St Alban's C of E Academy

Knowledge and Skills Progression

Building Block End Points

	Reception	Year 1	Year 2
Working with Computers • Digital Literacy and Online Safety • Working with computers	SEE KNOWLSEY – SEPARATE DOCUMENT	• logon to the school network • work on the network and save in a prepared folder • purposefully use suggested digital tools for my work • use technology safely and sensibly • talk about how I use technology in and beyond school • know who to talk to if any technology/online system makes them feel worried or uncomfortable.	• know that work is stored on the school network; • logon to the server, and aware of some of the areas on the network • save and retrieve work in prepared folders on the network; generally use suitable file names • keep personal information safe; I know that you do not share online • talk about using technology for my work in and beyond school • share my work with others; begin to use feedback and self-review to improve my work • demonstrate I understand the need to use technology safely and respectfully.
Create		• make choices to produce different outcomes • use digital tools to create a picture linked to a curriculum theme • use digital tools to create text, related to a picture • create a digital recording related to picture • share work with others /think about change/improvements talking about tools to use. • Show awareness about rules for taking/using images	• select the appropriate tool from a limited range to create and amend work • create and debug simple algorithms; use to sequence images or create animation • create a simple animation selecting their images • share work with others; begin to use feedback and self-review to improve my work • demonstrate need to seek consent before capturing and/or using an image of another person • demonstrate I understand the need to use technology safely and respectfully • talk about use of technology for still image and animation work at home and school
E world and digital communication • Computational thinking • eWorlds and Digital Communication		• demonstrate I know that many everyday devices respond to signals and instructions • understand an algorithm to be a precise set of instructions • understand that sequence is important in algorithms • I understand that sequence is important in algorithms • create and debug simple algorithms for short tasks • use an algorithm to create a simple program • create simple programs for human robots, onscreen and physical turtles or devices. • understand the need to be precise and follow the correct sequence when programming • use logical reasoning to help me investigate what will happen in simple programs • make choices to produce different outcomes	• investigate patterns and rules in simple simulations • understand that algorithms could support the programming of simulations and games • create, test and debug algorithms related to a game or simulation; consider sequence and simple repetition • use logical reasoning to predict what will happen in simple simulations
Digital research and information • Computers and Hardware • Digital Research and Info		• I know that information comes from different sources • know that I can find information on the World Wide Web • can explore information from a range of sources • use digital tools to create a picture linked to a curriculum theme. • Use digital tools to create a text related to my picture. • Use a digital recording related to a picture • Aware that anyone can put information on the internet which may not be true	• Understand technology can capture environmental data. • Record specific information using cameras and microscopes. • Use pictograms, bar charts and branching databases to organise/classify information for a purpose. • Understand that there are different types of questions • Use and refine yes/no questions to identify objects. • Keep personal information safe; do not share details on line • Use tools from a limited range, to organise my information.

Knowledge and skills progression KS2 and end points.

	Year 3	Year 4	Year 5	Year 6
Working with Computers • Digital Literacy and Online Safety • Working with computers	• can access the pupil areas on the school network; know that there are many computer networks in the world • can save and organise my work in folders on the network; use appropriate file names • can review, check and evaluate my work, modifying it in light of comments from others • can explain how my choices or decisions help them solve problems in my work • understand the school's eSafety rules; respect copyright ensuring they do not share personal data online • can use technology safely and responsibly • know who to talk to if I have an eSafety problem	• can apply the school's eSafety rules in my work; respect copyright, credit sources and keep personal data safe • know the school network connects through the internet to other computer networks; • know that the internet links the global computer networks and how it relates to the school network • can save and organise their work using appropriate file names and folder structure • show growing understanding of how the internet is used in the wider world • use peer- and self-review to check, evaluate and improve my work • consistently use technology safely and responsibly and sometimes encourage others to do the same • can relate the use of technology to produce digital texts in the wider world to their own work in and beyond school	• understand we can save work in online spaces but that are different from the school network • save and organise work on and offline appropriately • can recognise acceptable and unacceptable behaviour on- and off-line • can identify a range of ways to report concerns about content and contact on the internet • can critically evaluate my work using peer and self-review to modify and improve it • can save and organise my work on and offline using appropriate names and structures • demonstrate clear understanding of the school's eSafety rules including copyright and personal data and data protection; apply these in my work • can compare their use of technology to work with digital image in and beyond school	• can save and organise their work appropriately in the school network and online spaces • can apply the school's rules on data protection; be proactive in promoting good eSafe practice in others and through the school community • can apply the school eSafety rules consistently including those for appropriate use, personal data and data protection; • demonstrate I am proactive in promoting good eSafe practice through the school community • always demonstrate good behaviour when using technology; promote safe practice in others • can critically evaluate the effectiveness of their work; identify and implement improvements / refinements

	Year 3	Year 4	Year 5	Year 6
Create	- can use various digital tools to create and edit images for a purpose - can use repetition to improve efficiency in correctly-sequenced algorithms and programs - can design, test and debug algorithms to create animations - can use algorithms to support the design of programs; - can explain how my choices or decisions help them solve problems in my work - use the schools rules for the safe use of images in my work - can create and adapt digital images in and beyond school; - am aware of digital image in the wider world	- can select and use specific tools within the software to improve design and to aid accuracy and efficiency - can use a range of approaches in their multimedia texts designed to support specific audiences and purposes - can review the approaches we use to engage the audience and consider how these could be improved - can plan their work understanding how this helps to improve it and to solve problems - recognise unacceptable behaviour and know what to do if they have an eSafety problem	- create 3D models using varied techniques to develop detail/texture; review in 3D and adapt - can highlight features of specific animations and films considering their impact on audiences - can create a detailed plan for a film and/or animation for specific purposes and audiences - can create a film/animation from my plan, detailing adaptations - can justify my choice of tools and techniques used to edit and enhance my work - can revisit and modify my work in the light of audience reaction - can keep and review drafts; revisit previous drafts considering effectiveness of my changes	- can use a range of digital tools and techniques to plan, structure, refine and present sound recordings for specific audiences - can evaluate the effectiveness of their sound work; explain how they could adapt pieces for several different audiences - can develop detailed plans for my work, explaining why selected tools and techniques are suitable for specific pieces of work - can describe how keeping and reviewing drafts is key in building their critical awareness understand how online spaces are used and how these differ from offline networks - can save and organise their work appropriately and efficiently, both on and offline - can discuss my knowledge and experience of using technology to work with digital sound in and beyond school

	Year 3	Year 4	Year 5	Year 6
E world and digital communication • Computational thinking • eWorlds and Digital Communication	• can use technology for digital communication • can use email and blogging tools appropriately, including maintaining their own blog and commenting on others' blogs • can explain differences between email and blogging; begin to compare with other tools • can capture digital sound and use sound editing tools to produce sound clips for a purpose • can use a range of approaches to engage the audience • can demonstrate my understanding of copyright and ownership by appropriate use in my work	• can analyse simulations beginning to demonstrate understanding of the rules and structures • can design, test, debug and refine algorithms and programs to solve problems • can build precision and clarity in algorithms, knowing this supports program design • check my algorithms and program for precision and unambiguity • decompose a task before planning an algorithm or program • include sequence, repetition and selection in my algorithms and programs • design, test, debug and refine programs to control human robots and onscreen/physical devices • use logical reasoning to predict outcomes in programs and detect errors • demonstrate they understand selection in relation to using sensor inputs in an algorithm or program • can consider how automated systems at home and school; might be programmed	• can design, debug and refine algorithms to solve problems; review effectiveness • know well-designed algorithms support improved design and efficiency in programs • can use decomposition in algorithms and programs, knowing it is key to precise design • can use sequence, repetition and selection appropriately in algorithms and programs • explore the use of variables in their programs • can design, test, debug and refine programs for physical and onscreen devices and systems in several programming environments • can use logical reasoning to predict outcomes in programs and detect errors • demonstrate an understanding of selection in various contexts, including sensor inputs to simple automated devices they have built • can demonstrate I understand how automated systems might be programmed	• can critically evaluate the impact on audiences and participants of different digital communication technologies • can select/use appropriate digital tools for online research • can ensure the information they contribute to online spaces is high quality, accurate, unbiased, relevant and truthful • can organise and adjust language/ and style of their communications, for the context, audience needs and the technology used • can discuss advantages/disadvantages of using technology to communicate and collaborate in and out of school

	Year 3	Year 4	Year 5	Year 6
Digital research and information • Computers and Hardware • Digital Research and Info	• understand the difference between data and information • can construct questions to answer using a database • can use various tools within the software to organise and present my information • can contribute to the design of a class database to answer my questions • can use a database to store, organise and retrieve data • can use sort and/or search appropriately to answer simple questions, • can create appropriate graphs charts • can check the data for accuracy and understanding	• can explain how selected services on the internet help us communicate and share information • can describe in simple terms how a search engine finds information from different websites • can research results may be unreliable and should be checked against different sources • can turn questions into search criteria; use to find answers • can create a spreadsheet to collect and analyse findings • can develop simple formulae using arithmetic operators to carry out calculations for a purpose • can create different graphs; explore options and formats • can check their data for accuracy and reliability	• can show an understanding of how we can derive information from data • know data is analysed to provide information about us and that this can be positive or negative • can explain in simple terms how a search engine retrieves data • can use search operators and linked searches effectively to locate required information • can demonstrate I know how my digital footprint is created • can construct different types of question; use to structure a database • can use databases to organise, refine analyse data • can present answers/conclusions in suitable formats, support by appropriate graphs; • understand how to identify and correct inaccurate/implausible data in a database	• can correctly select and use different formulae and functions in their spreadsheets/spreadsheet models • can design a spreadsheet to record and support analysis of findings from various sources • can design/develop efficient spreadsheets and spreadsheet models to investigate problems and test hypotheses; using graphs appropriately • can accurately identify variables in a model; explain impact of changing • routinely check data accuracy and reliability. Explain how they check for accuracy/reliability • can critically evaluate my models; identify improvements/refinements. • can describe how spreadsheets are used in the wider world

AN- Expected upon entry to Rececption
AN1 I know how to operate simple equipment.
AN2 I can show an interest in technological toys with knobs or pulleys, or real objects such as cameras or mobile phones.
AN3 I can show skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images.
AN4 I know that information can be retrieved from computers.

BR- Expected from Autumn One to Spring One
BR1 I can complete a simple program on a computer.
BR2 I can use ICT hardware to interact with age-appropriate computer software.

AR-Expected from Spring Two to end of Reception
AR1 I can recognise that a range of technology is used in places such as homes and schools.
AR2 I can select and use technology for particular purposes.
AR3 I can find out about and use a range of everyday technology.
AR4 I can select appropriate applications that support an identified need (e.g. in deciding how best to make a record of a special event in my life).

AR+-Exceeding at the end of Reception
AR1+ I can find out about and use a range of technology.
AR2+ I can select appropriate applications that support an identified need-for example in deciding how best to make a record of special events in my life, such as journey on a train ride.