Progression of Knowledge in Computing

Topics			
Devas	**Bannerman**	**Porteous**	**Borton**
All about me! Let's Celebrate Polar Regions Growing London Beside the Seaside	**Cycle A** Online Safety Maze Explorers and Questioning Animated Story Books Making Music Spreadsheets and Pictograms Presenting Ideas **Cycle B** Online Safety and Effective Searching Lego Builders and Technology outside school Grouping and sorting and Creating pictures Spreadsheets Coding	**Cycle A** Online Safety and Coding Coding and Spreadsheets Writing for different audiences Logo and Animation Effective search and Presenting Hardware Investigators ad Making Music **Cycle B** Online Safety and Coding Coding and Spreadsheets Touch Typing Email Branching databases Simulations and Graphing	**Cycle A** Online Safety and Blogging Coding Spreadsheets Word Processing Text Adventures and Networks Quizzing **Cycle B** Coding Online safety and Databases Spreadsheets Game Creator 3D Modelling Concept Maps

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Computer Science

Devas	Bannerman		Porteous		Borton	
40-60+ months I know goals can be achieved by following a sequence of steps. **ELG** **PSED; Self-Regulation:** Give focused attention to what the teacher says, responding appropriately even when engaged in activity, and show an ability to follow instructions involving several ideas or actions.	**Year 1** I know an algorithm is a set of instructions used to solve a problem or achieve an objective. I know a computer program turns an algorithm into code that the computer can understand. I know that an unexpected outcome is due to the code I have created. I can read code one line at a time and attempt to envision the overall effect of the program.	**Year 2** I know an algorithm is a set of instructions to complete a task. I know how to plan an algorithm and transpose this into code. I know I need to be precise with my algorithm so it will work when I turn it into code. I know what the term 'debug' means and why this is important in coding. I know how to debug my own code to make sure it is successful. I know which parts of a program respond to events and initiate actions.	**Year 3** I know an error within my program can prevent it from following the desired algorithm. I know how to fix these errors. I know the difference between the effect of a timer or repeat command when creating repeating effects. I know how variables can be used to store information while a program is executing. I can list a range of ways that the internet can be used for communication.	**Year 4** I know how to use user inputs and outputs such as 'print to screen.' I know how to use trace code and use step-through methods to identify errors in code and correct them. I know how to 'read' programs with several steps and predict the outcome accurately. I know the main component parts of hardware which allow computers to join and form a network. I know that network and communication components can be found in many different devices which allow them to join the internet.	**Year 5** I know the importance of computer networks and how they help solve problems and enhance communication. I know the value of computer networks. I know the main dangers that can be caused via computer networks. I know organising my code carefully will help me debug more efficiently. I know what personal information is and know strategies for keeping this safe. I know how to select the most appropriate form of online communication according to the digital content.	**Year 6** I know how to identify the important aspects of a programming task. I know the difference between the internet and the World Wide Web. I know what a WAN and LAN is and describe the process of how to access to the internet in school is possible.

Compassion, Joy, Perseverance, Respect
'Live life in all its fullness' John 10:10

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Information Technology

Devas	Bannerman		Porteous		Borton	
40-60+ months I know how to operate simple electronic devices. I know some key features of a computer such as a mouse and keyboard. **ELG** **Expressive Arts and Design; Creating with materials:** - Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.	**Year 1** I know computers store and follow instructions. I know some technology that is used in school.	**Year 2** I know computers can store, retrieve and process information. I know how different technology can help us. I know a web-page displays information in different ways.	**Year 3** I know I am connecting to the internet and using a search engine when I use searches to get digital content. I know how to select the most appropriate software when given a task by my teacher.	**Year 4** I know the purpose of a search engine and the main features within it. I know how to assess a selected webpage for credibility and information at a basic level.	**Year 5** I know how accurate, safe and reliable the content is on a webpage.	**Year 6** I know how accurate and reliable a webpage and its content is. I know how to compare a range of digital content sources and rate them in terms of quality and accuracy.

Digital Literacy

Devas	Bannerman		Porteous		Borton	
40-60+ months I know some technology we use to communicate. I know that I need to stay safe when using technology. I know that some information should be kept private. I know what to do if I see things that upset me online at school and at home. I know technology is used in and out of school. **ELG** **Understanding the world; Past and Present:** - Know some similarities and differences between things in the past and now, drawing on their experiences and what has been read in class. **Physical, Social, Emotional Development; Self-Regulation:** - Show an understanding of their own feelings and those of others.	**Year 1** I know what technology is. I know examples of technology both at home and at school. I know it is important to keep information, such as my username and password, private. I know technology in my environment is a mixture of old and new technology.	**Year 2** I know the consequences of not searching online safety. I know what to do if unkind behaviour happens whilst I am online. I know where technology is used at school. I know my creations such as programs in 2Code, need similar skills to the adult world. I know things can be shared electronically, e.g. via display boards or emails.	**Year 3** I know why it is important to have a secure password and not share it with others. I know the negative consequences of not keeping passwords safe and secure. I know more than one way to report unacceptable content and contact.	**Year 4** I know the importance of online safety and understand the rules we learn at school. I know I have a right to privacy both on and offline. I know my wellbeing can be affected by how I use technology.	**Year 5** I know common online safety rules. I know how to not let my mental wellbeing or others be affected by use of online technologies and services.	**Year 6** I know the value of protecting my privacy and others online. I know more discreet inappropriate behaviours seen online through developing critical thinking.

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Online Safety					
Devas	**Bannerman**		**Porteous**		**Borton**
40-60+ months I know the internet can be safe and unsafe. I know what to do if someone makes me feel sad, uncomfortable, embarrassed or upset online. **ELG** **Physical, Social, Emotional Development; Self-Regulation:** - Show an understanding of their own feelings and those of others.	**Year 1** I know strangers use online services. I know some online content is inappropriate. I know that damaged or strange devices should not be touched. I know that personal information should not be shared with strangers.	**Year 2** I know who to talk to if I have any worries about content or contact on the internet. I know that strangers who ask questions may be dangerous. I know I should check with an adult before accessing something online.	**Year 3** I know a range of places/ways to report my concerns. I know going online in a private place may be unsafe. I know that not everything online is true. I know what makes an effective password.	**Year 4** I know a wide range of places/ways to report concerns I know that online 'gifts' are not always what they seem I know that games and websites can have age restrictions and breaking these can have consequences I know what a digital footprint is.	**Year 5** I know the benefits of different ways to report concerns. I know it is important to ask permission before taking a photo. I know what to do if I lose a device. I know apps can collect data.	**Year 6** I know how to report a concern at school and at home confidently. I know sharing images can have consequences. I know some content can promote stereotypes.