Great Chart Primary School

Curriculum Skills Map Computing

Sept 2021

We aim to provide creative and co-operative ways for the pupils to learn together so that all can succeed. As such we follow a skills based curriculum and we have aimed to create a document based around the key skills we see as relevant for life in the 21st Century. We believe that a curriculum heavily based on knowledge is no longer relevant, as knowledge is now so readily available at our fingertips. Instead, we want to foster in our pupils a love of learning, and develop their creativity and critical thinking through skills such as collaboration, research, problem solving, presentation, evaluation and reflection. These skills are reflected through the objectives identified in each subject area to help us develop confident, excited and proud learners who will be our leaders of the future and become a dynamic, adaptable workforce with high levels of reasoning and problem solving skills.

Teaching and learning within our school, as far as possible, is taught through a cross curricular approach to enable the children to make connections between their learning, leading to a deeper learning experience. Links are made wherever possible between subjects, however we recognise that Science, PE and RE will often need to be taught in a discrete manner.

Computing Skills Progression - Great Chart Primary School

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Online Safety and Digital Literacy	Children learn that they need permission to go on the internet. Recognise inappropriate content and who to tell Be aware that some information should be private Can describe what makes a good friend.	Reinforce not to give out personal information – use nickname Learn how internet and web can be used for communicating and learning – world wide- so important to keep safe – good and bad online Learn how and when to report and who to report to. Understand you can share digital content online Understand why we need to use passwords Can remember a simple password Understand what makes a good online friend. Can identify rules to add to an acceptable use policy for the class. Understand that they should limit time spent in front of a screen and why Understand that once content is online we may not be able to delete it Know that not all information found online is true		Make use of copy and paste, beginning to understand the purpose of copyright regulations and the need to repurpose information for a particular audience. Develop a growing awareness of how to stay safe when using the internet (in school and at home) and that they abide by the school's internet safety policy. Begin to understand that your online presence – on all devices – can be seen by all. Discuss what is appropriate and what is not. Privacy, respect for self and others Understand there is a code of conduct how you act online should be no different to how you behave to people offline. Covers all computing devices including gaming. Learn how to create a safe online profile and how to behave in social media Know how to report unacceptable content Understand that films, apps and games have age ratings and what they mean Understand that some people lie about who they are online. Understand how to check what is a reliable website Understand that the media can portray people differently		Independently and with due regard for safety, search the internet using a variety of techniques to find a range of information and resources on a specific topic. Use appropriate methods to validate information and check for bias and accuracy. Critically evaluate websites for reliability of information and authenticity. Repurpose and make appropriate use of selected resources for a given audience, acknowledging material used where appropriate. Reinforce how the internet and www works and how apps link Understand how filtering works – discuss the plus and minus of filtering. Learn that it will not always work – how to cope, responsibilities, who to report to. Check understanding of personal presence online and how to check and modify in different apps Understand importance of keeping parents informed of what you are doing	

What is a computer?	Use different devices Recognise a range of digital devices. Recognise the basic parts of a computer. Add text to a document Understand that information and media can be stored on a device.	Name a range of digital devices. Explain what the basic parts of a computer are used for. e.g mouse, keyboard (input/output) Use a simple password to log on Recognise that a range of devices contain computers (washing machine, car etc) Know where to save and open work (Google drive) Understand that all devices, programs, websites, apps and games are developed by people to fulfil tasks. Access different types of info from different sources. (no open searching)	Name a range of digital devices. Explain what the basic parts of a computer are used for. e.g mouse, keyboard (input/output) Use a simple password to log on Recognise that a range of devices contain computers (washing machine, car etc) Know where to save and open work (Google drive) Use websites and demonstrate an awareness of how to manage their journey around them (e.g. using the back/forward button, hyperlinks) Recognise not all information is useful. Develop questions about a topic and use information to answer those questions. Understand websites have a specific address.	Use G-Suite (docs, slides and forms) and know how to access their drive. Share work they have done electronically by email or Google classroom Delete, move and copy files. Copy text and images into another document. Remember passwords. Show an awareness that not all the resources/tools they use are resident on the device they are using. Begin to show an understanding of URLs. Develop key questions to search for specific information with purpose to answer a problem e.g to find out about different Roman Gods Understand how a search engine works and enter appropriate search strings. Understand some information is more relevant than others and some information can be fake. Save and retrieve accessed information through use of History and favourites and save as.	Share work they have done electronically by email or Google classroom Where possible seek and respond to feedback. Use a keyboard confidently. Create and use a strong password where appropriate. Organise files effectively in their drive. Perform a search using different search engines and check the results against each other, explaining why they might be different. Show an awareness of the need for accuracy in spelling and syntax to search effectively.

Communicating Text/Images/ Multimedia	Add text to photographs, edit photos Work with others and with support to contribute to a digital class resource which includes text, graphic and sound. Create simple digital content (art package)	Use a range of simple tools in a paint package / image manipulation software to create / modify a picture. Use simple authoring tools to create their own content and begin to add basic effects to sections of text changing font size and colour Work with others and with support to contribute to a digital class resource which includes text, graphic and sound. Understand that you can edit and change digital content.	Use a range of tools in a paint package / image manipulation software to create / modify a picture to communicate an idea. Create a simple animation to tell a story. Word process work, changing font size, colour and adding images. Use cut, copy and paste and save and share work. Generate their own work, (with help where appropriate with multimedia) combining text, graphics and sound. Save and retrieve and edit their work. Understand that you can edit and change digital content.	Manipulate digital images using a range of tools in appropriate software to convey a specific mood or idea. Create basic presentations, google slides or powerpoint. Work collaboratively to create documents and presentations. Use cloud based tools. Use technology to present work/information. Record and present information integrating a range of appropriate media combining text and graphics in printable form and sound and video for on-screen presentations which include hyperlinks. Begin to show an awareness of the intended audience and seek feed-back. Edit existing media with awareness of copyright rules.	Use collaborative tools and e-mail showing a sensitivity for this type of remote collaboration and communication Recognise the impact of using incorrect information in their work. Skim and select information checking for bias and different viewpoints. Understand what plagiarism is and what not to do. Make a short film / animation from images (still and / or moving) that they have sourced, captured or created. Use images that they have sourced / captured / manipulated as part of a bigger project (eg presentation or document) Work together to create a webpage, using google sites, incorporating hyperlinks, images and embedded media and documents. Use technology to present their work showing increasing degree of skill and advanced features of software and tools. Use an alternative presentation tool, eg prezi, to create a presentation linking into a topic, area of interest and event. Continue to create websites based on topics/areas of interest Use advanced tools in word processing software such as tabs, appropriate text formatting, line spacing etc appropriately to create quality presentations appropriate for a known audience.

Understanding And Sharing Data	As a class or individually with support, children use a simple pictogram or painting program to develop simple graphical awareness / one to one correspondence. Collect simple data on a topic Can present data using images	Use a graphing package to collect, organise and classify data, selecting appropriate tools to create a graph and answer questions. Enter information into a simple branching database, database or word processor and use it to answer questions. Recognise an error in a branching database Identify an object by asking questions Collect data on a particular topic	Children use a simple database (the structure of which has been set up for them) to enter and save and save information on a given subject. They follow straight forward lines of enquiry to search their data for their own purposes. They talk about their experiences of using ICT to process data compared with other methods. Know that different programs work with different types of data e.g text, number Understand the difference between data and information Understand search engines store information on a database. Understand that the internet is made up of computers that from all around the world connected together	Children work as a class or group to create a data collection sheet and use it to setup a straight forward database to answer questions. Enter information and interrogate it (by searching, sorting, graphing etc). Begin to reflect on how useful the collected data and their interrogation was and whether or not their questions were answered. Know that different programs work with different types of data e.g text, number Use filters to find out specific information	Independently solve a problem by planning and carrying out data collection, by organising and analysing data involving complex searches using a database, and by drawing conclusions and presenting findings. The need for accuracy is demonstrated and strategies for spotting implausible data are evident. Children should be able to talk about issues relating to data protection and the need for data security in the world at large (eg health, police databases). Design a questionnaire on google forms and evaluate data

Programming and Computational Thinking	Control simple everyday devices to make them produce different outcomes. Follow simple instructions to control a digital device Recognise patterns in groups of objects	Control a device, on and off screen, making predictions about the effect their programming will have. Begin to develop computational thinking by following instructions to move around a course. Explore outcomes when individual buttons are pressed on beebots etc Understand what an algorithm is. Create a simple algorithm Predict the outcome of a simple algorithm or programme. Debug an error in a simple program Use Scratch Junior	Children are able to type a short sequence of instructions and to plan ahead when programming devices on and off screen. Further develop their understanding of computational thinking and language – algorithm, debugging and programming. Understand that the order of instructions is important Understand that the instructions need to be clear and unambiguous Use the language if..then to describe the relationship between two actions	Engage in problem solving activities that require children to write procedures etc. and to predict, test and modify. Use control software to control devices (using output commands) or to simulate this on screen. Predict, test and refine their programming. Create programs with loops and repeats Develop an understanding of how computers and technology work focusing on computational thinking. Use software to make basic puzzles and quizzes, google forms etc Use computational game design software to plan, design and make their own games (Scratch) Decompose a problem and create a solution for each part	Independently create sequences of commands to control devices in response to sensing (i.e. use inputs as well as outputs). Design, build, test, evaluate and modify the system; ensuring that it is fit for purpose Understand that software relies on codes to run and that a range of different coding language exists Use two way selection if..then..else Create simple variables eg keeping score Use a range of assisted programming software keyboard, mouse, joystick, chromebooks
Modelling and Simulations	Understand the computers and technology can be used to represent and model situations. Use an art package or drag and drop to create a representation of a real or fantasy situation Explore a simulation to support a given topic and talk about what happens and why		Enter information into a basic computer simulation and explore changing the variables	Continue to explore simulations as appropriate and link with other curriculum areas and discuss the benefits Use software to represent 3d objects or items	Explore a range of increasingly complex simulations, exploring the effect of changing variables and recording the results.