YEAR 6

CURRICULUM OVERVIEW

	Autumn		Spring		Summer	
	Digital Literacy		Computer Science		Information technology	
Years 1-6	Creativity	Communication and collaboration	Computer science	Coding	Networks and the internet	Productivity
	Creating and publishing	Communication and collaboration online	Modelling and simulations	Programming and control	Using technology Using the internet	Digital media Using data

Topic/Unit	National Curriculum Objective	Learning Objectives	Resources for NC objectives and Skills	Skills	
AUTUMN **Digital Literacy**	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	- To understand the main risks associated with the internet. - To understand that they should not share certain types of personal information online. - To understand the school's acceptable use policy - To know how to report a worry or concern about inappropriate online behaviour	DB Primary Microsoft PowerPoint Google – Ad words tool Google inside	1st half Creativity Creating and publishing • Continue to create websites based on topics, area of interest or events, increasing the complexity of these sites. • Continue to create presentations which link into a topic, area of interest or event, choosing an appropriate tool or service • Create a web based application for a smart phone or tablet with consideration for the audience- containing information about a topic, trip, the school or to	2nd half Communication and collaboration Communication and collaboration online • Continue to collaborate on a project using a range of web 2.0 tools to support their work- including, but not limited to, google documents and sites- both with children in their class, other classes and children from other schools. • Respond to e-mails sent from outside (e-saftey paramount) • Talk about the different forms of electronic communication and web 2.0

				support work in other areas of the curriculum. • *Create a non-linear presentation.* • Continue to regularly use word processing and desktop publishing to present their work, combing formatted text with other media and making choices about programs and features to use and justifying these choices to others. Continue to use ICT to create a finished product or set of linked products, developing consistency in style across linked products.	tools, discuss appropriateness of using different tools in different contexts and the advantages and disadvantages
SPRING **Computer Science**	- Use sequence, selection and repetition in programs; work with variables and various forms of input - Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and	- To create a series of commands that can be combined or condensed to create more complex or efficient routines called procedures - To understand and explore different game genres -To understand what makes a good game -To understand that games are made of a specific code -To refine a game to make it more appealing to a specific audience - Transfer existing coding skills to a new program	Robomind Kodu Data loggers Gant Prezi Scratch (website) Beebots Beebot programme Lego robotics (?)	1st half Computer Science Modelling and simulations - Use software to create models of 3D objects, landscapes or items, including creating to scale - Use a range of more complex simulations, exploring the link to 'real life' and the impact of changing variables. Link the work exploring simulations to creating their own basic simulations in excel (see Using Data strand).	2nd half Coding Programming and control - Continue to explore different ways in which computer software can be planned. - Continue to develop an understanding of how technology works, with a focus on developing computational thinking - *Use a range of visual based programming software (e.g Scratch and Kodu) to plan and design basic software (for example a simple game), controlling the movement and*

	programs				responses of different elements on screen.
					• Use a range of visual programming software to plan and design more complex software (for example a multi-level game)
					• Control an on-screen icon using text based controls, including responding to sensors and repeating written algorithms (e.g. Robomind)
					Begin to explore text based programming languages and create basic scripts (for example writing a python script to identify if a number is odd or even)

| SUMMER **Information Technology** | - 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 | - To understand that collecting and organizing information using ICT makes it easier to find answers to questions
- To understand that ICT can be used to create different graphs that show data for different purposes across the curriculum
- To understand that questions are key to organizing data efficiently in a branching database to solve problems
- To understand the difference and similarities between branching 'standard' databases | Audacity
Microsoft excel
Movie maker
Lenovos – video and sound and microphones
Google search tools | 1st half
Networks and the internet
Using technology
- Continue to become familiar with a range of devices, for example tablets, desktop computers, laptops, microphones, cameras etc and **increasingly develop their independence and confidence in using these devices**.
- Continue to increase their typing speed, and be encouraged to play games at home and school which help with this.
Be encouraged to increasingly make sensible **choices** about the technology they use to **help** them work, and to justify their choices- for example, why they have chosen to use a *tablet* rather than a laptop, or why they have chosen to use an *easi-speak* microphone rather than the computer to record sound.

Using the internet
- Understand the dynamics of different search engines and know that there are different search engines which may focus on different media
- Modify searches further to find relevant information for a report | 2nd half
Productivity
Digital media
• Use a range of devices to create music samples and sequence these.
• Independently choose and use an appropriate device to record sounds in order to create a sound file and use software manipulate sounds using computer software – e.g. remove unwanted silences/trimming start and end combine to make a podcast or similar broadcast.
• Create stop motion animations and combine with video and audio effects.
• Apply more complex effects to photographs using a computer.
• Compare and contrast different image creation and editing tools across a range of platforms.
• Continue to choose to independently record |

				- Talk about where web content might originate from by looking at web address, author, other linked pages - Talk about validity and plausibility of information by checking other sources - Recognise the impact of using incorrect information in their work - Skim and select information checking for bias and different viewpoints	video for a range of purposes. • Continue to take photographs for a specific reason or project and/or find appropriate images on-line. Using data • Continue to use, query and create their own databases as appropriate, linking into work across the curriculum • Understand what a spreadsheet is and the basic features of a spreadsheet and how these may be used in real life applications. • Linked into a theme, or real life application, create a spreadsheet, enter basic formulae (simple calculations and SUM) and change data in a spreadsheet to model situations and answer 'What if…' questions.