

KGB Computing Progression



Coding Knowledge and skills						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Knowledge & understanding of terms	Understand what an algorithm is.		Understand and identify simple input and outputs. Understand and identify repetition in code.	Understand and identify selection in their coding	Understand and use variables.	
Understanding technology	Understand that digital devices work using algorithms.	Understand that real and virtual devices can be controlled by sequences of commands (algorithm).		Understand that games, apps and web content are made of code. Transfer existing coding skills between applications.	Understand what networks (including the internet) are and how they are used to transfer information.	CS29 To understand that the internet is made up of networks of computers around the world that can provide multiple services.
Creating code	Control devices through a series of clear and accurate algorithms to achieve a predefined outcome.	Plan a set of commands to achieve a specific outcome. Control devices through a series of commands (algorithm). Predict the outcome of an algorithm using logical reasoning.	Create simple algorithms combining inputs and outputs. Use repetition in programs to write code using the least number of lines and improving efficiency.	Design and code a simple game. Use selection in their coding.	Use selection in programming to create a game aimed at an audience. To become familiar with inputs and outputs and create algorithms using them to control or simulate physical systems.	CS28 Include more complex selection linked to variables to programs. Create a program where an event is triggered by a sensor.
Debugging and improving code		Write, test and debug simple programs.	Create, refine and debug a series of commands (algorithm) for virtual programmable devices.	Debug existing code to improve it.	Solve problems by decomposing them into smaller parts. Convert lines of code into everyday language (pseudocode) and vice versa.	CS27 To design, write and debug a program to solve a problem.
Uses of technology in wider world	Recognise common uses of technology beyond school. For example programming Sky box or using a washing machine or microwave.	Understand the benefits of using technology beyond school.		Understand and explore different game genres and what makes a good game.		

Data Handling Knowledge and skills						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Collect, represent and interpret data	2 Represent and interpret simple data as pictograms.	3 Represent information as a simple block graph or pictogram. 4 Organise and interpret data as a simple graph.	6 Collect and organise information to find answers to questions. 7 Create different graphs that show data for different purposes across the curriculum.	9 Represent data in a database using appropriate data types.	14 Create charts using appropriate data to interpret and answer a specific question.	20 Identify and collect appropriate data to answer their questions.
Sorting and classifying / databases	1 Sort, organise and classify objects based on their properties.	5 Sort and answer questions using yes/no answers.	8 Access data using a database.	10 Turn questions into search criteria and use database tools to find answers.	16 Interrogate a database using suitable questions. 17 Use technology to search and sift through large amounts of different types of information.	15 Create a database to store and search relevant information
Spreadsheets				11 Use a spreadsheet to enter data and perform simple calculations. 12 Convert data in a spreadsheet into different graph types for different purposes.	18 Use a range of calculations and functions in a spreadsheet. 13 Change elements of a spreadsheet and understand the effects on other calculations.	22 Refine, search, filter, sort and graph data for purpose in a database or spreadsheet.

Information Literacy Knowledge and skills

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Different forms of information	Access information coming from a variety of different sources and understand technology allows quick access to these resources.	Identify information through a range of appropriate forms of media.		Locate online content using some of the available advanced features in search engines.	IL15 Search for and save differing types of media using search engine functions.	
Search technologies	Explore a variety of digital information as part of a given topic.	Search for information using child friendly search engines.	Use search technologies effectively by identifying specific keywords.	Carry out and modify searches developing keywords to improve search accuracy.	IL15 Search for and save differing types of media using search engine functions.	IL19 Understand how search engines work and rank results.
Layout and organisation	Find / access information using technology.	Recognise the layout of a web page and interact with it appropriately.	Locate specific information online and recognise that web pages can be organised in different ways.			
Identify relevant and valid information			Find and choose appropriate information and use it in other digital forms. (copy and paste relevant info)	Check the relevancy and accuracy of search results.	IL14 Recognise that the Internet may contain material that is irrelevant, bias, implausible and inappropriate. IL13 Interpret and validate information from a range of online sources.	IL17 Check plausibility of information from a variety of chosen sources on the same topic. IL18 Make informed judgments as to the validity of information on a website and be aware of bias.

Computing Knowledge and skills

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Trusted adults / sharing information	Identify trusted adults and ensure a trusted adult knows what they are doing online and inform them if online content makes them feel sad, scared or confused.	Talk to a trusted adult before sharing information about themselves online.	Identify personal information about themselves and others. Explain the possible consequences of sharing personal information online.	Explain the possible consequences of submitting personal information online. Ensure information submitted online is only accessed by the people they trust.		
Being thoughtful online / online bullying	Behave in a kind and considerate way to others in the real and virtual world.	Be polite and respectful when communicating & playing games online.	Know that bullying through the use of technology is called online bullying and how to report it.		ES22 Describe the causes and consequences of online bullying and discuss behaviours and strategies to prevent and stop online bullying .	
Rules on the internet	Understand that the internet is fun but just like there are rules in the real world to keep you safe there are rules for keeping them safe in the online world.			Identify age limits and PEGI ratings for games and understand the importance of only accessing age appropriate content.	ES19 Understand the terms plagiarism and copyright and be aware of the implications of copying and sharing content without permission.	ES26 Evaluate whether games, websites and social media are appropriate for specific ages.
Data protection/passwords		Know login details and passwords should only be shared with trusted adults.		Use strong passwords for all online accounts and devices.		ES25 Appropriately configured and secure all devices used to access personal data.
Validity information and mindfulness			Understand that not all information you access online is accurate or reliable.		ES20 Use blocking / unsubscribing / reporting mechanisms appropriately.	ES23 Explain the importance of a balanced lifestyle with respect to technology use. ES24 Explain the importance of a positive 'digital footprint'
Connecting with people online		Understand that they can be connected to many people in their life (real life and online). Know that some of the people they interact with online may not be who they say they are.		Identify the similarities and differences of virtual and real world communication to develop an understanding of positive online communication.	ES21 Control who they interact with online and the information they share.	

