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Pseudocode
and Algorithms



Web Design –
Using HTML &
CSS



Drawing with
Python



3D Design
using
Sketchup



Online Safety:
Social Media



8

7



Online
Safety:
Digital
Footprints



3D Design
using
Sketchup



Hardware
and
Computer
Systems



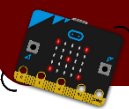
Go with the
Flow (Charts)



Web Design



Micro:Bits



Python:
Introduction



Africa



Coding Principles
in Scratch



SCRATCH

Spreadsheets



Great Journeys

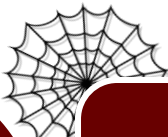


Online Safety:
Cyberbullying



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Welcome to the
Web



King Arthur



Presentation
Skills

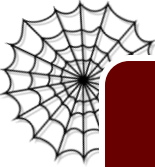









China & India









Spreadsheets










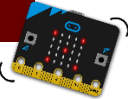
Scheme of Learning	 <div>Welcome to the Web</div> 	 <div>King Arthur</div> 	 <div>Presentation Skills</div> 
Knowledge	<ul style="list-style-type: none">• To understand the many positive uses of the internet.• To recognise what a website might look like.• To know what a hyperlink looks like.• To identify the basic features of a web browser.• To understand how to search for reliable information.• To be able to identify a number of different file types that might be saved from the internet.	<ul style="list-style-type: none">• To identify what is meant by logical thinking.• To understand how to approach problems logically to help solve them quicker.• To use problem solving skills to crack codes and secrets.• To understand what is meant by the term 'algorithm'• To use a computer program to help display my algorithms.• To be able to identify what shapes might be made from certain algorithm instructions.	<ul style="list-style-type: none">• To identify careers that might use presentation tools.• To apply word processing skills to format text and images to present professionally.• To create a presentation on a theme/topic.• To know how to add animations to slideshows.• To practice presentation skills to create interactive quizzes.
Sequencing Statements/ Cross Curricular Learning			Careers – Which jobs use PowerPoint/ Slides?
Enrichment Opportunities and British Values			



Scheme of Learning	 <p>China & India</p>	 <p>Spreadsheets</p>
Knowledge	<ul style="list-style-type: none">• To understand that there are different search engines used across the world.• To recognise some of the main differences between the search engines.• To reflect on the most effective web browsers and why people may prefer ones over others.• To identify what is meant by internet filtering.• To understand how search engine algorithms work using key words.• To recognise potential bias on websites.	<ul style="list-style-type: none">• To understand how to input data in to spreadsheets.• To begin to understand the use of formulae in spreadsheets.• To understand how to order and present data based on calculations.• To understand the processes involved in adding, editing and calculating data within spreadsheets.
Sequencing Statements/ Cross Curricular Learning	<ul style="list-style-type: none">• Understanding Algorithms - King Arthur (Year 5)	
Enrichment Opportunities and British Values		




Scheme of Learning	 <p>Online Safety: Cyberbullying</p>	 <p>Great Journeys</p>	 <p>Spreadsheets</p>
Knowledge	<ul style="list-style-type: none">• To recognise similarities and differences between bullying and cyberbullying.• Recognise significant features of trusted websites that are reliable to use.• To recognise the potential issues with online relationships and sharing of personal information.• To begin to identify the role of media in gender stereotyping.• To offer advice that demonstrates our learning and understanding about online safety.	<ul style="list-style-type: none">• To understand the difference between the internet and world wide web.• To understand using examples what a wiki is and how they can be created and edited.• To understand how collaboration can be beneficial to all when using online projects and communities.• To explore the use of blogs and vlogs and why they can help to develop career paths.	<ul style="list-style-type: none">• To retrieve the basic functions of spreadsheets from prior learning and instruct others to recall significant information.• To use spreadsheets to solve a problem.• To begin interpreting data and make comparisons.• To plan and budget using a spreadsheet.• To calculate total costs using prices and quantities of items needed.• To apply learning to create an independent spreadsheet that serves an intended purpose.
Sequencing Statements/ Cross Curricular Learning			<ul style="list-style-type: none">• Spreadsheets (Year 5)
Enrichment Opportunities and British Values			



Scheme of Learning	  Coding Principles in Scratch	 Africa
Knowledge	<ul style="list-style-type: none">• To animate a scene using Scratch.• To understand how to broadcast messages.• To identify ways in which to sequence stories using Scratch.• To add audio files to Scratch programs.• To be able to create interactive stories and games using Scratch.	<ul style="list-style-type: none">• To identify significant apps that we regularly use.• To begin categorising those apps as to how they benefit our lives.• To identify how apps are created and use data.• To begin to recognise purposes of the most popular apps.• To identify times at which people will most use specific apps and identify patterns between these types of applications.• Begin to identify and reflect on the apps that you use most.
Sequencing Statements/ Cross Curricular Learning		
Enrichment Opportunities and British Values		

Scheme of Learning	<div><div>Online Safety: Digital Footprints</div></div>	<div><div>3D Design using Sketchup</div></div>	<div><div>Hardware and Computer Systems</div></div>
Knowledge	<ul style="list-style-type: none">To understand what a computer virus is and how they might affect a computer system either in the workplace, school or at home.To begin to reflect on ways of protecting ourselves from computer viruses and malware.To recognise the features within a 'strong' password and which words/phrases that might be best avoided.To know what a digital footprint is and the potential long term impacts.	<ul style="list-style-type: none">To understand what is meant by 3D modelling.To be able to describe several examples of 3D design.To draw shapes in 2D and transform them in to 3D.To practice the construction of items within Sketchup and add colours and textures.Use Sketchup to solve a problem and create a proposal for a piece of Oakfield Academy play equipment.	<ul style="list-style-type: none">To understand what is meant by hardware and software.To identify what is meant by and provide examples of input and output devices.To explain what the function of the CPU is and how it relates to other parts of a computer.To recognise the different capabilities of storage devices and how these have evolved over recent years.To identify the advantages of cloud storage.To recognise how gaming PCs might differ from regular PCs and why someone would need these changes to play regularly.
Sequencing Statements/ Cross Curricular Learning	Welcome to the Web (Year 5) Online Safety: Cyberbullying (Year 6)	Careers - Jobs that use 3d design and modelling.	
Enrichment Opportunities and British Values			

Scheme of Learning	<div>Go with the Flow (Charts)</div>	<div>Web Design</div>	<div> <div>Micro:Bits</div></div>
Knowledge	<ul style="list-style-type: none">To understand the purpose and use of flowcharts in computing.To recognise the different symbols used within flowcharts.To be able to create a flowchart from scratch that demonstrates a certain problem in need of solving.How to transfer an algorithm in to a flowchart.To use flowcharts in real life scenarios to understand their relevance and significance.	<ul style="list-style-type: none">To identify the significance of websites in today’s society.To explore careers that rely on website design.To explore online website creators.To recognise a basic structure to a website in terms of pages and professional styles.To begin to build a website designed for a purpose.	<ul style="list-style-type: none">To understand the component parts to a Micro:Bit.To know how to use ‘if’ to make branching decisions in a computer program.To design and develop modular programs that use procedures or functions.To understand the hardware and software components that make up computer systems.To undertake creative projects to achieve challenging goals.To understand sorting algorithms that reflect computational thinking.
Sequencing Statements/ Cross Curricular Learning	King Arthur (Year 5)	Web Design – Using HTML and CSS (Year 8)	
Enrichment Opportunities and British Values			

Scheme of Learning	 Python: Introduction	 3D Design using Sketchup
Knowledge	<ul style="list-style-type: none">• To identify Python as an example of a programming language.• To know how to write a first computer program.• To recognise the purpose and use of If ..Else conditions.• To recognise how to plan and structure a Chat bot conversation.• To provide sensible and constructive feedback of someone else's work.• To understand the importance of feedback in the process of developing and solving problems.	<ul style="list-style-type: none">• To understand how 3d modelling is used within careers.• To retrieve prior learning from Sketchup about creation of designs and features of structures.• To demonstrate understanding of Sketchup to create a design proposal that meets specific criteria.• To display proposal with justified and explained annotations as to the choices you have made for your chosen property design.
Sequencing Statements/ Cross Curricular Learning		Careers - Jobs that use 3d design and modelling.
Enrichment Opportunities and British Values		

Scheme of Learning	<div>Online Safety: Social Media</div> 	<div> Drawing with Python</div>	<div> Web Design – Using HTML & CSS</div>
Knowledge	<ul style="list-style-type: none">• To explore the increasing use of social media.• To recognise how social media can and should be a significant part of our lives.• To understand the ever changing purpose of social media.• To understand the impacts of sexting• To understand the age restrictions on social media and the reasons why they are in place for safety.• To produce clearly presented information to educate others about the importance of staying safe on different social media.	<ul style="list-style-type: none">• To use prior learning of Python and understand how to apply it when drawing and creating different shapes.• To edit the thickness and colours of shapes created.• To recognise the purpose of a FOR loop to create a variety of shapes and improving efficiency of coding.• To create variety of shapes for a birthday card that also includes displaying of text by using Python to create it.	<ul style="list-style-type: none">• To understand the meaning of HTML.• To care a very simple webpage using HTML.• To use tags to build up a design of a webpage.• To insert images in to webpages and create hyperlinks.• To understand what CSS is and how it can affect the formatting of a HTML page.• To recognise the impact of using CSS instead of individual formatting tags.• To design their own webpages that are connected to a CSS file and are suitable for a purpose.
Sequencing Statements/ Cross Curricular Learning	Welcome to the Web (Year 5) Online Safety: Cyberbullying (Year 6) Online Safety: Digital Footprints (Year 7) Careers: Which jobs now rely on social media? PSHE: Healthy Relationships	Python: Introduction (Year 7)	Web Design (Year 7)
Enrichment Opportunities and British Values			

Scheme of Learning	<div><div>Pseudocode and Algorithms</div></div>
Knowledge	<ul style="list-style-type: none">• To understand the definition of pseudocode.• To recognise how appropriate pseudocode can be used to solve problems.• To identify how to use IF...THEN...ELSE... conditions within pseudocode.• To understand how a WHILE loop can be used.• To understand that there are a variety of different sorting and searching algorithms.• To recognise how a bubble sorting algorithm works.• To be able to describe a bucket and insertion sort.• To recognise different types of searching algorithms.
Sequencing Statements/ Cross Curricular Learning	
Enrichment Opportunities and British Values	