



Bishop Martin CE Primary School - Computing Subject Overview



	Autumn One	Autumn Two	Spring One	Spring Two	Summer One	Summer Two
EYFS (2YO & Nursery)	<u>Technology Around Us</u> "In the Early Years Foundation Stage, computing is not taught as a discrete subject. Instead, children are introduced to technology through purposeful play and exploration within the learning environment. They have opportunities to engage with a variety of age-appropriate technological tools and resources—such as interactive whiteboards, iPad, and role-play scenarios involving everyday technology—to develop their understanding of how technology is used in the world around them."					
Reception	<u>Winter Warmers – Let's Make an Igloo</u> Computational Thinking Logic – Refine understanding based on new information. Use digital images to support planning process. Tinkering – Explore different methods and ideas. Decomposition – Break the task up into small steps, record and photograph each stage. Add recorded description to the images.		<u>People Who Help Us – Fighter Fun</u> Computational Thinking Abstraction – Find the main common features and decide what is the most important information. Creating Collaboration – Decompose the task and work collaboratively. Debug their design when needed. Children record at each stage of creating and take images with voice descriptions. Online Safety Share their videos and images with their friends, discuss how we can use technology safely.		<u>Summer Fun –Journeys</u> Computational Thinking Logic – Explain how they see their journey using logical reasoning. Algorithms – Sequence when ordering what they can see on their journey. Consider where objects are in relation to each other within the sequence. Creating – Use technology to create maps by using shapes to represent buildings. Test out maps and debug their design. Collaborating – Create maps and retell stories, work together to express their thoughts. Tinkering – Try out different objects, methods and positions and make choices about what to include and where things will go. Tinker and make changes to their design.	
Year One	<u>DL - My Online Life</u> Be aware that content online is owned by the person that created it. Use a search engine. Explain what personal information is and give examples of it. Know the rules of using technology at home or in school. Describe how to behave online in ways that do not upset others and can give examples. Understand something online may upset and know where to find help it anything does. Recognise the ways we use technology in our classroom, home and community.		<u>CS - What is a Computer?</u> Use logical reasoning to predict the outcome of simple programs. Recognise the ways technology is used in the classroom, home and community. debug simple sequence errors in a program. Use technology to organise and present ideas. Create algorithms that can be turned into a program using a robot or digital device.	<u>IT - Mini-Beasts</u> Do the basics with technology Collect and sort data Use a search engine Use technology to create and present ideas Organise and store digital work Take a good quality photograph and video on an iPad.	<u>CS - My Friend the Robot</u> Recognise the ways we use technology in our classroom, home and community. Use technology to organise and present ideas. Follow a simple algorithm and create a simple sequence algorithm using symbols. Debug simple sequence errors in a program. Create algorithm can create algorithms that can be turned into a program using a robot or digital device. Use logical reasoning to predict the outcome of simple programs.	

Year Two	<u>DL - My Online Life</u> Understand that somethings online may upset them and that they cannot trust everyone online. Know how technology is used to communicate beyond school. Understand that once something it posted you lose control if it and know how to get help if they need to. Give examples of online bullying behaviour, understand the impact it may have and know where to go for support. Know the rules of using technology at home or in school. Explain what personal information is and understand the need for passwords to protect it. Be aware that content online is owned by the person that created it.	<u>CS - Making Games</u> Discrete objective: I can use design formatting to enhance my digital work. Create a simple game program. Use design and formatting to enhance my digital work. Predict the outcome of a sequence of blocks in Scratch. Plan out an algorithm with a sequence of commands to carry out specific tasks. Create a simple repeat loop Identify 'bugs' in computer programs and use the term debug in context.	<u>IT - Presentations & Typing</u> Save, share and retrieve digital work. Give examples of how technology is used to communicate beyond school. Use technology to organise and present ideas. Know that content is owned by the person that created it. (Copyright) Create with technology. E.g. Video, animation, 3D. Use design and formatting to enhance digital work. Collect and record data purposefully.

Cycle A

Year Three/Four	<u>DL - My Online Life</u> Explain how their online identity can be different to the identity they present in real life. Be aware others can find information out about them by searching online. Make informed choices about what is fake news. Describe ways to be respectful online. Know which technologies can be used for online bullying. Understand the effect technology can have on their health and well-being.		<u>IT - Endangered Animals</u> Improve the quality and presentation of work using editing and formatting techniques. Use a search engine and be aware that not everything read online is correct. (Online Bullying) Create with technology. E.g. Video, animation, 3D Understand the need for copyright and the consequences of ignoring it. (Copyright) Label the different types of input connections on devices. Explain common file types.		<u>CS - Games Designer</u> Label the different types of input connections on devices. Improve the quality and presentation of work using editing and formatting techniques. Understand the impact technology can have on health, well-being and lifestyle. Solve an open-ended problem by breaking it up into smaller parts. Explain common file types. Design and write a program for a given purpose, including specific programming features. Create with technology. E.g. Video, digital graphics, animation, 3D Test existing programs to see how they could be improved.	
	Year Four/Five	<u>DL - My Online Life</u> Understand the impact online bullying can have and know what to do if they are the victim or witness online bullying. Create the need to create a strong password. Understand the need for copyright. Know that identity can be copied by other users and take appropriate measure to minimise the risk of this happening. Access school email and can send emails to classmates and teachers. Understand the impact technology can have on my health, wellbeing and lifestyle.	<u>CS - Lost in Space</u> Decompose a problem, design and algorithm and use this to write a program. Design a program linked to physical systems and sensors. Use variables, conditional statements, procedures and repeat commands to improve programs. Use logical reasoning to detect and debug a program. Film and produce a short video.	<u>IT - Binary Messages</u> Translate binary numbers to decimals. Improve the quality and presentation of work. Understand the need for copyright and the consequences of ignoring it. Record and produce podcast/audio clips. Film and produce a short video. Use unfamiliar technology to create content. Make QR codes that links to their work. Use a spreadsheet to collect and record data.		<u>CS - Web Designer</u> Explore networks and internet traffic. Use a search engine and be aware that not everything read online is correct. Create a basic web page using HTML. Improve the quality and presentation of work. Use unfamiliar technology to create content. Make a QR code.

	Be aware that there are people online who may try to upset their group of friends and themselves. Know how to make a positive contribution to my online community.				
	Objectives to be covered discretely or within other units: I can design and write a program linked to physical systems and sensors. I can use variables, conditional statements, procedures & repeat commands to improve programs.				
Year Five/Six	<u>DL - My Online Life</u> Be aware of the ways in which the media can shape our ideas about gender. Understand the need to create a positive online reputation. Support friends to protect themselves and make good choices online, including reporting concerns to an adult. Know how to capture evidence of online bullying and how to report it. Understand the impact technology can have on my health, wellbeing and lifestyle. Understand the need for copyright and the consequences of ignoring it. Know how to keep data private and secure. Explain how to protect my device/myself from harm on the Internet.	<u>CS - Crossy Roads</u> Design and create a complex program. Create a consistent design for a presentation and present it to others. Test, debug and modify a program to improve it. Use logical reasoning to detect and correct errors in algorithms and programs. Write a program using text-based programming language Improve the quality and presentation of their work using editing and formatting techniques.	<u>IT - Money</u> Create a consistent design for their presentation and present to others. Use a search engine and be aware that not everything read online is correct and that other people may be attempting to influence their opinions. Create and combine a range of media to produce digital content. Explain how to protect their computer or device from harm on the Internet. Collaborate to create digital content Create a digital storyboard to plan a project or investigation.	<u>CS - Coding Playground</u> Use a search engine and be aware that not everything read online is correct. Create a consistent design for a presentation and present to others. Write a program using a text-based programming language. Create a digital storyboard to plan a project or investigation. Use logical reasoning to detect and correct errors in algorithms and programs. Improve the quality and presentation of their work using editing and formatting techniques. Create and combine a range of media to produce digital content.	
	Objectives to be covered discretely or within other units: I understand how computer networks work, including the internet.				

Cycle B

Year Three/Four	<u>DL - My Online Life</u> Explain what is meant by the term identity. Explain some risks of communicating online with others they don't know well. Recognise they need to be careful before they share anything about themselves or others online. Explain what bullying is and can describe how people may bully others. Describe rules about how to behave online and how they follow them. Use key phrases in search engines. Explain why spending too much time online can have a negative impact on their health. Explain why copying someone's work from the internet without permission can cause problems.		<u>CS - Dancing Robot</u> Use decomposition to help solve computing problems. Discuss different types of digital content and file types. Use logical reasoning to predict and correct errors in algorithms and programs. Improve the quality and presentation of their work. Plan, create and debug programs. Create with technology. E.g. Video, animation, 3D Work with various forms of input and output.	<u>DL - Online Detectives</u> Explain how a search engine works. Use advanced search tools. Know how to use the internet. Collect, analyse, evaluate and present data and information. Understand the term identity and I can take appropriate measures to protect my own online identity. Analyse information and make accurate searches. Understand the need for copyright and the consequences of ignoring it.	<u>IT - Be Digitally Awesome</u> Troubleshoot when something doesn't appear to be working with a device. Discuss different types of digital content and file types. Explain how the internet works. Use advanced search tools. Understand the need for copyright and the consequences of ignoring it. (Copyright) Analyse information and make accurate searches. Collect, analyse, evaluate and present data and information. Create with technology. E.g. Video, animation, 3D	
	Year Four/Five	<u>DL - My Online Life</u> Explain how their online identity can be different to the identity they present in real life. Be aware others can find information out about them by searching online. Make informed choices about what is fake news. Describe ways to be respectful online. Know which technologies can be used for online bullying. Understand the effect technology can have on their health and well-being.		<u>IT - Endangered Animals</u> Improve the quality and presentation of work using editing and formatting techniques. Use a search engine and be aware that not everything read online is correct. (Online Bullying) Create with technology. E.g. Video, animation, 3D Understand the need for copyright and the consequences of ignoring it. (Copyright) Label the different types of input connections on devices. Explain common file types.		<u>CS - Games Designer</u> Label the different types of input connections on devices. Improve the quality and presentation of work using editing and formatting techniques. Understand the impact technology can have on health, well-being and lifestyle. Solve an open-ended problem by breaking it up into smaller parts. Explain common file types. Design and write a program for a given purpose, including specific programming features. Create with technology. E.g. Video, digital graphics, animation, 3D Test existing programs to see how they could be improved.
Objectives to be covered discretely or within other units: I can design and write a program linked to physical systems and sensors. I can use variables, conditional statements, procedures & repeat commands to improve programs.						
Year Five/Six	<u>DL - My Online Life</u> Understand the impact online bullying can have and know what to do if they are the victim or witness online bullying. Create the need to create a strong password. Understand the need for copyright. Know that identity can be copied by other users and take	<u>CS - Lost in Space</u> Decompose a problem, design and algorithm and use this to write a program. Design a program linked to physical systems and sensors. Use variables, conditional statements, procedures and repeat commands to improve programs. Use logical reasoning to detect and debug a program.	<u>IT - Binary Messages</u> Translate binary numbers to decimals. Improve the quality and presentation of work. Understand the need for copyright and the consequences of ignoring it. Record and produce podcast/audio clips. Film and produce a short video. Use unfamiliar technology to create content. Make QR codes that links to their work. Use a spreadsheet to collect and record data.		<u>CS - Web Designer</u> Explore networks and internet traffic. Use a search engine and be aware that not everything read online is correct. Create a basic web page using HTML. Improve the quality and presentation of work.	<u>DL - Online Safety Dilemmas (Y6 unit)</u> Know copyright issues, online bullying, and the importance of positively contributing to online communities. Recognise the potential risks of sharing content online and the importance of strong passwords and privacy measures.

	appropriate measure to minimise the risk of this happening. Access school email and can send emails to classmates and teachers. Understand the impact technology can have on my health, wellbeing and lifestyle. Be aware that there are people online who may try to upset their group of friends and themselves. Know how to make a positive contribution to my online community.	Film and produce a short video.		Use unfamiliar technology to create content. Make a QR code.	Understand the impact of technology on health, well-being, and lifestyle. Understand the impact online bullying can have and know what to do if they are a victim of online bullying or witness online bullying.
	Objectives to be covered discretely or within other units: I understand how computer networks work, including the internet.				