Curriculum Road Map Year 1

**Why do we follow on with this unit?**

To understand that digital content can be created, manipulated and edited in a software programme.

Digital Art

Spring 1 –

In this unit, children will experiment with tools such as pens and brushes available in ‘Paint’ software. They will learn to create shapes and change their colour. They will experiment with inserting text and changing its font, colour and size. The unit will culminate with children applying their newly learned skills to plan, design and create a piece of artwork using a range of ‘Paint’ tools.

Hardware Explorers

Autumn 1 –

In this unit, children will start to understand how to use hardware. They will learn how to open their computers and care for them. They will practise inputting login details and experience opening programs. They will begin to use the keyboard to learn typing skills, including lower case, upper case and some symbol character keys. Pupils will also learn the importance of what we mean by personal information, with a focus on passwords, and why we must be careful when sharing them.

**What skills will we continue to build upon?**

To develop, create and edit digital content using basic skills.

**Why do we follow on with this unit?**

To show the many uses of technology. To understand that certain information used on digital technology should be kept private, to expand on what personal information is and how to protect it online.

Internet Explorers

Summer 2 –

In this unit, children will learn the rules for staying safe online and understand what personal information means and how to keep it safe. They will ascertain what actions and comments are kind and considerate when communicating online and how to safely search for and find information using the Internet. They will conclude by presenting what they have learned in this unit through using a range of word processing tools to write and edit a document.

**What skills will we continue to build upon?**

To continue to follow simple digital technology instructions; this time, to access online resources.

Curriculum Road Map Year 2

**Why do we follow on with this unit?**

Understand that there are a variety of different programs on computers used to create original content (e.g. word processing, drawing, presenting etc)

Creating Presentations

Spring 1 –

In this unit, children will explore the features and tools of a presentation software - PowerPoint. They will learn how to open, edit and save a PowerPoint presentation. Learning will progress on to how to insert text boxes, and insert and edit text within them. Children will then learn how to search the Internet for appropriate images, inserting and manipulating them in PowerPoint using the copy or cut and paste techniques. The unit will conclude with children applying their learned PowerPoint skills to make a pre-existing presentation more visually effective.

Internet Awareness

Autumn 2 –

In this unit, children will further develop their skills in using the internet and search engines to find information and images. They will learn how to copy and paste information and images in word processing software. They will further develop their understanding of how to use the internet safely, searching for reliable content that is from trusted sites.

**What skills will we continue to build upon?**

Creating, manipulating and editing original content using a range of media

**Why do we follow on with this unit?**

To further develop understanding that there are a variety of different programs on computers used to create original content (e.g. word processing, drawing, calculating etc).

Excellent Excel

Spring 2 –

In this unit, children will learn what a spread sheet is and begin to understand how to present data that they have collected for a specific purpose. They will begin to create simple bar charts to present data and edit spread sheets. Children will also learn how to store, organise, find and access files.

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**What skills will we continue to build upon?**

Storing, organising and retrieving content on digital devices for a given purpose. Naming files meaningfully.

Curriculum Road Map Year 2

**Why do we follow on with this unit?**

To develop an understanding of what constitutes acceptable and unacceptable behaviour when communicating online.

Digital Citizens

Summer 2 –

In this unit, children will further develop their understanding of online safety and begin to understand how they can be positive digital citizens.

They will gain an understanding of using trusted sites to ensure they have ‘good’ information. They will begin to understand the importance of regulating ‘screen time’ to be healthy. They will further develop their understanding of what personal information is and how to keep it secure and will learn how to report upsetting content online.

. **What skills will we continue to build upon?**

The skills of acting responsibly online and reporting their concerns about inappropriate content and communication.

Curriculum Road Map Year 3

**Why do we follow on with this unit?**

To understand the importance of their conduct when using communication tools and that any form of online content can remain indefinitely.

Communicating Online

Spring 2 –

In this unit, children will begin to understand different ways that people can communicate online and that online communication leaves a digital footprint. They will learn that age restrictions apply on digital platforms to protect children. They will recognise that people can use email to communicate online and they will plan and write formal and informal emails to a range of recipients. In so doing, children will be made aware of the different protocols required when writing an email and that its language should be altered to fit its audience.

Networks

Spring 1

In this unit, children will learn the rudiments of how digital devices work. They will begin to understand what networks are and how they work and will learn to differentiate between the internet and the World Wide Web. They will learn that the internet is a global system of interconnected computer networks that allows communication between networks and digital devices. In turn, they will be able to articulate that the World Wide Web is a collection of web pages that are transported between digital devices across the world on the internet. The unit will conclude with children understanding how search engines work, being able to navigate websites within the world wide web and access information from them.

**What skills will we continue to build upon?**

To use technology safely, respectfully and responsibly and to recognise acceptable/unacceptable behaviour.

**Why do we follow on with this unit?**

To understand how to refine searches using the concept of Boolean logic, when using search engines.

Branching Databases

Summer 1 –

In this unit, children will learn that a database is like an on line library where information is sorted and classified. They will discover the principles of branching databases, have the opportunity to create their own and, where technology allows, create and insert 3-D images into them. As well as learning to refine internet searches using Boolean search terms, children will also discover the differences between search engines and databases.

**What skills will we continue to build upon?**

Collecting and presenting information from both online and offline sources

Curriculum Road Map Year 3

**Why do we follow on with this unit?**

To learn the basic principles of creating a presentation in a software programme.

Presenting my Ideas

Summer 2 –

In this unit, children will examine what makes a presentation effective and appealing. They will further develop their knowledge of how to more effectively search for information in a search engine using word-strings. They will then input their research findings into a multimedia presentation. This will contain transitioning slides with inserted text and images that they have manipulated as well as audio recordings that they have made. The unit will conclude with children being given the opportunity to present their multimedia presentations to different audiences, in order to effectively communicate their findings.

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**What skills will we continue to build upon?**

The skills of collecting information from online as well as offline sources and presenting them in a stimulating way using a software program.

Curriculum Road Map Year 4

**Why do we follow on with this unit?**

To revisit and consolidate key features of spreadsheet software.

Animation Adventures

Autumn 2 –

In this unit, children will begin to understand the history of animation and recognise that animation can be created using multiple frames that change quickly. Children will have the opportunity to create animation using software technology. They will design stick figure animation videos, web-based animations using multiple actions that happen at the same time and create their own stop-frame animation using Lego. In so doing, they will learn that modern software can record movement of inserted objects and interacting characters against a backdrop. In addition, they will appreciate the importance of timing in an animation – and learn how to coordinate frame transition timing with inserting and moving characters and introducing speech bubbles.

Presenting Data

Spring 1 –

In this unit, children will learn how to collect data for a given purpose using appropriate equipment. They will learn how to organise data into tables and present it in a range of graphs and charts. They will learn how to use hyperlinks to insert data into presentation software.

**What skills will we continue to build upon?**

To further develop the skills of collecting, organising and presenting data for a given purpose.

**Why do we follow on with this unit?**

To see how software is used to create images and video that influence us on a daily basis.

Advertising

Spring 2

In this unit, children will identify the features that make adverts and promotional videos effective. They will then learn how to create a storyboard for an advert that depicts scenes and plans for text, backgrounds, images, music and voiceovers. Next, they will have the opportunity to learn the principles of filming video footage and recording audio, using appropriate devices, which they will incorporate into their advert. The unit will conclude with children importing their recordings into an editing software and creating a video that is true to their planned storyboards.

**What skills will we continue to build upon?**

To design and create content on a computer using a variety of software e.g. plan, shoot and edit a video.

Curriculum Road Map Year 4

**Why do we follow on with this unit?**

Children can experience using desktop publishing software in addition to the presentation software that they have met so far.

Desktop Publishing

Summer 2

In this unit, children will experience the concept of desktop publishing and be able to identify the differences between Microsoft PowerPoint and Publisher. They will learn how to manipulate image size and shape by cropping and how to find and create images with transparent backgrounds. In addition, they will experience layering images and text by moving them forwards and backwards. The unit will be concluded by children applying their learned desktop publishing skills to create a printed end-product.

**What skills will we continue to build upon?**

To further build the skills of manipulating the form, size, colour and background of text and images. To have the opportunity to apply these skills to produce a printed end product.

Curriculum Road Map Year 5

**Why do we follow on with this unit?**

To understand the importance of analysing the quality of information gathered for accuracy and reliability.

Video Montage

Spring 2 –

In this unit, children will learn that a montage is a technique of film editing that combines a series of short shots or clips into one sequence and is often set to music. They will learn different types of camera shots (wide shot, mid shot, close up, extreme close up) and understand their different effects. They will then have the opportunity to practise different filming techniques, such as static, panning, zooming, camera angle and use of light and colour. In downloading and saving audio clips, they will learn the importance of copyright law. The unit will conclude with children using editing software to assemble rushes of footage, add in transitions and combine them with audio to create montages of their own.

Analysing Data

Spring 1 –

In this unit, children will further develop their understanding of how data processing software can be used to collect, organise, present, analyse and evaluate data for a given purpose. They will begin to write formulae to manipulate data and learn how data can be used to support a claim. They will conclude the unit by creating infographics to present data in more detail, using appropriate software.

**What skills will we continue to build upon?**

To further consolidate the skills of collecting, organising, presenting and analysing data for specific purposes.

**Why do we follow on with this unit?**

To develop an understanding of what is meant by intellectual property, copyright, piracy, fair use and distribution.

Staying Safe Online

Summer 1 –

In this unit, children will further develop their understanding of intellectual property, fair use and distribution and plagiarism and how they impact people’s lives. They will learn how our online identity can be copied, modified or altered and develop a sound awareness that there may be people online that wish to hurt them or their friends. They will conclude the unit by memorising the safety advice for staying safe on the internet.

**What skills will we continue to build upon?**

To be able to coherently explain how identity online can be copied, modified or altered.

Curriculum Road Map Year 6

**Why do we follow on with this unit?**

To see the connection between encryption codes created in Excel and their use in the real world through RFID technology.

Solving Problems Using Data

Summer 1 -

In this unit, children will further develop their understanding of data processing software; they will learn how to use Excel functions to add and multiply amounts, work out averages and highlight different cell values. They will examine in detail how bar codes and QR codes work and be able to generate QR codes using QR generator software. They will go on to learn the varied uses of radio frequency identification (RFID) technology and have the opportunity to write examples of encryption code in Excel, that are used by RFID readers and tags. The unit will conclude with children using and applying their learned knowledge and skills to collect, organise and present data using Excel formulae, in order to analyse and evaluate it for specific research purposes.

Internet Searches

Spring 1 –

In the Internet Searches part of the unit, children will learn how a search engine selects and ranks results using algorithms and apply this knowledge to maximise the search engine optimisation of a website they have designed. They will consider the potential for bias in ranking systems and its debatable role in relation to how website search engine optimisation and search engine algorithms effect website rankings. They will analyse the implications of fairness when a search engine’s results present pages from opposing viewpoints.

**What skills will we continue to build upon?**

To develop the skills of using Excel functions for a multitude of different purposes.

Internet Fairness

Summer 2 –

In this unit, children will evaluate the benefits and flaws of technological advances and examine the contributions made to technology from a range of people. They will explore ideas around whether there is unconscious bias in relation to the concept of gender imbalance and racism in technological advancements and consider the implications of technology designed for different sexes and ethnic groups. They will also examine the importance of self-regulation when posting online, the conflict between regulation and control of content faced by social media providers and why policies are used by social media sites to regulate the use of data. They will also come to clearly understand how digital footprints are used to target us with online content and how personal data can be harvested and used to gather information about individuals.

**Why do we follow on with this unit?**

To develop an awareness of terms and conditions for web servers/Apps (for example, use or ownership of content shared by individuals online) and the reasons behind them.

**What skills will we continue to build upon?**

To further enhance online safety skills.