Year 6 – Computing curriculum

Computer Science		
Programming		
Learning Objectives	**Key Skills**	**Outcome**
• To create, edit and refine more complex sequences of instructions for a variety of programmable devices. • To continue to develop their understanding of how computer and technology works and how computers process instructions and commands. • To use variable within programs to complete you goal. • To use aspects of computational thinking to complete a goal. • Create algorithms and using logic and calculations. • Use decomposition to debug code. • Collaborate with others to complete a program.	• Combining sequences of instructions to follow a pattern or create a shape. • Using decomposition to break down a problem into smaller part and find a solution • Write, design and debug programs. • Evaluate Script for the required outcome. • Perseverance when tackling a problem. • Use software to create programs to create a competitive game. • Using different devices to understand different form of input and output. • Continue to develop understanding of how a computer and technology works, focusing on computational thinking.	• Create a Pong game in kodu. • Can debug errors in programs. • Use decomposition to break down a program and to help with error correction. • Can work with others on a project. • Plan and create a game and work independently. • Use HTML code and add it to a simple website.
Modelling		
Learning Objectives	**Key Skills**	**Outcome**
• To use a range of basic simulations to represent real life situations and explore the effects of changing variable and the benefits of using the simulations.	• Explore a range of increasingly complex simulations, exploring the effect of changing variables • Use software to create models of 3D objects, landscapes or items. • Discuss their use of simulations and compare with reality.	• Use Sketchup to create a WW2 bombed building. • Design and create a building with realistic proportions. • Create a real build and replicate its features accurately.
Computer networks		
Learning Objectives	**Key Skills**	**Outcome**
• Understand that the internet and the WWW are not the same.	• Understand how the www works. • Have a understanding of websites and domains.	• Discuss the difference between the internet and the WWW.

Information technology		
Using the internet		
Learning Objectives	**Key Skills**	**Outcome**
• To talk about the different forms of information (text, images, sound, media) and understand some are more useful than others • To understand and talk about how the information can be used to answer specific questions • To understand that Cloud based tools can allow multiple people to contribute to shared documents and Google Sites • Understand how to search for key words and phrases. • Save images from the internet. • Work with email.	• Recognise that not all information is useful some information is more useful • Use web based resources to find answers to questions • Develop questions about a specific topic and use information to answer those questions • Begin to navigate within a website using hyperlinks and menu buttons to locate information • Use basic information from the internet. • Begin to use on-line tools, such as Google docs and sites to collaborate together- for example by working together to add ideas to a word bank, write a shared story	• Import pictures and text. • Edit the pictures in PPT add borders and Colours • Create Hyperlinks within a Website • Use Spellcheck and grammar check. • Be able to import tables and media into MS applications. • Be able to create and organise folders.
Creating manipulating and publishing		
• To continue to produce work using a computer, using more advanced features of programs and tools. • To work collaboratively together to create documents, including presentations. • Work with different office applications to produce fit for its purpose. • Use a combination of software to complete a task • Manipulate images ready to be presented.	• Use office applications to create range of work in other curriculum areas. • Work together to collaboratively produce a presentation using cloud based tools. • Understand that different applications are more suited for certain tasks. • Combine software (Import from the internet, edit image or video and present in documents, webpage or presentation)	• Create a website about WW2 • Import pictures and text. • Edit the pictures in Publisher and the borders and Colours. • Display data in a webpage from Excel.

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Handling Data		
• Understand the different between data and information. • To use technology to create graphs and amend created graphs. • To begin to create their own branching databases using IT. • Understand the value of data and why collecting data is important. • Understand why data must be accurate.	• Understand the different between data and information. • Input data and manipulate it to achieve your goal. • Use the application to present the data visually (Chart or Graph). • Type data correctly.	• Create a collaborative data base using Purple Mash. • Understand why data analysis is so important in the OSW.

Digital Literacy		
E-safety and Acceptable use		
Learning Objectives	**Key Skills**	**Outcome**
• Develop awareness of relevant e-Safety issues and understand that personal information is unique to them. • Identify characteristics of people who are worthy of their trust • Students develop awareness of online protocols, in order to stay safe on the web. • Students develop strategies for staying safe when using the Internet. • Begin to collaborate with other Students outside of Chorlton Park Primary School •	• Develop awareness of relevant e-Safety issues, such as cyber bullying. • Students understand and abide by the school's AUP and know that it contains rules that exist in order to keep Students safe online. • Understand what personal information should be kept private. • Know that passwords keep information secure and that they should be kept private. • Communicate safely using the blog • Know how to use online spaces safely. • Understand age restrictions on content (games, videos)	• Students to use the Internet to undertake independent and appropriate research and attempt to distinguish between fact and fiction. • Create blog post on other schools blogs. • Students work on Thinkuknow in the cyber café. • Students and can about CEOP and know the correct procedure for reporting a problem. • Understand when to must use CC images.