Year 3 – Computing curriculum

Computer Science		
Programming		
Learning Objectives	**Key Skills**	**Outcome**
• To continue to develop their understanding of how computer and technology works and how computers process instructions and commands. • To create, edit and refine more complex sequences of instructions for a variety of programmable devices. • To use a computer to create basic applications, investigating how different variables can be changed and the effect this has. • To use aspects of computational thinking to complete a goal.	• Continue to develop understanding of how a computer and technology works, focusing on computational thinking. • Combining sequences of instructions to follow a pattern or create a shape. • Use software to create simple program to complete a goal. • Using different devices to understand different form of input and output. • 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.	• Create simple programs in scratch 2 with a clear goal. • Create a fully working maze game in Scratch 2. • Can debug a simple error in a program. • Create a working game in Kodu. • Use variable to count a score.
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.	• 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. • Discuss their use of simulations and compare with reality.	• Students Research natural disaster and look at how to prevent them. • Make an animation of an active volcano.
Computer networks		
Learning Objectives	**Key Skills**	**Outcome**
• Understand that the internet and the WWW are not the same.	• Discuss what a computer network is.	• Student should have an understanding about computer networks and can talk about different aspects.

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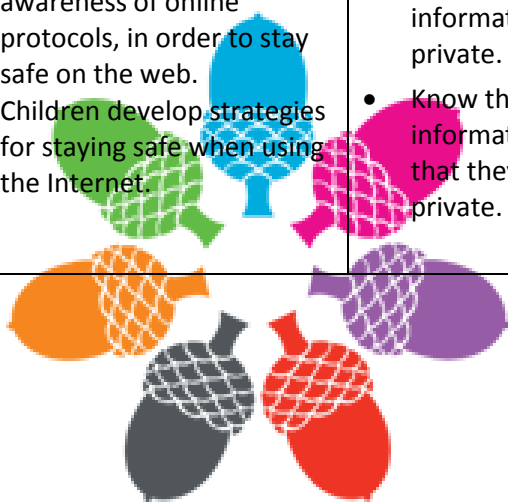| Information technology		
Using the internet		
Learning Objectives	**Key Skills**	**Outcome**
• To talk about the different forms of information (text, images, sound, multimedia) and understand some are more useful than others • To understand and talk about how the information can be used to answer specific questions • To begin to develop key questions and find information to answer them • To understand that Cloud based tools can allow multiple people to contribute to shared documents and Google Sites	• Recognise that not all information is useful some information is more useful • Use web based resources to find answers to 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 office 365 and sites to collaborate together- for example by working together to add ideas to a word bank, write a shared story	• Produce a comic about a given topic. • Use appropriate images and text relating to topic and given audience. • Search the internet efficiently.
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 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)	• Produce a comic about a given topic. • Use appropriate images and text relating to topic and given audience.
Handling Data		
• To use technology to create graphs and amend created graphs. • To begin to create their own branching databases using IT.	• 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)	• Recognise the importance of correct data. • Create a accurate spreadsheet. • Produce a graph within Excel to allow for visual analysis.

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• Understand the value of data and why collecting data is important.		

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 • Children develop awareness of online protocols, in order to stay safe on the web. • Children develop strategies for staying safe when using the Internet. •	• Develop awareness of relevant e-Safety issues, such as cyber bullying. • Children understand and abide by the school's AUP and know that it contains rules that exist in order to keep children safe online. • Understand what personal information should be kept private. • Know that passwords keep information secure and that they should be kept private.	• Children to use the Internet to undertake independent and appropriate research and attempt to distinguish between fact and fiction.

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