

EYFS Computing Long Term Plan

Our Rationale

At Courthill, we understand that Computing has become an integral part of our current lifestyle and therefore our computing curriculum reflects this. Children at Courthill have opportunities to use computers at any point in the school day, as well as a being taught a dedicated Computing curriculum. We teach children that computing includes a range of media from computers and cameras to remote control toys. We teach children that technology should be used responsibly, whether this is the hardware used to access technology or what we can do with technology. We also inform children that there are some people who do not use technology responsibly and what they should do if they encounter people who behave like this. Children at Courthill are taught that programs are used to perform functions and how humans can control them. Children are also taught that there is a variety of software that can be used to accomplish goals to assist us in our everyday life.

The computing curriculum covers three areas, programming (computer science), computing skills (digital literacy) and solving computing problems (information technology). Computing is taught as a discreet lesson to allow children to gain knowledge and skills of the technological world. We also allow children to use computers and other electrical equipment in order that they can apply what they have learnt. We have ensured that the curriculum is taught progressively, building on previous learning through each year group.

Term	Autumn	Spring	Summer
Big idea	That software is used accomplish goals and hardware enables us to do this	That programs are used to perform functions	That software is used accomplish goals and hardware enables us to do this
Knowledge and facts (NC)	<p>-That there are many different types of digital devices, which have different functions</p> <p>- That digital devices can be used to take videos, photos and videos</p> <p>-That pushing a button can cause a reaction (outcome) e.g. mouse button, on/off, icon.</p> <p>Skill (Pupils should be able to)</p> <p>-Be able to identify different types of digital devices and what they do (function)</p> <p>-Be able to take photos and record videos / voices</p> <p>Direct NC Ref / context for learning</p> <p>ELG: Children recognise that a range of technology is used in places such as homes or schools. They select and use technology for particular purposes.</p>	<p>-That pushing a button can cause a reaction (outcome) e.g. mouse button, on/off, icon.</p> <p>-That pushing an accurate sequence of buttons results in a reaction (outcome) e.g. bee bot, floor turtles</p> <p>Skill (Pupils should be able to)</p> <p>-Be able to set a simple sequence for a robot (e.g. Beebot) to follow.</p> <p>Direct NC Ref / context for learning</p> <p>Completes a simple program on a computer.</p> <ul style="list-style-type: none"> • Interacts with age-appropriate computer software. 	<p>-That a desktop/laptop computer has the following parts screen, mouse, keyboard, <i>hard drive</i></p> <p>-That there are two main types of keyboard, physical (e.g. desktop computer) and touch screen (e.g. tablet / phone)</p> <p>- That clicking on different icons to cause things to happen in a computer program (40-60m)</p> <p>-Identify different types of digital devices and what they do (function)</p> <p>Skill (Pupils should be able to)</p> <p>- Be able to complete a simple program on a computer (40-60m)</p> <p>-Be able to use a mouse/track pad to left click and double click on icons</p> <p>Direct NC Ref / context for learning</p> <p>ELG: Children recognise that a range of technology is used in places such as homes or schools. They select and use technology for particular purposes.</p>
Context	<p>Magical Me - can use remote control to record a favourite program, adjusting volume, changing channel etc or operate cd player/radio. Use a camera/phone to take a photo or record a video – home learning</p> <p>Bright Sparks - Pressing a switch will give light – when using a torch. To know that a torch needs a power source to operate, e.g. batteries and will need charging</p> <p>Ongoing through the term – E-Safety - To know what a password is and its purpose – talk to children about what a password is (how it is made up of letters, words and symbols and is a secret to help people get in to some software)</p> <p>Be able to name trusted adults at home and within school (talk to children about who they can talk to if something not very nice happens)</p>	<p>Once Upon a Time – Can use a mobile phone and/or a computer to access apps (phonics play) that they want to use. Showing an understanding that information can be retrieved through the computer.</p> <p>Using interactive books – pressing buttons for sound effects</p> <p>Beebots – planning out a journey using a sequence of buttons to make mechanical toys move.</p> <p>When I Grow Up I Want To Be - Beginning to explore simple computer programs e.g. Paint and click on icons to use some of the tools.(introduction to holding and using a mouse)</p> <p>Ongoing through term – E-Safety – talk about what the rules are for using computers safely, e.g. no food or water by computer, treat it respectfully, don't play with the cables</p>	<p><u>Taught discreetly throughout the term</u> - Can play games (child appropriate) and navigate round them independently either on a laptop, school computer, iPad or phone (how they are made up e.g. screen, keyboard – physical or digital, hard drive, mouse)</p> <p>Can complete successfully a simple program on the computer and explain how they did it.</p> <p>Shows an understanding of how technology has changed since grandparents age (History link)</p> <p>Ongoing - E-Safety – Talk to an adult about how to stay safe online and say how technology helps us</p>
Big Idea (ongoing throughout the year)	The idea that technology has benefits and risks and should be used responsibly		
Knowledge and facts (NC) (ongoing throughout the year)	<p>-That a password (should be) a unique combination of letters or/and numbers that allows one person access to software.</p> <p>-That trusted adults can help us to stay safe (on and off line)</p> <p>-That if anything happens when using electronic devices that is unexpected or makes pupils feel uncomfortable, this should always be reported to a trusted adult.</p> <p>-That there is a range of technology it home and in school.</p> <p>-That technology helps us</p> <p>Skill (Pupils should be able to)</p> <p>-To know what a password is and its purpose</p> <p>-Be able to name trusted adults at home and within school</p> <p>-To be able to follow boundaries set by an adult when using hardware (and software?)</p> <p>-To be able to identify different types of technology and the ways in which it helps us</p> <p>Direct NC Ref / context for learning</p> <p>Children recognise that a range of technology is used in places such as homes or schools, They select and use technology for particular purposes. (ELG)</p>		

Year 1 Computing Long Term Plan

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Inclusion statement

At Courthill Infant School we strive to provide all pupils with a broad and balanced curriculum that meets the specific needs of individual pupils with suitable challenge. Our curriculum aims to respond to pupils' diverse needs across the school and to overcome any barriers to their learning.

Key knowledge and skills have been identified in **bold** with the expectation that all pupils will achieve these outcomes by the end of the year. We strive to address the key objectives through differentiated questioning, demonstrating and scaffolding, as well as using different approaches to teaching and learning to overcome barriers.

Term	Autumn	Spring	Summer
Big idea	That software is used accomplish goals and hardware enables us to do this	That programs are used to perform functions	That software is used accomplish goals and hardware enables us to do this
Knowledge and facts (NC)	<ul style="list-style-type: none"> -That a web page is a page of information -That web pages all have different addresses (see in the toolbar at the top) -That a website (is often) a collection of web pages that are linked together -That email is a way to communicate with people, which sends messages back and forth through the internet. To do this you need an email address for both yourself and person you wish to email -Navigate between pages within a website -Send a group email (written by an adult) -Turn computer on, log on and off, enter usernames and passwords 	<ul style="list-style-type: none"> -That an algorithm is a set of clear instructions -That an algorithm is written to solve a problem or achieve a particular outcome. -That sometimes algorithms are wrong and need to be 'de-bugged' -Use the word 'algorithm' -Use software/apps to create movement and patterns on a screen. -Use the word 'debug' when correcting instructions -Create a sequence of instructions to produce an outcome 	<ul style="list-style-type: none"> -That all electronic devices need a power source (mains or battery) -That computers have a limited memory which information can be stored within -That there are steps (route) to be followed to save and retrieve created content -Type words, numbers, passwords, backspace, spaces and arrows using a keyboard -Create and save a file (in a pre-determined place) in a software package (e.g. paint, video, word processing)
Big Idea (ongoing throughout the year)	The idea that technology has benefits and risks and should be used responsibly		
Key Knowledge and Facts (ongoing throughout the year)	<ul style="list-style-type: none"> -That there is lots of online content that is positive, but this isn't always the case -That passwords should not be shared -That using a username and password helps to keep information safe -That sometimes there is content online that might make them feel uncomfortable e.g. adverts and pop ups. -That following online rules e.g. 'zip it, block it, flag it' will help them to stay safe on the internet -That their name, school, address, age and gender are pieces of personal information that should not be shared with any one (online) or people that they do not know well (offline) -That email is a way to communicate with people, which sends messages back and forth through the internet -That real people send messages to one and another on the internet -Know the difference between online and offline -That it is important to be kind and polite to others both offline and online -That every school has a set of rules that are designed to keep pupils safe (acceptable use policy) and that they must follow these rules -That the internet is a way in which computers across the world communicate -That some websites are suitable for certain age groups and others are not -Log on to a computer / account on a computer, using a username and password -Recognise websites that are age appropriate and good to visit -Create and save a file in their own digital space -Talk about some of the ways in which they can stay safe online (e.g. passwords, usernames, 'zip it, block it, flag it') -Identify positive uses of the internet 		

Year 2 Computing Long Term Plan

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Term	Autumn	Spring	Summer
Big idea	That software is used accomplish goals and hardware enables us to do this	That programs are used to perform functions	That software is used accomplish goals and hardware enables us to do this
Knowledge and facts (NC)	<ul style="list-style-type: none"> • <i>Recognise common uses of information technology beyond school</i> • <i>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</i> • That a computer can sometimes be re-booted by turning it off and on again • That there is a sequence of instructions to follow in order to and shut a computer down correctly • That a computer needs to be shut down correctly otherwise it will not be able to follow the correct sequence to re-start • That many programs can be closed by clicking on the cross in the top right corner • That some programs have undo and re-do buttons which are generally denoted with forwards and backwards arrows • That some digital devices (e.g. printer) can be connected a computer • That created content / files within a computer can be organised into folders, this can make it easier to view and retrieve them • That the size of created content / files is measured in bytes (KB, MB, GB, TB) and the more bytes or content there is, the more memory it will take up • Create and name folders to save and organise created content into. • Troubleshoot simple problems e.g. checking to see a computer is plugged in, turned on, hold buttons, minimise, click red cross, use redo and undo buttons, back arrow • Follow a sequence of instructions to print a document • Type a capital letter and some punctuation (using shift key) and copy and paste pictures into a document 	<ul style="list-style-type: none"> • That an algorithm is a set of instructions and need to be in order • That an algorithm's outcomes can be predicted • That these instructions need to be written in the correct language in order for the computer to understand them. This is called a program • That debugging involves four steps 1) identify there is a problem (Y1), 2) work out which part of the program is causing it 3) Find a solution and fix it 4) Check it has worked • Program a robot or software to do a particular task e.g. make objects move • Predict the outcome of a program (whether or not it will be successful) • Write a simple program using code, watch a program execute and debug it if needed (with some support) 	<ul style="list-style-type: none"> • <i>Recognise common uses of information technology beyond school</i> • <i>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</i> • That the address of a website takes you to a specific page on the world wide web • That a search engine uses programs that search through pages on websites and return results linked to the keywords entered into it. • That to send an email you need to put the correct email address in the 'to' bar. That the subject line is a title of the email that recipients can see before they open it • Control the volume of device • Use a search engine by typing in key words
Big Idea (ongoing throughout the year)	The idea that technology has benefits and risks and should be used responsibly		
Knowledge and facts (NC) (ongoing throughout the year)	<ul style="list-style-type: none"> • That they can also call child line if they have concerns (0800 1111) or the NSPCC on 0800 136 663 • That online people aren't always who they say they are • That whilst technology has many benefits, (e.g. including finding information, creating and communicating) electronic devices should be used as part of a balanced lifestyle, for short blocks of time. • That although the internet is useful, there are times when other resources are more beneficial • That some applications have pop ups and that these can be closed by using the X in the top right corner. • That some pop ups advertise other games / in app purchases. That clicking on these will cost money to the person who holds the account or owns the device • Describe things (scenarios) that could happen online that I must tell an adult about • Explain why they need to keep their password and personal information private and how to do this • Minimise, click the red cross, back arrow and use redo and undo buttons to get rid of unwanted adverts, pop ups or content • Talk about why it is important to limit my time on electronic devices 		