

## Year 4 – Computing curriculum

Computer Science		
Programming		
Learning Objectives	Key Skills	Outcome
<ul style="list-style-type: none"> <li>To continue to develop their understanding of how computer and technology works and how computers process instructions and commands.</li> <li>To create, edit and refine more complex sequences of instructions for a variety of programmable devices.</li> <li>To use a computer to create basic applications, investigating how different variables can be changed and the effect this has.</li> <li>To use aspects of computational thinking to complete a goal.</li> <li>Build debugging skills.</li> </ul>	<ul style="list-style-type: none"> <li>Continue to develop understanding of how a computer and technology works, focusing on computational thinking.</li> <li>Combining sequences of instructions to follow a pattern or create a shape.</li> <li>Use software to create programs to complete a goal.</li> <li>Using different devices to understand different form of input and output.</li> <li>Using decomposition to break down a problem into smaller part and find a solution</li> <li>Write, design and debug programs.</li> <li>Evaluate Script for the required outcome.</li> <li>Perseverance when tackling a problem.</li> </ul>	<ul style="list-style-type: none"> <li>Use repetition in logo to create algorithms.</li> <li>Create simple game in Kodu and Scratch 2 with a clear goal.</li> <li>Can debug a simple error in a program.</li> <li>Will be able to detect a problem and have a strategy to fix it.</li> <li>Solve algorithms on Tynker.</li> </ul>
Modelling		
Learning Objectives	Key Skills	Outcome
<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Enter information into a basic computer simulation and explore the effects of changing the variables in simulations and discuss the benefits of using these simulations.</li> <li>Discuss their use of simulations and compare with reality.</li> </ul>	<ul style="list-style-type: none"> <li>Students create an animation replicating the Titanic's crash and events.</li> <li>Using Kodu to create landscapes. Programming link</li> </ul>
Computer networks		
Learning Objectives	Key Skills	Outcome
<ul style="list-style-type: none"> <li>Understand that the internet and the WWW are not the same.</li> </ul>	<ul style="list-style-type: none"> <li>Discuss what a computer network is.</li> </ul>	<ul style="list-style-type: none"> <li>Students can talk about the internet and its makeup.</li> </ul>

## Information technology

### Using the internet

#### Learning Objectives

- To search for different forms of information (text, images, sound, media)
- To understand that all information on the internet is not correct and use reliable sources.
- To navigate correctly.
- Understand how and why we use creative commons images.
- To understand that Cloud based tools can allow multiple people to contribute to shared documents and Google Sites.
- Work collaterally using online.

#### Key Skills

- 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.
- use on-line tools, such as Google docs
- add ideas to a word bank, write a shared story

#### Outcome

- Create a discovery board about the Egyptians.
- Import pictures and text.
- Edit the pictures in PPT add borders and Colours.
- Create Hyperlinks within a PPT.

### 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 a multimedia project.
- Manipulate audio and video files.
- Work with different office applications to produce fit for it's propose.
- Use a combination of software

- 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)

- Import pictures and text.
- Edit the pictures in PPT add borders and Colours.

### Handling Data

<ul style="list-style-type: none"> <li>• Understand the different between data and information.</li> <li>• To use technology to create graphs and amend created graphs.</li> <li>• To begin to create their own branching databases using IT.</li> <li>• Understand the value of data and why collecting data is important.</li> <li>• Understand why data must be accurate.</li> </ul>	<ul style="list-style-type: none"> <li>• Understand the different between data and information.</li> <li>• Input data and manipulate it to achieve your goal.</li> <li>• Use the application to present the data visually (Chart or Graph).</li> <li>• Type data correctly.</li> </ul>	<ul style="list-style-type: none"> <li>• Create a spread sheet and graphs using excel.</li> </ul>
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Digital Literacy		
E-safety and Acceptable use		
Learning Objectives	Key Skills	Outcome
<ul style="list-style-type: none"> <li>• Develop awareness of relevant e-Safety issues and understand that personal information is unique to them.</li> <li>• Identify characteristics of people who are worthy of their trust</li> <li>• Children develop awareness of online protocols, in order to stay safe on the web.</li> <li>• Children develop strategies for staying safe when using the Internet.</li> <li>• Begin to collaborate with other children outside of Chorlton Park Primary School</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Develop awareness of relevant e-Safety issues, such as cyber bullying.</li> <li>• Children understand and abide by the school's AUP and know that it contains rules that exist in order to keep children safe online.</li> <li>• Understand what personal information should be kept private.</li> <li>• Know that passwords keep information secure and that they should be kept private.</li> <li>• Communicate safely using the blog</li> </ul>	<ul style="list-style-type: none"> <li>• Children to use the Internet to undertake independent and appropriate research and attempt to distinguish between fact and fiction.</li> <li>• Create blog post on other schools blogs.</li> </ul>