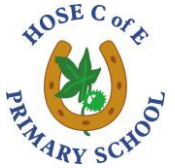


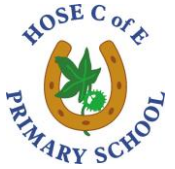
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	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
Fox Class (EYFS, Y1 & Y2)						
Cycle A	<p>Programming (Bee-Bots Y1)</p> <ul style="list-style-type: none"> * Recognise cause and effect when pressing buttons on a Bee-Bot. * Discuss and demonstrate how the Bee-Bot works. * Record video ensuring everyone is in the shot. * Give a number of clear instructions in sequence. * Program a Bee-Bot to reach a destination. * Identify and correct mistakes in their programming. 	<p>Creating Media (Digital Imagery Y1)</p> <ul style="list-style-type: none"> * Plan a pictorial story using photographic images in sequence. * Explain how to take clear photos. * Take photos using a device. * Edit photos by cropping, filtering and resizing. * Search for and import images from the internet. * Explain what to do if something makes them uncomfortable online. * Organise images on the page, orientating where necessary. 	<p>Data Handling (Introduction to Data Y1)</p> <ul style="list-style-type: none"> * Represent animal-themed data in different ways, using objects and technology. * Log in and use mouse and keyboard skills to navigate the computer. * Represent the same data as a pictogram and a table or chart. * Collect data about minibeasts using a tally chart and represent their data digitally. * Click and drag objects to sort data using a branching database. * Consider the types of input that would be used to gather different forms of data when designing an invention. 	<p>Programming (Scratch Junior Y2)</p> <ul style="list-style-type: none"> * Explore a new application independently. * Explain what the blocks on Scratch do and use them for a purpose. * Recognise a loop in coding and why it is useful. * Use a code to create an animation of an animal moving. * Use code to follow <i>and</i> create an algorithm. * Program code to run 'on tap'. * Explain the role of the blocks in a program they have created. 	<p>Creating Media (Stop Motion Y2)</p> <ul style="list-style-type: none"> * Create a flip book animation. * Decompose a story into smaller parts to plan a stop motion animation. * Create stop motion animations with small changes between images. 	<p>Data Handling (International Space Station Y2)</p> <ul style="list-style-type: none"> * Describe and explain how astronauts' survival needs are met aboard the ISS. * Identify and digitally draw items which fulfil basic human needs when aboard the ISS. * Read the correct temperature on a thermometer. * Design a display showing everything that needs to be monitored by sensors on the ISS. * Create an algorithm that addresses all plants' needs. * Explain how space exploration can benefit life on Earth. * Read data to identify whether a planet might be habitable.
Cycle B	<p>Computing Systems and Networks (Improving Mouse Skills Y1)</p> <ul style="list-style-type: none"> * Use computers more purposefully * Log in and navigate around a computer * Drag, drop, click and control a cursor using a mouse * Use software tools to create art on the computer 	<p>Programming (Algorithms Unplugged Y1)</p> <ul style="list-style-type: none"> * Explain what an algorithm is. * Write clear algorithms. * Follow an algorithm. * Explain what inputs and outputs are. * Create an achievable program. * Decompose a design into steps. * Identify bugs in an algorithm and how to fix them. 	<p>Skills Showcase (Rocket to the Moon Y1)</p> <ul style="list-style-type: none"> * Use a computer to make a list * Explain the benefits of making a list on the computer * Use a basic range of tools on graphics editing software to design a rocket * Sequence instructions * Follow instructions to build their model rocket * Input data about their rockets into a table or spreadsheet 	<p>Computing Systems and Networks (What is a computer Y2)</p> <ul style="list-style-type: none"> * Name some computer peripherals and their function. * Recognise that buttons cause effects. * Explain that technology follows instructions. * Recognise different forms of technology. * Design an invention which includes inputs and outputs. * Explain the role of computers in the world around them. 	<p>Programming (Algorithms and Debugging Y2)</p> <ul style="list-style-type: none"> * Decompose a game to predict the algorithms. * Give a definition for 'decomposition'. * Write clear and precise instructions. * Create algorithms to solve problems. * Use loops in their algorithms to make their code more efficient. * Explain what abstraction is. 	<p>Computing Systems and Networks (Word Processing Y2)</p> <ul style="list-style-type: none"> * Explain which are the home row keys and how to find them for typing. * Use the spacebar and backspace correctly. * Type and make simple alterations to text using buttons on a word processor. * Search for, import and alter appropriate images for a text document. * Modify text in a document. * Use copy and paste to copy text from one document to another.



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						* Explain what information is safe to be shared online.
	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
Parrot Class (Y3 & Y4)						
Cycle A	<p>Computing Systems and Networks (Networks and the Internet)</p> <ul style="list-style-type: none"> * Recognise that a network is two or more devices connected. * Explain how information moves around a network and the role of the server. * Understand that networks connect to the internet via a router. * Explain some of the journey a website goes through to reach your computer. * Explain that websites are split into small pieces (packets) to be sent via the internet. 	<p>Data Handling (Comparison Cards)</p> <ul style="list-style-type: none"> * Explain what is meant by 'field,' 'record,' and 'data.' * Compare paper and computerised databases. * Put values into a spreadsheet. Sort, filter and interpret data in a spreadsheet. * Create a graph on Google Sheets. * Explain the purpose of visual representations of data. 	<p>Computing Systems and Networks (Journey Inside a Computer)</p> <ul style="list-style-type: none"> * Recognise inputs and outputs and that the computer sends and receives information. * Explain that the parts of a laptop work together and the purpose of each part. * Explain what an algorithm is. * Suggest what memory is for inside a computer. * Make comparisons between different types of computer. 	<p>Computing Systems and Networks (Collaborative Learning)</p> <ul style="list-style-type: none"> * Understand the need to be thoughtful when working on a collaborative document. * Use comments to suggest changes to a document and understand how to resolve comments. * Use a variety of different slide styles to convey information including images and transitions. * Create a Google Form with a range of different questions types that will provide different types of answers, e.g. text, multiple choice or numerical values. * Export data to a spreadsheet, highlighting data, using conditional formatting and calculating averages and sums of numbers. 	<p>Data Handling (Investigating Weather)</p> <ul style="list-style-type: none"> * Search the web efficiently to find temperatures of different cities and record this accurately. * Design a weather station that gathers and records sensor data, explaining how it works and the units of measurement it would use. * Design an automated machine that uses selection to respond to sensor data. * Search for and record weather forecast information in a spreadsheet and explain how this data is collected. * Create a video which includes weather forecast information. 	<p>Skills Showcase (HTML)</p> <ul style="list-style-type: none"> * Add text between the heading and paragraph tags. * Easily activate the goggles to investigate a web page. * Explain how they altered the HTML to create their own posters. * Change the colours and sizes of their object elements. Explain how they created their story. * Adapt the basic elements of a story within a web page using the 'Inspect Elements' tool. * Change an image within a web page and create their own news story, replacing the text and images of a webpage.
Cycle B	<p>Computing Systems and Networks (Emailing Y3)</p> <ul style="list-style-type: none"> * Log in and out of email. * Send a simple email with a subject plus 'To' and 'From' in the body of the text. * Edit an email. * Type in the email address correctly and send the email. * Add an attachment to an email. 	<p>Programming (Programming Scratch Y3)</p> <ul style="list-style-type: none"> * Explain what some of the blocks do in Scratch. * Explain what a loop is and include one in their program. * Suggest possible additions to an existing program. * Recognise where something on screen is controlled by code. * Use a systematic approach to find bugs. 	<p>Creating Media (Video Trailers Y3)</p> <ul style="list-style-type: none"> * Describe the purpose of a trailer. * Create a storyboard for a book trailer. * Consider camera angles when taking photos or videos. * Import videos and photos into film editing software. * Record sounds and add these to a video. 	<p>Creating Media (Website Design Y4)</p> <ul style="list-style-type: none"> * Use most of the tabs (e.g. insert, pages, themes) on Google Sites on their website. * Create a clear plan for their web page and begin to create it. * Create a professional looking web page with useful information and a clear style, which is easy for the user to read and find information from. 	<p>Programming (Further coding with Scratch Y4)</p> <ul style="list-style-type: none"> * Understand how to create a simple script in Scratch – be able to change sprite and prevent the sprite from rotating. * Use decomposition to identify key features and understand how to decipher actions that make the quiz game work. 	<p>Programming (Computational Thinking Y4)</p> <ul style="list-style-type: none"> * Understand that problems can be solved more easily using computational thinking. * Understand what the different code blocks do and create a simple game. * Understand the terms 'pattern recognition' and 'abstraction' and how they help to solve a problem.



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	<ul style="list-style-type: none"> * Write an email using positive language, with an awareness of how it will make the recipient feel. * Recognise unkind behaviour online and know how to report it. * Offer advice to victims of cyberbullying. * Recognise when an email may be fake and explain how they know. 	<ul style="list-style-type: none"> * Explain what an algorithm is and its purpose. 	<ul style="list-style-type: none"> * Add text to a video. * Incorporate transitions between images. * Evaluate their own and others' trailers. 	<ul style="list-style-type: none"> * Create a clear plan by referring back to their checklist. * Create four web pages with a range of features on their website. 	<ul style="list-style-type: none"> * Understand what a variable is and how to use the 'say' and 'ask' blocks. * Create a variable and be able to use a variable to record a score. * Understand what a variable is and how it works within a program. 	<ul style="list-style-type: none"> * Create a Scratch program which draws a square and at least one other shape. * Understand how computational thinking can help to solve problems and apply computational thinking to problems they face.
	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
Monkey Class (Y5 & Y6)						
Cycle A	Programming (Programming: Music Y5)	Creating Media (Stop Motion Animation Y5)	Computing Systems and Networks (Search Engines Y5)	Data Handling (Big Data 1 Y6)	Data Handling (Big Data 2 Y6)	Programming (Introduction to Python Y6)
	<ul style="list-style-type: none"> * Iterate ideas, testing and changing throughout the lesson. * Explain what the basic commands do: 'play', 'sleep', '2. times do'. * Explain how their program links to the theme. Include a loop in their work. Correct their own simple mistakes. * Explain their scene in the story. Link musical concepts to their scene. * Include a live loop and explain its function. Use samples effectively to enhance music. * Code a piece of music that combines a variety of structures. Use loops in their programming. Recognise that programming music is a way to apply their skills. 	<ul style="list-style-type: none"> * Create a toy with simple images with a single movement. * Create a short stop motion with small changes between images. * Think of a simple story idea for their animation then decompose it into smaller parts to create a storyboard with simple characters. * Make small changes to the models to ensure a smooth animation and delete unnecessary frames. * Add effects such as extending parts and titles. * Provide helpful feedback to other groups about their animations. 	<ul style="list-style-type: none"> * Explain what a search engine is, suggesting several search engines to use and explain how to use them to find websites and information. * Suggest that things online aren't always true and recognise what to check for. * Explain why keywords are important and what TASK stands for, using these strategies to search effectively. * Recognise the terms 'copyright' and 'fair use' and combine text and images in a poster. * Make parallels between book searching and internet searching, explaining the role of web crawlers and recognising that results are rated to decide rank. 	<ul style="list-style-type: none"> * Understand why barcodes and QR codes were created. * Create (and scan) their own QR code using a QR code generator website. * Explain how infrared can be used to transmit a Boolean type signal. * Explain how RFID works, recall a use of RFID chips, and type formulas into spreadsheets. * Take real-time data and enter it effectively into a spreadsheet. * Presenting the data collected as an answer to a question. * Recognising the value of analysing real-time data. * Analyse and evaluate transport data and consider how this provides a useful service to commuters. 	<ul style="list-style-type: none"> * Recognise that data can become corrupted within a network and that data sent in packets is more robust, as well as identify the need to update devices and software. * Recognise differences between mobile data and Wi-Fi and use a spreadsheet to compare and identify high-use data activities and low-use data activities. * Make links between the Internet of Things and Big Data and give a basic example of how data analysis/analytics can lead to improvement in town planning. * Explain ways that Big Data or IoT principles could be used to solve a problem or improve efficiency within the school and prepare a presentation about their idea, considering the privacy of some data. * Present their ideas about how Big Data/IoT can improve the 	<ul style="list-style-type: none"> * Iterate ideas, testing and changing throughout the lesson and explain what their program does. * Use nested loops in their designs, explaining why they need two repeats. * Alter the house drawing using Python commands; use comments to show a level of understanding around what their code does. * Use loops in Python and explain what the parts of a loop do. * Recognise that computers can choose random numbers; decompose the program into an algorithm and modify a program to personalise it.

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					school and provide feedback to others on their presentations.	
Cycle B	<p style="text-align: center;">Programming (Micro: bit Y5)</p> <ul style="list-style-type: none"> * Clip blocks together and predict what will happen. Make connections with previous programming interfaces they've used, e.g. Scratch. * Create their own images to make the animation and recognise the difference between 'on start' and 'forever'. * Recognise blocks they've used previously, identifying inputs and outputs used and make predictions about how variables work. * Choose appropriate blocks to complete the program and attempt the challenges independently. * Break a program down into smaller steps, suggesting appropriate blocks and match the algorithm to the program. 	<p style="text-align: center;">Data Handling (Mars Rover 1 Y5)</p> <ul style="list-style-type: none"> * Explain what some of the blocks do in Scratch. * Explain what a loop is and include one in their program. * Suggest possible additions to an existing program. * Recognise where something on screen is controlled by code. * Use a systematic approach to find bugs. * Explain what an algorithm is and its purpose. 	<p style="text-align: center;">Skills Showcase (Mars Rover 2 Y5)</p> <ul style="list-style-type: none"> * Create a pixel picture, explaining that a pixel is the smallest element of a digital image and that binary is used to code and transfer this data. * Save a JPEG as a bitmap and recognise the difference in file size as well as explaining how pixels are used to transfer image data. * Explain the 'fetch, decode, execute' cycle in relation to real-world situations. * Create a profile with a safe and suitable username and password and begin to use 3D design tools. * Independently take tutorial lessons, applying what they have learnt to their design and understand the importance of using an online community responsibly. 	<p style="text-align: center;">Computing Systems and Networks (Bletchley Park Y6)</p> <ul style="list-style-type: none"> * Explain that codes can be used for a number of different reasons and decode messages. * Explain how to ensure a password is secure and how this works. * Create a simple website with information about Bletchley Park including the need to build electronic thinking machines to solve cipher codes. * Explain the importance of historical figures and their contribution towards computer science. * Present information about their historical figure in an interesting and engaging manner. 	<p style="text-align: center;">Creating Media (History of Computers Y6)</p> <ul style="list-style-type: none"> * Explain how to record sounds and add in sound effects over the top. * Produce a simple radio play with some special effects and simple edits which demonstrate an understanding of how to use the software. * Create a document that includes correct date information and facts about the computers and how they made a difference. * Demonstrate a clear understanding of their device and how it affected modern computers, including well-researched information with an understanding of the reliability of their sources. * Describe all of the features that we'd expect a computer to have including RAM, ROM, hard drive and processor, but of a higher specification than currently available. 	<p style="text-align: center;">Skills Showcase (Inventing a Product Y6)</p> <ul style="list-style-type: none"> * Evaluate code, understanding what it does and adapt existing to code for a specific purpose. * Debug programs and make them more efficient using sequence, selection, repetition or variables. * Design appropriate housing for their product using CAD software, including any input or output devices needed to make it work. * Create an appealing website for their product, aimed at their target audience which explains what their product is and what it does, using persuasive language. * Create an edited video of their project, articulating the key benefits. * Describe and show how to search for information online and be aware of the accuracy of the results presented.