cloud such as Seesaw

Information Technology

National Curriculum

- ❖ Be discerning in evaluating digital content
- ❖ 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

Remember to:

- give pupils opportunities to publish their written work digitally
- provide sharing opportunities across the wider community
- share tips with parents/carers

Key Skills/Objectives

- I can copy cells and formulae using copy & paste, and fill across and down
- I can display and interpret data selecting bar charts, pie charts, scatter graphs and line graphs appropriately
- I can match the information in a spreadsheet to the needs of the audience and present data, with appropriate ranges, labelling axes and title
- I can create and amend a spreadsheet to solve a problem through a review of the rules and variables
- I can use databases and branching databases to process, interpret, store, and present information for a specific audience, realising the need for accuracy and checking plausibility
- I can identify opportunities to use data logging to support my work
- I can use data logging devices to investigate changes in the environment over time
- I can use graphical information to answer questions and solve simple problems

Examples of Cross Curricular Links

- ✓ Explore prepared databases and then create a database that includes identification keys to support work on habitats / animals / plants
- ✓ Plan a family holiday using Excel, or school trip, taking into account children's prices and the cost of travel and accommodation
- ✓ Using Audacity or Garage Band to alter the speed, pitch and texture of sounds in compositions
- ✓ Record performance of a poem using suitable sound effects
- ✓ Select suitable music and/or sound to add atmosphere and enhance a multimedia presentation/film/image/photo, considering specific audience and purpose
- ✓ Using Audacity, children use timeline editing to enable music to stop/start at selected points and add suitable effects such as fade in, fade out
- ✓ Children use the filters and cutting tools in photo editing software to create their own fantasy settings to support their writing

Examples of Cross Curricular Links

- ✓ Create a copy of a TV programme or advert using iMovie
- ✓ Use animation to illustrate water cycle, seasons or plant growing
- ✓ Children plan, frame and take photographs to illustrate poster on Roman life
- ✓ Children make video of weather forecast around the world.
- ✓ Use a digital camera to capture freeze frame in drama to show different shapes and emotions, use Movie Maker to create video presentation
- ✓ Create a news broadcast using TouchCast to demonstrate a current affairs programme.
- ✓ Children design wrapping paper for Christmas or DT project
- ✓ Propaganda posters from ww2 – linked to art/ scanning pictures and editing using J2e5 and blogging using J2webby
- ✓ Children create their own silent film with music they have composed