

Computing Y4

Key Threshold Concepts

Computing and online safety are vital life skills which run throughout our curriculum and not just in discrete computing lessons. Through the use of our class mobile technologies, our children use a range of applications, operating systems and devices to help become proficient, safe, responsible and creative users of technology, software and online systems.

Coding		Collect		Communicate		Connect (Online Safety) Ongoing skills	
<ul style="list-style-type: none"> To use specified screen coordinates to control movement. To set the appearance of objects and create a sequence of changes. To create and edit sounds. Control when they are heard, their volume, duration and rests. To be able to specify conditions to trigger events. To use IF and THEN conditions to control events or objects. To use variables to store a value. To use the functions – define, set, change, show and hide to control the variables. 		<ul style="list-style-type: none"> To devise and construct databases To make and explore branching databases. To use spreadsheets (linked to maths). 		<ul style="list-style-type: none"> To use some of the advanced features of applications and devices in order to communicate ideas, work or messages professionally. To create text, images and sounds for specific audience (capturing images from range of sources). Use in presentation. To plan and create animation using a variety of medium (clay, toys, drawing) To make and edit a simple film; including title scenes. 		<ul style="list-style-type: none"> To begin to contribute to blogs or other media (e.g. class Twitter) that are moderated by teachers. To understand how online services work. To begin to be able to perform effective web searches. To understand how to be kind online and what cyber-bullying is. To be able to test the reliability of online information. To protect personal information online. 	
We are network engineers	We are publishers	We are quiz masters	We are coders Variables and repetition	We are animators	We are treasure hunters	We are controllers	
Overview of the unit							
Chn gain an understanding of the hardware that makes up computer networks and how IP addresses allow communication between computers. They consider the range of internet-connected devices, and how they use web browsers to display the pages of information stored on web servers. Chn will learn about internet searches and how results are ranked. They will also learn about how data is stored.	Children will use https://www.dfindout.com/uk to locate information about Stone age / sound linked to their studies. Using the information, children produce a simple key note incorporating images, text and contents page with links to relevant section of the document. Children to make informed choices about the colour, size and font style to aid use.	Chn will use google forms and kahoot to create a google quiz to challenge the other Y4 class. They will use is as a retrieval task linked to the Chn compare which quiz formats and evaluate which one is easier to use to create / respond to. Discuss the benefits of collating results on forms and how this could be used by teachers.	Chn will explore how variables and repetition are used in games. They will debug algorithms and work to create their own simulation game requiring the use of taught skills.	Chn will use I can animate to create stop motion animations that link to their science unit, states of matter. Chn will use 2D materials to show the differences between solid, liquids or gases, the changes that take place as materials are heated, cooled, condensed, evaporated. Children could also animate the stages of the water cycle. Once complete, chn import into iMovie and add text to the animations to describe the process / model that can be seen.	Children will be introduced to the microbit, and use their experience of block code to program the microbit. They will then choose to either create a pedometer or compass, in prep for their Astrea promise visit to Austerfield.	Children will explore the app ‘ Move the Turtle.’ They will make links to maths and create shapes and patterns to create geometric pictures and patterns.	

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Key Knowledge						
<ul style="list-style-type: none"> To begin to be able to perform effective web searches understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content 	<ul style="list-style-type: none"> To use some of the advanced features of applications and devices in order to communicate ideas, work or messages professionally. To create text, images and sounds for specific audience (capturing images from range of sources). 	<ul style="list-style-type: none"> To use some of the advanced features of applications and devices in order to communicate ideas, work or messages professionally. To create text, images and sounds for specific audience (capturing images from range of sources). 	<ul style="list-style-type: none"> To use specified screen coordinates to control movement. To set the appearance of objects and create a sequence of changes. To create and edit sounds. Control when they are heard, their volume, duration and rests. To be able to specify conditions to trigger events. To use IF and THEN conditions to control events or objects. To use variables to store a value. To use the functions – define, set, change, show and hide to control the variables. 	<ul style="list-style-type: none"> To create text, images and sounds for specific audience (capturing images from range of sources). Use in presentation. To plan and create animation using a variety of medium (clay, toys, drawing) To make and edit a simple film; including title scenes. 	<ul style="list-style-type: none"> To use specified screen coordinates to control movement. To set the appearance of objects and create a sequence of changes. To create and edit sounds. Control when they are heard, their volume, duration and rests. To be able to specify conditions to trigger events. To use IF and THEN conditions to control events or objects. To use variables to store a value. To use the functions – define, set, change, show and hide to control the variables. 	<ul style="list-style-type: none"> To use specified screen coordinates to control movement. To set the appearance of objects and create a sequence of changes. To create and edit sounds. Control when they are heard, their volume, duration and rests. To be able to specify conditions to trigger events. To use IF and THEN conditions to control events or objects. To use variables to store a value. To use the functions – define, set, change, show and hide to control the variables.
Supportive Materials						
<p>Lesson 1: What is the internet? https://www.bbc.co.uk/bitesize/clips/zsyr9j6</p> <p>Lesson 2: How do search engines select results? https://www.youtube.com/watch?v=BNHR6IQJGZs&feature=youtu.be</p> <p>Lesson 3: How are searches ranked?</p> <p>Provide chn with print outs of different web pages based on the same theme. Work through the activity using those and ask chn to decide which they thin would be ranked highest and why?</p> <p>Lesson 4: How is data stored?</p>	<p>Non Chronological multimedia presentations https://drive.google.com/drive/folders/1j5SP5QC5BQJYT9XDm2Q6biZ4GU_2M360</p>	<p>Google forms support https://drive.google.com/drive/folders/1hDqAoGd247nPovRICBlssmHcz8cXGm6</p>	<p>Discovery coding – unit 4a https://drive.google.com/drive/folders/1S5bu_BsvyPHTHynD4y3ZCQMmQpb-vH_W</p> <p>Password: https://online.espresso.co username: student27377 password: gooseacre</p>		<p>Basic controls https://drive.google.com/drive/folders/1H9mbSxF3PjZxGarwzDVR8cKwITRPN2Ha</p> <p>Pedometer https://drive.google.com/drive/folders/1g9cXd6dIY2PjNYFLA-goepTtpuf2vqYi</p> <p>Compass https://drive.google.com/drive/folders/1tgOMvgQP2IIWBVlBPOdRMQlyorqvJs3g</p> <p>https://microbit.org/projects/make-it-code-it/compass-bearing/</p>	<p>https://drive.google.com/drive/folders/1iRRDA_yEtKAT4jqJwW62_J5Eywwa4jZu</p>

<p>Children produce a pic collage showing their understanding of how computers store data.</p> <p>https://www.bbc.co.uk/bitesize/clips/z3s3r82</p> <p>https://drive.google.com/drive/folders/1-BhDIBi7J76-gmNUasCWdHrij82OTLM</p>						
Vocabulary						