CHERRY TREE ACADEMY

COMPUTING INTENT

2022 – 2023

Computing at Cherry Tree Academy

Long Term Plan

Computing at Cherry Tree Academy is planned and resourced using The National Centre for Computing Education (NCCE) for computational thinking, computer science and Information Technology. Digital Literacy is taught through Jigsaw lessons and supplemented using Project EVOLVE.

Computing in EYFS	
Computing in EYFS looks very different to computing in other areas of school. In EYFS, computing is known as 'Computational Thinking', which is a set of problem solving skills that we can use in everyday life. Children in EYFS will not be taught explicit computing skills; instead, they are ingrained throughout all areas of the curriculum. Along with the rest of the school, EYFS will be taught Digital Literacy using Project Evolve resources.	
Concepts	Approaches
Logical Reasoning- anticipating and explaining (C1)	Tinkering- Playing and exploring (A1)
Abstraction- working out what is important and ignoring what is not important. (C2)	Creating- making things, checking things and fixing things (A2)
Pattern- comparing, spotting similarities and differences (C3)	Collaboration- playing and working cooperatively (A3)
Algorithms- making steps and rules (C4)	Persevering- not giving up (A4)
Decomposition- breaking problems down into steps (C5)	Debugging- identifying when something isn't right and fixing it
Evaluation- Making judgements (C6)	

KS1 Computing Curriculum		
Computer Science *(How computers and computer systems work and how they are designed and programmed)*	**Information Technology** *(the purposeful use of existing programs to develop products and solutions)*	**Digital Literacy** *(the skills, knowledge and understanding needed in order to participate fully and safely in an increasingly digital world)*
A- understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions		
B- create and debug simple programs		
C- use logical reasoning to predict the behaviour of simple programs		
D- use technology purposefully to create, organise, store, manipulate and retrieve digital content		
E- recognise common uses of information technology beyond school		
F- use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies		

KS1 Overview

Cycle		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
A	CS	**Computer Systems and networks (Y2)** **DEF** ***add in how to log on etc*** https://teachcomputing.org/curriculum/key-stage-1/computing-systems-and-networks-it-around-us	**Programing A:** Beebots **(Y2)** **ABC** https://teachcomputing.org/curriculum/key-stage-1/programming-a-robot-algorithms				**Programming B**: Scratch Jnr **(Y2)** **ABC** https://teachcomputing.org/curriculum/key-stage-1/programming-b-an-introduction-to-quizzes
	IT			**Creating Media:** Making Music **(Y2)** **D** https://teachcomputing.org/curriculum/key-stage-1/creating-media-making-music	**Creating Media:** Digital Photography **(Y2)** **DE** https://teachcomputing.org/curriculum/key-stage-1/creating-media-digital-photography	**Data and Information**: Pictograms **(Y2)** **DE** https://teachcomputing.org/curriculum/key-stage-1/data-and-information-pictograms	
	DL	Managing Online Information (Y2)	Self-Image and Identity	Copyright and Ownership (Y2)	Health, Well-Being and lifestyle	Privacy and Security (Y2)	Online Relationships (Y2)
Resources			Beebots	musiclab.chromeexperiments.com/About	Pixlr App Tablets	J2e Pictograms (Online)	ScratchJnr App
B	CS	**Computer Systems and networks** (Y1) **DEF**		**Programing A :** Beebots **(Y1)** **ABC** https://teachcomputing.org/curriculum/key-			**Programming B:** Scratch Jnr **(Y1)** **ABC** https://teachcomputing.org/curriculum/key-stage-

				stage-1/programming-a-moving-a-robot			1/programming-a-moving-a-robot
	IT	***add in how to log on etc*** https://teachcomputing.org/curriculum/key-stage-1/computing-systems-and-networks-technology-around-us	**Creating Media:** Digital Writing **(Y1)** **DF** https://teachcomputing.org/curriculum/key-stage-1/creating-media-digital-writing		**Creating Media:** Digital Painting **(Y1)** **D** https://teachcomputing.org/curriculum/key-stage-1/creating-media-digital-painting	**Data and Information:** Grouping Data **(Y1)** **DE** https://teachcomputing.org/curriculum/key-stage-1/data-and-information-grouping-data	
	D L	Managing Online Information (Y1)	Online Bullying	Privacy and Security (Y1)	Online Reputation	Copyright and Ownership (Y1)	Online Relationships (Y1)
Resources		Laptops Individual log ins	Word Laptops	Beebots	Laptops Paint app		Scratch Jnr App

Key Stage 2 Computing Curriculum		
Computer Science	**Information Technology**	**Digital Literacy**
(How computers and computer systems work and how they are designed and programmed)	*(the purposeful use of existing programs to develop products and solutions)*	*(the skills, knowledge and understanding needed in order to participate fully and safely in an increasingly digital world)*
A - design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts		
B - use sequence, selection, and repetition in programs; work with variables and various forms of input and output		
C - use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs		
D - 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		
E - use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content		
F - select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information		
G - use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact		

LKS2 Overview

Cycle		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
A	CS	**Computer Systems and Networks (Y3)** **BDEFG** https://teachcomputing.org/curriculum/key-stage-2/computing-systems-and-networks-connecting-computers	**Programming A (Y3)**: Sequence in Music **ABCF** https://teachcomputing.org/curriculum/key-stage-2/programming-a-sequence-in-music		:		**Programming B (Y4)**: Repetition in games (note changes in L1 slides) **ABCF** https://teachcomputing.org/curriculum/key-stage-2/programming-b-repetition-in-games
	IT			**Creating Media (Y4):** Photo editing **EFG** https://teachcomputing.org/curriculum/key-stage-2/creating-media-photo-editing	**Creating Media (Y4):** Audio editing **EFG** https://teachcomputing.org/curriculum/key-stage-2/creating-media-audio-editing	**Data and Information (Y3):** Branching Databases **F** https://teachcomputing.org/curriculum/key-stage-2/data-and-information-branching-databases	
	DL	Managing Online Information (Y4)	Self-Image and Identity	Copyright and Ownership	Health, Well-Being and lifestyle	Privacy and Security	Online Relationships (Y4)
Resources			scratch.mit.edu (On laptops) Ensure teacher accounts are set up to enable chn's	https://fixthephoto.com/paint-net-online-editor.html Pixabay.com	Audacity App Headphones Microphones	J2e Data (Online)	scratch.mit.edu (On laptops) Ensure teacher accounts are set up to enable chn's access

			access easier and can be monitored.				easier and can be monitored.
B	**CS**		**Computer Systems and Networks (Y4)** **BDEFG** https://teachcomputing.org/curriculum/key-stage-2/computing-systems-and-networks-the-internet	**Programming B (Y3):** Events and actions in programs **ABCF** https://teachcomputing.org/curriculum/key-stage-2/programming-b-events-and-actions			**Programming A (Y4):** Repetition in shapes **ABCF** https://teachcomputing.org/curriculum/key-stage-2/programming-a-repetition-in-shapes
	IT	**Creating Media (Y3):** Stop-frame Animation **F** https://teachcomputing.org/curriculum/key-stage-2/creating-media-animation			**Creating Media (Y3):** Desktop publishing **FG** https://teachcomputing.org/curriculum/key-stage-2/creating-media-desktop-publishing	**Data and Information (Y4)**: Data Logging **BF** https://teachcomputing.org/curriculum/key-stage-2/data-and-information-data-logging	
	DL	Online Bullying	Managing Online Information (Y3)	Privacy and Security	Online Reputation	Copyright and Ownership	Online Relationships (Y3)
Resources		Tablets only Stop Motion Studio App		scratch.mit.edu (On laptops) Ensure teacher accounts are set up to enable chn's access easier and can be monitored.	Adobe Spark- teachers to set up account and give chn class code.	Data loggers or Google Science Journal App	Laptops turtleacademy.com/playground

UKS2 Overview

Cycle		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
A	CS	**Computer Systems and Networks (Y5):** Sharing Information **ABDFG** https://teachcomputing.org/curriculum/key-stage-2/computing-systems-and-networks-sharing-information	**Programming A (Y5)** Selection in physical computing Instead of using Crumbles- Code.org (Course D lessons 10-4 and 18) **ABDF** https://teachcomputing.org/curriculum/key-stage-2/programming-a-selection-in-physical-computing				**Programming B (Y6)-** Sensing (variables): Instead of Microbits use: https://makecode.microbit.org/ **ABDF** https://teachcomputing.org/curriculum/key-stage-2/programming-b-sensing
	IT			**Creating Media (Y5):** Vector Drawing Instead of Vector drawing use PPT/Publisher **F** https://teachcomputing.org/curriculum/key-stage-2/creating-media-vector-drawing	**Data and Information (Y5):** Flat file Databases **EF** https://teachcomputing.org/curriculum/key-stage-2/data-and-information-flat-file-databases	**Creating Media (Y6):** 3D Modelling **FG** https://teachcomputing.org/curriculum/key-stage-2/creating-media-3d-modelling	
	DL	Managing Online Information (Y6)	Self-Image and Identity	Copyright and Ownership	Health, Well-Being and lifestyle	Privacy and Security	Online Relationships (Y6)
Resources			Code.org (Online)	Powerpoint/ Publisher	J2e Data (Online)	https://www.tinkercad.com	Microbits (if purchased)

						Teacher accounts need to be set up and learner accounts set up under this umbrella (initials only). Use a class code to do this.	https://makecode.microbit.org/
B	**CS**	**Computer Systems and Networks (Y6):** Communication **ADEF** https://teachcomputing.org/curriculum/key-stage-2/computing-systems-and-networks-communication		**Programming B (Y5):** Selection in Quizzes **ABCF** https://teachcomputing.org/curriculum/key-stage-2/programming-b-selection-in-quizzes			**Programming A (Y6):** Variables in games **ABDFG** https://teachcomputing.org/curriculum/key-stage-2/programming-a-variables-in-games
	IT		**Creating Media (Y5):** Video Editing **EFG** https://teachcomputing.org/curriculum/key-stage-2/creating-media-video-editing		**Creating Media (Y6):** Webpage creation- use code club instead **EFG** https://teachcomputing.org/curriculum/key-stage-2/creating-media-web-page-creation	**Data and Information (Y6):** Spreadsheets **F** https://teachcomputing.org/curriculum/key-stage-2/data-and-information-spreadsheets	
	DL	Managing Online Information (Y5)	Online Bullying	Privacy and Security	Online Reputation	Copyright and Ownership	Online Relationships (Y5)
Resources		PPT/Publisher	Tablets	scratch.mit.edu (On laptops)	Code club log ins	Excel (Laptops)	scratch.mit.edu (On laptops)

		Microsoft Video Editor	Ensure teacher accounts are set up to enable chn's access easier and can be monitored.			