



Statement of Intent

At Burbage C of E Infants our intention is that pupils will be able to use their computing skills across the curriculum and to inform and enhance life-long learning.

We intend for pupils to have a foundational understanding of computing to include algorithms, simple programs, logical reasoning, and prediction. We also aim for pupils to purposefully and creatively store, manipulate and retrieve digital content as well as being able to recognise how technology is used across the wider world.

We believe that young children need a strong, but age-appropriate, understanding of how to keep safe when using modern computing technology and the internet. This will then allow pupils to feel protected, well-informed, and able to self-regulate when using technology and the internet and all it has to offer.

Supporting this intent is our vision of ‘Loving, Living, Learning’ – ‘Walking with Jesus to life in all its fullness.’ John 10:10. We intend for children to love and enjoy their computing which will ensure that they reach their full learning potential in this subject.

Development Matters – children in Reception (non-statutory curriculum guidance for EYFS)	KS1 National Curriculum Subject Content
<p>Personal, Social & Emotional Development</p> <ul style="list-style-type: none"> • Show resilience and perseverance in the face of challenge • Know and talk about the different factors that support their overall health and well-being. • Increasingly follow rules, understanding why they are important. • Remember rules without needing an adult to remind them. • Select and use activities and resources, with help when needed. <p>Expressive Arts and Design</p> <ul style="list-style-type: none"> • Explore, use and refine a variety of artistic effects to express their ideas and feelings. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions. • create and debug simple programs • use logical reasoning to predict the behaviour of simple programs. • use technology purposefully to create, organise, store, manipulate and retrieve digital content. • recognise common uses of information technology beyond school. • 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.



Burbage C of E Infant School Computing Progression Ladder

Technology in Our Lives		
Foundation Stage	Year 1	Year 2
Disciplinary Knowledge		
<ul style="list-style-type: none"> Children can recognise purposes for using technology in school and at home. 	<ul style="list-style-type: none"> Children can identify technology. Children can identify a computer and its main parts. Children can use a mouse in different ways. Children can use a keyboard to type on a computer. Children can use the keyboard to edit text. Children can create rules for using technology responsibly. 	<ul style="list-style-type: none"> Children can recognise the common uses and features of information technology. Children can identify information technology in the home. Children can identify information technology beyond school. Children can explain how information technology benefits us. Children can show how to use information technology safely. Children can recognise that choices are made when using information technology.
Substantive Knowledge		
<ul style="list-style-type: none"> Children are beginning to know and understand that things they create belong to them and can be shared with others using technology. 	<ul style="list-style-type: none"> Children know how to use a mouse in different ways. Children know how to use a keyboard to type on a computer. Children know how to use the keyboard to edit text. 	<ul style="list-style-type: none"> Children know how to use information technology safely. Children know how to make choices when using information technology.
Vocabulary		
Technology Share Create Internet	Information technology (IT) Computer barcode scanner/scan	Information technology (IT) computer barcode scanner/scan



Burbage C of E Infant School Computing Progression Ladder

Multimedia		
Foundation Stage	Year 1	Year 2
Disciplinary Knowledge		
<ul style="list-style-type: none"> Children can recognise text, images when using ICT. Children can use a camera to collect photos. Children can use paint programs to create pictures. Children can develop an interest in ICT by using age appropriate programs. 	<ul style="list-style-type: none"> Children can use technology to store and retrieve digital content. Children can use a computer to write. Children can add and remove text on a computer. Children can identify that the look of text can be changed on a computer. Children can make careful choices when changing text. Children can explain why they used the tools that they chose. Children can compare writing on a computer with writing on paper. Children can describe what different freehand tools do. Children can use the shape tool and the line tools. Children can make careful choices when painting a digital picture. Children can explain why they chose the tools they used. Children can purposefully create their own picture using the computer. Children can compare painting a picture on a computer and on paper. 	<ul style="list-style-type: none"> Children can use technology to store and retrieve digital content. Children can use a digital device to create a photograph. Children can make choices when taking a photograph. Children can describe what makes a good photograph. Children can decide how photographs can be improved Children can use tools to change an image. Children can recognise that photos can be changed. Children can say how music can make us feel. Children can identify that there are patterns in music. Children can describe how music can be used in different ways. Children can show how music is made from a series of notes. Children can create music for a purpose. Children can review and refine our computer work.
Substantive Knowledge		
<ul style="list-style-type: none"> Children know how to use a touch-screen to rearrange objects and pictures on a screen. 	<ul style="list-style-type: none"> Children know how to use a computer on their own to paint a picture. Children know how to store and retrieve digital content. 	<ul style="list-style-type: none"> Children know how music can make them feel. Children are beginning to know how music is made from a series of notes. Children know how to review and refine our computer work. Children know how to store and retrieve digital content.
Vocabulary		
Screen Mouse Images Keyboard Paint	Word processor, keyboard, mouse, keys, letters, numbers, space, backspace, text cursor, Microsoft Word, capital letters, toolbar, bold, italic, underline, select, font, undo, paint program, tool, paintbrush, erase, fill, primary colours, shape tools, line tool, fill tool, undo tool, feelings, brush style, Pointillism, brush size, Pictures, painting, computers, like, prefer, dislike Henri Matisse, Piet Mondrian, Wassily Kandinsky, Georges Seurat,	Device, camera, photograph, capture, image, digital, Landscape, portrait, Framing, subject, compose, Light sources, flash, focus, background, Editing, filter, Format, framing, lighting, Music, planets, Mars, Venus, war, peace, quiet, loud, feelings, emotions, Pattern, rhythm, pulse, Neptune, pitch, tempo, rhythm, notes, instrument, Create, emotion, pitch, pulse/beat, tempo, instrument, rhythm, notes, Open, edit



Burbage C of E Infant School Computing Progression Ladder

Programming		
Foundation Stage	Year 1	Year 2
Disciplinary Knowledge		
<ul style="list-style-type: none"> Children can operate equipment around the school, independently operating simple equipment. Children can explore options and make choices with toys, software 	<ul style="list-style-type: none"> Children can explain what a given command will do. Children can act out a given word. Children can combine forwards and backwards commands to make a sequence. Children can combine four direction commands to make sequences. Children can plan a simple program. Children can find more than one solution to a problem. Children can choose a command for a given purpose. Children can show that a series of commands can be joined together. Children can identify the effect of changing a value. Children can explain that each sprite has its own instructions. Children can design the parts of a project. Children can use their algorithm to create a program. 	<ul style="list-style-type: none"> Children can describe a series of instructions as a sequence. Children can explain what happens when we change the order of instructions. Children can use logical reasoning to predict the outcome of a program (series of commands). Children can explain that programming projects can have code and artwork. Children can design an algorithm. Children can create and debug a program that they have written. Children can explain that a sequence of commands has a start. Children can explain that a sequence of commands has an outcome. Children can create a program using a given design. Children can change a given design. Children can create a program using their own design Children can decide how their project can be improved.
Substantive Knowledge		
<ul style="list-style-type: none"> Children know how to use simple software to make things happen. Children know how to press buttons on a floor robot and talk about the movements. 	<ul style="list-style-type: none"> Children know what an algorithm is. Children know how algorithms are implemented as programs on digital devices. Children know how to act out a given word. Children know how to combine four direction commands to make sequences. Children know how to plan a simple program. Children know how to design the parts of a project. 	<ul style="list-style-type: none"> Children know how algorithms are implemented by following precise and unambiguous instructions. Children know how to create a program using a given design.
Vocabulary		
Equipment Buttons Movement	Forwards, backwards, Left, right, turn, clear, go, commands, Plan, Route, Instructions, directions ScratchJr, Bee-Bot, command, sprite, compare, programming, programming area, Block, joining, command, start block, run, program, programming area, background, delete, reset, algorithm, predict, Effect, change, value, block Instructions, sprite, delete, program, algorithm Sprite, background, appropriate, algorithm, Sprite, design, programming blocks, algorithm, programs	Instruction, sequence, clear, order, unambiguous, algorithm, program, Artwork, design, route, mat, Sprite, design, programming blocks, algorithm, programs command, run, start, outcome, predict, blocks, Sprite, design, sequence, Actions, sequence, modify, change, build, match, Compare, debug, debugging, program, features, evaluate



Data Handling		
Foundation Stage	Year 1	Year 2
Disciplinary Knowledge		
	<ul style="list-style-type: none"> • Children can organise and label objects. • Children can identify that objects can be counted. • Children can describe objects in different ways. • Children can count objects with the same properties. • Children can compare groups of objects. • Children can answer questions about groups of objects. 	<ul style="list-style-type: none"> • Children can recognise that we can count and compare objects using tally charts. • Children can recognise that objects can be represented as pictures. • Children can create a pictogram. • Children can select objects by attribute and make comparisons. • Children can recognise that people can be described by attributes. • Children can explain that we can organise and present information using a computer.
Substantive Knowledge		
	<ul style="list-style-type: none"> • Children know how to label objects. • Children know how to describe objects in different ways. 	<ul style="list-style-type: none"> • Children know how to create a pictogram.
Vocabulary		
	Object, label, group, search, image, colour, size, shape, property, value, label, colour, data set, more, less, most, least, fewest, the same	More than, less than, most, least, organise, data, object, tally chart, votes, total



Online Safety

Self-Image and Identity		
Foundation Stage	Year 1	Year 2
Disciplinary Knowledge		
<ul style="list-style-type: none"> <input type="checkbox"/> Children can give different examples of how to say 'no' / 'please stop' / 'I'll tell' / 'I'll ask'. <input type="checkbox"/> Children can explain how this could be better to do in real life or online. 	<ul style="list-style-type: none"> <input type="checkbox"/> Children can recognise that there may be people online who could make me feel sad, embarrassed or upset. <input type="checkbox"/> Children can give examples of different adults they can ask for help. <input type="checkbox"/> Children can recognise that there may be people online who could make them feel sad, embarrassed or upset. <input type="checkbox"/> Children can give examples of different adults they can ask for help. 	<ul style="list-style-type: none"> <input type="checkbox"/> Children can explain how other people may look and act differently online and offline. <input type="checkbox"/> Children can give examples of issues online that might make someone feel sad, worried, uncomfortable or frightened. <input type="checkbox"/> Children can give examples of how they might get help.
Substantive Knowledge		
<ul style="list-style-type: none"> <input type="checkbox"/> Children know that I can say 'no' / 'please stop' / 'I'll tell' / 'I'll ask' to somebody who asks me to do something that makes me feel sad, embarrassed or upset. 	<ul style="list-style-type: none"> <input type="checkbox"/> Children know when they should ask an adult for help with things online that upset me. <input type="checkbox"/> Children know when they should ask an adult for help with things online that upset me. 	<ul style="list-style-type: none"> <input type="checkbox"/> Children know that people can choose different pictures online to what they look like in real life. <input type="checkbox"/> Children know who they can go to for help. <input type="checkbox"/> Children know how to ask for help.
Vocabulary		
Apps, games, online, real-life, please stop, no, I'll tell, I'll ask, sad, uncomfortable, embarrassed, upset	Identity, Online, sad, embarrassed, upset, worries, uncomfortable, frightened, trusted, grown-up,	Identity, online, offline, avatar, feelings, apps, gaming, colour code,



Burbage C of E Infant School Computing Progression Ladder

Online Relationships		
Foundation Stage	Year 1	Year 2
Disciplinary Knowledge		
<ul style="list-style-type: none"> ☐ Children can name some ways that members of their family talk to each other and other people using the internet. ☐ Children can name an app, a piece of software or a technology that they use or could use to talk to people they know. 	<ul style="list-style-type: none"> ☐ Children can give examples of when they should ask permission to do something online and explain why this is important. ☐ Children can name the people they know and how they know them, describing what they are like. ☐ Children can describe how they might use the internet to communicate with family or close friends. ☐ Children can describe what someone might feel like if you were unkind to them. ☐ Children can describe ways in which they can try to be kind both offline and online. ☐ Children can explain what they like and dislike and give reasons ☐ Children can explain what they like, dislike and find funny and sad online. ☐ Children can understand that different people may have different reactions to different things online. 	<ul style="list-style-type: none"> ☐ Children can give examples of how someone might use technology to communicate with others they don't also know offline and explain why this might be risky. (eg. email, online gaming, a pen-pal in another school/country). ☐ Children can describe different ways to ask for, give, or deny my permission online and can identify who can help them if they are not sure. ☐ Children can explain why they have a right to say 'no' or 'I will have to ask someone'. ☐ Children can explain who can help them if they feel under pressure to agree to something they are unsure about or don't want to do. ☐ Children can explain how it may make others feel if they do not ask their permission or ignore their answers before sharing something about them online.
Substantive Knowledge		
		<ul style="list-style-type: none"> ☐ Children know who can help them if something happens online without my consent. ☐ Children know who they should ask before sharing things about myself or others online. ☐ Children know why they should always ask a trusted adult before clicking 'yes', 'agree' or 'accept' online.
Vocabulary		
Internet, communicate, technology	Offline, online, polite, manners, respect, rule-breaking, technology, internet, healthy, safe, well-being, lifestyle, cartoons, YouTube, consequences, information, character, kind, loving, caring, communicate, video call apps, service, app, video button, camera button, keyboard, emojis, icon, considerate, inconsiderate, positive, negative	Technology, communicate, email, online gaming, pen-pal, talk, chat, message, software, facetime, posted, pics, video, media, record, comments, permission, give, deny, identity, consequences, under pressure, connected, positive, negative, emotions, exploring, responsibility, protect, conversation, trusted adult, content, belonging, information, clicking, agree, accept, advert, YouTube



Online Reputation		
Foundation Stage	Year 1	Year 2
Disciplinary Knowledge		
<ul style="list-style-type: none">Children can identify ways that they can put information on the internet.	<ul style="list-style-type: none">Children can recognise that information can stay online and could be copied.Children can name different types of personal information that can be shared (photos, text, video).Children can name 3 adults that can help them if they are unsure about information they want to share.	<ul style="list-style-type: none">Children can explain how information put online about someone can last for a long time.Children can describe how anyone's online information could be seen by others.
Substantive Knowledge		
<ul style="list-style-type: none">Children know what the word 'information' means.Children know what 'online' means.	<ul style="list-style-type: none">Children know that information can copied off the internet.Children know that they should not share their personal information online.	<ul style="list-style-type: none">Children know who to talk to if something has been put online without consent or if it is incorrect.
Vocabulary		
Online, offline, posted, TikTok video	Download, online, privacy setting, limiting the audience, personal, search, Wikipedia, control, opinion lines	digital footprint, copied, personal information, internet, gaming, streaming, public, private, consent, privately, stranger



Online Bullying		
Foundation Stage	Year 1	Year 2
Disciplinary Knowledge		
<ul style="list-style-type: none"> ☒ Children can describe ways that some people can be unkind online. ☒ Children can give examples of what unkind words online may make someone else feel. ☒ Children can understand that being unkind online can make you feel angry, upset and sad. 	<ul style="list-style-type: none"> ☒ Children can identify behaviour that might upset others online. ☒ Children can recognise being kind online would make someone feel good. ☒ Children can recognise being unkind online would make someone feel bad. 	<ul style="list-style-type: none"> ☒ Children can explain what bullying is, how people may bully others and how bullying can make someone feel. ☒ Children can explain why anyone who experiences bullying is not to blame. ☒ Children can talk about how anyone experiencing bullying can get help.
Substantive Knowledge		
	<ul style="list-style-type: none"> ☒ Children know that certain behaviours online can upset others. 	<ul style="list-style-type: none"> ☒ Children know the difference between accidental and on purpose (intentional). ☒ Children know who they can go to if someone was bullying me
Vocabulary		
Online bullying, unkind, online, offline, face to face, mean, games, social media, internet, device, words or actions, feel, emotions, feelings, sadness, upset, worry, scared, anger, behaviours, not acceptable	Behaviours, online games, behave, emotions, happy, confused, angry, shocked, jealousy, excitement, pride,	Types of bullying, emotions, behaviour, situations, repeated, intended, intentionally, impacts, rights, bystander, accidental, intentional



Burbage C of E Infant School Computing Progression Ladder

Managing Online Information		
Foundation Stage	Year 1	Year 2
Disciplinary Knowledge		
<ul style="list-style-type: none"> Children can talk about how they can use the internet to find things out. Children can identify devices they could use to access information on the internet. 	<ul style="list-style-type: none"> Children can give simple examples of how to find information (eg. search engine, voice activated searching). Children can use the internet to find things out. 	<ul style="list-style-type: none"> Children can use simple keywords in search engines. Children can explain what voice activated searching is and how it might be used, and know it is not a real person (eg. Alexa, Google Now, Siri). Children can explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'. Children can explain why some information they find online may not be real or true.
Substantive		
	<ul style="list-style-type: none"> Children know that we can encounter a range of things online including things we like and don't like. Children know that we can encounter things online which are real or make believe / a joke. Children know they can get help if they see content that makes me feel sad, uncomfortable, worried or frightened. Children know how to get help from a trusted adult. 	<ul style="list-style-type: none"> Children can demonstrate how to navigate a simple webpage to get to information they need (eg. home, forward, back buttons; links, tabs and sections).
Vocabulary		
Internet, finding information online, device, purpose	Digital technology, search engines, voice activated searching, encounter, real, make believe	Search engines, navigate, website, webpage, links, tabs, sections, tools, Alexa, Google, Siri, voice-activated searching



**Burbage C of E Infant School
Computing Progression Ladder**

Health, Well-being and Lifestyle		
Foundation Stage	Year 1	Year 2
Disciplinary Knowledge		
<ul style="list-style-type: none"> ☐ Children can tell you the things that they are allowed/not allowed to do when using technology/the internet. ☐ Children can name some things that might make them happy/unhappy/angry/sad when they use technology and the internet. ☐ Children can name at least one trusted adult who can help them stay safe when using technology/internet. 	<ul style="list-style-type: none"> ☐ Children can explain rules to keep myself safe when using technology both in and beyond the home. 	<ul style="list-style-type: none"> ☐ I can explain simple guidance for using technology in different environments and settings eg. accessing online technologies in public places and the home environment. ☐ Children can say how those rules/guides can help anyone accessing online technologies
Substantive Knowledge		
<ul style="list-style-type: none"> ☐ Children know what to do if they are worried or unsure about something online. 		
Vocabulary		
Rules, safe, healthy, technology, adults, internet, categories, simple, can / can't do	Health, well-being, lifestyle, safe, technology, online	Health, well-being, lifestyle, safe, technology, online, environment, settings, public place, rules, guides



Burbage C of E Infant School Computing Progression Ladder

Privacy and Security		
Foundation Stage	Year 1	Year 2
Disciplinary Knowledge		
<ul style="list-style-type: none"> Children can name examples of their own personal information. (eg. name, address, birthday, age, location). Children can name people they trust and why. 	<ul style="list-style-type: none"> Children can explain how passwords can be used to protect information, accounts and devices. Children can explain and give examples of what is meant by 'private' and 'keeping things private'. Children can describe and explain some rules for keeping personal information private (eg. creating and protecting passwords). Children can explain how some people may have devices in their homes connected to the internet and give examples (eg. lights, fridges, toys, televisions). 	<ul style="list-style-type: none"> Children can explain how passwords can be used to protect information, accounts and devices. Children can explain and give examples of what is meant by 'private' and 'keeping things private'. Children can describe and explain some rules for keeping personal information private (eg. creating and protecting passwords). Children can explain how some people may have devices in their homes connected to the internet and give examples (eg. lights, fridges, toys, televisions).
Substantive Knowledge		
Vocabulary		
Personal information, name, address, birthday, age, location, share, inviting, trustworthy, share, information, trusted	Privacy, security, password, accounts, devices, protect information, web browser, logins, machine, in-games, playlists, characters, personal information, belonging, trusted adult	Privacy, security, password, accounts, devices, protect information, web browser, logins, machine, in-games, playlists, characters, personal information, belonging, trusted adult



Burbage C of E Infant School Computing Progression Ladder

Copyright and Ownership		
Foundation Stage	Year 1	Year 2
Disciplinary Knowledge		
<ul style="list-style-type: none"> ☒ Children can name their work so that others know it belongs to them. 	<ul style="list-style-type: none"> ☒ Children can explain why work they create using technology belongs to them. ☒ Children can say why it belongs to them (eg. 'I designed it' or 'I filmed it'). ☒ Children can save their work under a suitable title or name so that others know it belongs to them (eg. file name, name on content). ☒ Children understand that work created by others does not belong to them even if they save a copy. 	<ul style="list-style-type: none"> ☒ Children can recognise that content on the internet may belong to other people. ☒ Children can describe why other people's work belongs to them.
Substantive Knowledge		
<ul style="list-style-type: none"> ☒ Children know that work they create belongs to them. 		
Vocabulary		
Created, belongs, labelling, owner, label, digital work, owns, device, person, name, filenames, folder, ownership, letters, .doc, .pdf, .jpg, save	Copyright, ownership, identify, display, credit, files, saving, .doc, .pdf, .jpg, painting, photocopy, filename	Content, belong, ownership, copyright, search engine, website, images, photos, videos, apps, tweet/social media, computers, tablets, blog, video post, YouTube, seek permission