



Christleton Primary School

Computing

Curriculum Design



Look up



Look out



Look beyond

Curriculum Delivery



Ignite

Introduction of the Context for Learning

A question is used to spark interest.

Pre-planning.

Describe, list, outline, find, label, draw, match.

Pre-planning questions are used to shape how learning takes place, drawing objectives from the national curriculum and key skills from our skills progression documents.



Explore

Exploration of the Context for learning

Sequence, classify, compare and contrast, explain (cause and effect), analyse, organise, distinguish, question, relate, apply, link prior learning.

The planned sequence of learning is followed to provide the children with the knowledge and skills required. Additions may be made in response to events, further questions, assessments or responding to the interests of the children.



Reflect

Reflection on the Context for Learning

Generalise, predict, evaluate, reflect, hypothesise, theorise, create, prove, justify, argue, compose, design, construct, perform.

The children are able to communicate their learning to others via a variety of means.

Year 1

Functional Skills (used throughout all areas of Computing)	Computer Science	Digital Literacy	Information Technology
<ul style="list-style-type: none"> <input type="checkbox"/> Can I enter text using single fingers, beginning to use more than one hand? <input type="checkbox"/> Can I log into and out of an account on a computer or program independently, and shut down a device? <input type="checkbox"/> Can I save and retrieve work with support? <input type="checkbox"/> Can I use a mouse/trackpad to move and place items accurately on a screen? 	<ul style="list-style-type: none"> <input type="checkbox"/> Can I say what an 'algorithm' is? <input type="checkbox"/> Can I use the appropriate keys or commands to make a virtual or floor robot go forward, backward, left and right? <input type="checkbox"/> Can I program a bot or sprite by giving simple sequences of commands with an immediate outcome? <input type="checkbox"/> Can I use basic symbols to record directional instruction and attempt to identify a bug in their code? <input type="checkbox"/> Can I use a developing range of language and styles of control e.g. tilt and turn/instructional to direct a robot? 	<ul style="list-style-type: none"> <input type="checkbox"/> Can I access information on the internet and navigate a website using a QR code or links? <input type="checkbox"/> Can I, with support, access and view pictures or work via an online platform? <input type="checkbox"/> Can I use a search engine or in-app search to search for and save images? <input type="checkbox"/> Can I change options in models/simulations to create different outcomes and effects? <input type="checkbox"/> Can I be aware some of the dangers of online activity and know when to tell an adult? 	<ul style="list-style-type: none"> <input type="checkbox"/> Can I produce text and make basic edits? <input type="checkbox"/> Can I explore a range of simple tools within a digital art package? <input type="checkbox"/> Can I use simple video or animation software? <input type="checkbox"/> Can I use a sound recorder to store information as sound, and create sounds or music by arranging sound markers? <input type="checkbox"/> Can I use represent information using pictographs?
Vocabulary			
<p>Online, internet, search, engine, trusted adult, stranger, personal, information, private, technology, device Algorithm, instructions, program, code, sequence, predict, bug Save, open, Public Folder, computer network, copy, paste, image, web browser, website, search engine Audio, video, record, play, edit, delete, save</p>			

Functional Skills (used throughout all areas of Computing)	Computer Science	Digital Literacy	Information Technology
<ul style="list-style-type: none"> <input type="checkbox"/> Can I enter text using more than one finger, beginning to use both hands? <input type="checkbox"/> Can I use basic keyboard keys e.g. backspace, space bar, and return? <input type="checkbox"/> Can I save, retrieve and begin to organise work with support? <input type="checkbox"/> Can I use a range of methods of interacting with a program e.g. right click, drag and drop, long tap etc. Use double click or tap, pinch to zoom, swipe etc. 	<ul style="list-style-type: none"> <input type="checkbox"/> Can I give control devices instructions that contain numerical data (e.g. move 2 steps etc.)? <input type="checkbox"/> Can I use the repeat command (loops) to program more efficiently? <input type="checkbox"/> Can I use logical reasoning to predict the outcome of a sequence of instructions and test the sequence, amending if necessary? <input type="checkbox"/> Can I make use of simple events e.g. mouse clicks/tap on screen? <input type="checkbox"/> Can I find a bug in simple code and attempt to debug errors? 	<ul style="list-style-type: none"> <input type="checkbox"/> Can I independently navigate to the right information on a website using links or buttons? <input type="checkbox"/> Can I share pictures or work to an online platform with support? <input type="checkbox"/> Can I use a search engine to search for given information? <input type="checkbox"/> Can I make changes in a model/simulation and use them to make and test predictions? <input type="checkbox"/> Can I explain online danger and begin to be responsible for my actions? 	<ul style="list-style-type: none"> <input type="checkbox"/> Can I add and edit text, considering style, colour, layout and font? <input type="checkbox"/> Can I use simple tools to create digital art or alter an image, using tools such as crop, resize, and flip? <input type="checkbox"/> Can I sequence and arrange images and text for a purpose? <input type="checkbox"/> Can I select and record musical phrases, sound-effects or voice-overs to enhance multimedia work? <input type="checkbox"/> Can I make use of different types of graphs (pictographs and bar charts) to represent data collected?
Vocabulary			
<p>Online, internet, search engine, safe, search, trusted adult, stranger, personal information, private, public, appropriate, inappropriate, technology, device Algorithm, instructions, program, code, block, sequence, select, predict, explain, bug, debug, input, output, sprite, stage, backdrop Save, open, folder, network, copy, paste, image, web browser, website, search engine, Audio, video, image, sound, record, edit, delete, save</p>			

Functional Skills (used throughout all areas of Computing)	Computer Science	Digital Literacy	Information Technology
<ul style="list-style-type: none"> <input type="checkbox"/> Can I use more than one hand to enter text, using the keyboard? <input type="checkbox"/> Can I use cut, copy and paste tools by right clicking or using the edit toolbar? <input type="checkbox"/> Can I save work effectively navigating a folder system e.g. Shared Drive, iPad camera roll, Google Drive or OneDrive? <input type="checkbox"/> When using a mouse or trackpad, can I use left/right/double click and scroll? 	<ul style="list-style-type: none"> <input type="checkbox"/> Can I sequence a list of commands/blocks to produce an output e.g. a light comes on or a robot follows a defined route? <input type="checkbox"/> Can I use 'repeat' and 'repeat until' loops when appropriate. <input type="checkbox"/> Can I use simple conditional statements (if and when commands) and understands the importance of time within a program (e.g. using wait), with support? <input type="checkbox"/> Can I make use of an input 'event' within a simple program e.g. when the start button is clicked? <input type="checkbox"/> Can I find errors in a simple program, and successfully debug to make the program work. 	<ul style="list-style-type: none"> <input type="checkbox"/> Can I identify and use keywords for effective Internet searches? <input type="checkbox"/> Can I independently share suitable pictures and work on an online platform? <input type="checkbox"/> Can I independently use a suitable search engine to search for information to answer questions? <input type="checkbox"/> Can I enter data into a computer simulation, change data and observe changes in results? <input type="checkbox"/> Can I be aware of the consequences of my online actions and be able to explain the importance of balancing game and screen time with other parts of my life? 	<ul style="list-style-type: none"> <input type="checkbox"/> Can I format text to indicate relative importance, including bold, italic, underline and strikethrough? <input type="checkbox"/> Can I select and use appropriate editing tools in an image-editing package for a specific purpose? <input type="checkbox"/> Can I sequence still images, video, audio clips and text to create a video presentation? <input type="checkbox"/> Can I locate, record, save and retrieve sounds in multimedia software? <input type="checkbox"/> Can I use data loggers to collect snapshot information and use information from a given source? <input type="checkbox"/> Can I enter data into a graphing package and use it to create a range of graphs?
Vocabulary			
<p>Account, cyberbullying, download, password, personal information, private, public, safe search, search engine, trusted adult, web browser, SMART = Safe, meet, accept, reliable, tell, algorithm, instructions, program, code, block, sequence, select, event, predict, explain, bug, debug, input, output, repetition loop, sprite, stage, backdrop, image, select, copy, paste, text box, font, search engine, PowerPoint, animation, transition, relevant, slide, sound, slide, text, box, sound, animation, transition, relevant</p>			

Functional Skills (used throughout all areas of Computing)	Computer Science	Digital Literacy	Information Technology
<ul style="list-style-type: none"> <input type="checkbox"/> Can I use more than two fingers to enter text? <input type="checkbox"/> Can I use keyboard function keys e.g. shift, caps lock, num lock, space bar, return? <input type="checkbox"/> Can I rename a previously saved digital document or file appropriately? 	<ul style="list-style-type: none"> <input type="checkbox"/> Can I design, test and amend programs to achieve an intended objective, including controlling an external output? <input type="checkbox"/> Can I use nested loops to increase the efficiency of a program? <input type="checkbox"/> Can I use and change a pre-written function? <input type="checkbox"/> Can I understand a wider range of 'events' such as sprite interactions and button presses, and use them within programs? <input type="checkbox"/> Can I find errors in a program of my own design, and successfully debug to achieve a specific goal? 	<ul style="list-style-type: none"> <input type="checkbox"/> Can I evaluate how appropriate a website is? <input type="checkbox"/> Can I work collaboratively with others online, with support? <input type="checkbox"/> Can I search for and select relevant information (pictures and text) to use in other software? <input type="checkbox"/> Can I predict the effect(s) of changing the variables in digital simulations and observe the results? <input type="checkbox"/> Can I understand the reasons for using strong passwords? <input type="checkbox"/> Can I be aware of ways in which we interact with online communities and be able to suggest and use strategies for dealing with cyberbullying? 	<ul style="list-style-type: none"> <input type="checkbox"/> Can I use a range of features of layout and design such as text boxes, columns and borders? <input type="checkbox"/> Can I make use of a range of visual effects such as filters, hues, saturation, contrast and combining images to give different effects? <input type="checkbox"/> Can I create and add text, video, sound and other graphic effects to a video? <input type="checkbox"/> Can I layer sounds using music composition software? <input type="checkbox"/> Can I collect snapshot data from data loggers, selecting the appropriate tool to generate graphs or charts? <input type="checkbox"/> Can I create a branching database to sort and identify objects?

Vocabulary

Account, consequence, communication, consent, cyberbullying, download, permission, personal information, private, public, profile, search engine, web browser, SMART = Safe, Meet, Accept, Reliable, Tell

Algorithm, instructions, program, code, sequence, event, predict, explain, bug, debug, input, output, repetition loop, condition, action, if/else command, variable, backdrop, blocks, sprite

Search engine, web page, World Wide Web, internet, computer network, evaluate, relevant,

client, router, server, DNS, save, import, edit, image, video, audio, web browser HTML, collaborative, heading, subheading, paragraph, font, image, link, layout, upload

Year 5

Functional Skills (used throughout all areas of Computing)	Computer Science	Digital Literacy	Information Technology
<ul style="list-style-type: none"> <input type="checkbox"/> Can I hold two hands over different halves of the keyboard and use more than two fingers to enter text? <input type="checkbox"/> Can I use more advanced keyboard function keys e.g. insert, delete, ctrl+c, ctrl+v, ctrl+z? <input type="checkbox"/> Can I navigate a folder system to move files or work to a suitable location within e.g. Shared Drive, iPad camera roll, Google Drive or OneDrive. <input type="checkbox"/> Can I change print properties to affect the appearance of a printed document? 	<ul style="list-style-type: none"> <input type="checkbox"/> Can I use decomposition when solving problems (break the code/problem into smaller parts)? <input type="checkbox"/> Can I explain what happens when a variable changes and can use this within a computer program to manipulate data? <input type="checkbox"/> Can I show an understanding of when to use 'while', 'repeat until' and 'forever if' loops to make programs more efficient? <input type="checkbox"/> Can I use and change a pre-written function as part of a longer program or sequence? <input type="checkbox"/> Can I use a greater range of conditionals (selection) including "whilst", "if else", "repeat until"? 	<ul style="list-style-type: none"> <input type="checkbox"/> Can I search the internet for specific information? <input type="checkbox"/> Can I engage in online communication with teachers and other pupils? <input type="checkbox"/> Can I use more than one search term, adapting the search terms to refine search results? <input type="checkbox"/> Can I use modelling and simulation software to explore or create realistic or fantasy representations of the real world? <input type="checkbox"/> Can I demonstrate an understanding of responsible social media use, including knowledge of my digital footprint? <input type="checkbox"/> Can I demonstrate an understanding of the risks of online gaming and know strategies for healthy online behaviours? 	<ul style="list-style-type: none"> <input type="checkbox"/> Can I independently plan and structure the layout of multimedia presentations? <input type="checkbox"/> Can I select and change options in digital art software, within the creation tools to alter the effect e.g. line width, opacity, blur, iterations, etc? <input type="checkbox"/> Can I include a range of media in documents or presentations, including images, video and sound, embedded media and hyperlinks? <input type="checkbox"/> Can I layer and edit sounds in appropriate sound editing software? <input type="checkbox"/> Can I organise data by designing fields and entering records in a database, checking for accuracy. Be able to query a database using keywords and filters to search a large database? (Supported) <input type="checkbox"/> Can I understand that spreadsheets perform calculations. Explore the effect of changing the cell values in a pre-prepared spreadsheet?
Vocabulary			
<p>Consequence, communication, consent, cyberbullying, digital footprint, hyperlink, firewall, permission, plagiarism, phishing, private, public, profile, secure, spam, virus, SMART = Safe, Meet, Accept, Reliable, Tell</p> <p>Algorithm, program, code, decompose, sequence, select, predict, explain, error, debug, input, output, repetition loop, condition, action, if/else command, variable</p> <p>World Wide Web, internet, search engine, web browser, index, web crawler, server, rank, URL, reliable, bias, blog post, hyperlink, comment</p> <p>Video, audio, edit, save, import, image, impact, audience, purpose</p>			

Year 6

Functional Skills (used throughout all areas of Computing)	Computer Science	Digital Literacy	Information Technology
<ul style="list-style-type: none"> <input type="checkbox"/> Can I use more than two fingers to enter text, with increasing speed and accuracy? <input type="checkbox"/> Can I use more advanced keyboard function keys e.g print screen, ctrl+a, ctrl+b, ctrl+t, ctrl+shift+t F6.3 <input type="checkbox"/> Can I independently create suitably named folders to organise documents, using appropriate file paths? 	<ul style="list-style-type: none"> <input type="checkbox"/> Can I use logical operations (not, or, and) to alter and control the outcome of a series of commands? <input type="checkbox"/> Can I use variables efficiently? <input type="checkbox"/> Can I demonstrate an understanding of what subroutines (e.g. functions and procedures) are, and be able to create them within a computer program to store and retrieve data? <input type="checkbox"/> Can I use a wider range of events (such as broadcasts) and use them efficiently within programs to start and stop scripts? <input type="checkbox"/> When debugging, can I use abstraction to filter out extraneous detail and debug the program? 	<ul style="list-style-type: none"> <input type="checkbox"/> Can I identify irrelevant, implausible and inappropriate information, when searching for information online? <input type="checkbox"/> Can I work with others to create an online collaborative project for a specific purpose? <input type="checkbox"/> Can I show an awareness that some media is copyrighted and cannot be used without permission? <input type="checkbox"/> Can I use modelling software to explore and create detailed virtual environments or simulations? <input type="checkbox"/> Can I demonstrate an understanding of media bias and strategies for ensuring a balanced view, including gender stereotypes? <input type="checkbox"/> Can I explain how to develop positive online relationships and have strategies to prevent and stop negative situations and manage private information? 	<ul style="list-style-type: none"> <input type="checkbox"/> Can I identify irrelevant, implausible and inappropriate information, when searching for information online? <input type="checkbox"/> Can I work with others to create an online collaborative project for a specific purpose? <input type="checkbox"/> Can I show an awareness that some media is copyrighted and cannot be used without permission? <input type="checkbox"/> Can I use modelling software to explore and create detailed virtual environments or simulations? <input type="checkbox"/> Can I demonstrate an understanding of media bias and strategies for ensuring a balanced view, including gender stereotypes? <input type="checkbox"/> Can I explain how to develop positive online relationships and have strategies to prevent and stop negative situations and manage private information?
Vocabulary			
<p>Consequence, communication, consent, cyberbullying, digital footprint, hyperlink, firewall, permission, plagiarism, phishing, private, public, profile, secure, spam, virus, SMART = Safe, Meet, Accept, Reliable, Tell</p> <p>Algorithm, program, code, decompose, sequence, select, predict, explain, error, debug, input, output, repetition loop, condition, action, if/else command, variable</p> <p>World Wide Web, internet, search engine, web browser, index, web crawler, server, rank, URL, reliable, bias, blog post, hyperlink, comment</p> <p>Video, audio, edit, save, import, image, impact, audience, purpose</p>			