

Thurlbear Computing Progression

EYFS		Recognise and use a selection of digital devices. - Recognise the basic parts of a computer, e.g. mouse, screen, keyboard. - Select a digital device to fulfil a specific task, e.g. to take a photo. - Use technology to explore and access digital content. - Operate a digital device with support to fulfil a task. - Create simple digital content, e.g. digital art. - Follow simple instructions to control a digital device. - Recognise that we control computers. - Know to tell an appropriate adult if they see something on the computer that upsets them					
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computer Systems and Networks		<ul style="list-style-type: none"> Recognise a range of digital devices. - Select a digital device to fulfil a specific task, Name a range of digital devices, Log on to the school computer / unlock the school tablet with support. Identify the basic parts of a computer, e.g. mouse, keyboard, screen. Use a suitable access device (mouse, keyboard, touchscreen, switch) to access and control an activity on a computer. Open key applications with support 	<ul style="list-style-type: none"> Recognise what a computer is (input > process > output). Recognise that a range of digital devices contain computers, e.g. phone, games console, smart speaker. Explain what the basic parts of a computer are used for. Identify and use input devices, e.g. mouse, keyboard; and output devices, e.g. speakers, screen. Open key applications independently. Add an image to a document from a given source. Resize an image in a document. Highlight text and use arrow keys. Capture media independently 	<ul style="list-style-type: none"> Describe what a computer is (input > process > output). Explain the difference between input and output devices on a computer. Know where to save and open files (e.g. on Google Drive). Save files with appropriate names. Use a keyboard effectively to type in text. Use left-, right- and double-click on the mouse / trackpad Add an image to a document from the internet. Resize and move an image in a document. Use a search engine to find simple information. 	<ul style="list-style-type: none"> Recognise that you can organise files using folders. Explain what a good file name would look like. Delete and move files. Use key parts of a keyboard effectively. Know how to copy and paste text or images in a document. Crop an image and apply simple filters. Use a search engine to find specific information. 	<ul style="list-style-type: none"> Type using fingers on both hands. Use common keyboard shortcuts Explain what makes a strong password. Know how to mute and unmute audio on a computer or tablet. Recognise that there is more than one search engine, and they may produce different results. Use a search engine effectively to find information and images. Know how to search for an application on a computer/tablet. 	<ul style="list-style-type: none"> Type efficiently using both hands. Use a range of keyboard shortcuts. Recognise that different devices may have different operating systems. Use the advanced search tools when using a search engine to find specific information and images. Explain the basic function of an operating system. Recognise common file types and extensions. Recognise a range of Internet services, and what they do.

Multimedia	<ul style="list-style-type: none"> • Create digital content • Choose media from a selection to present information on a topic. • Recognise that you can find out information from a website. • Recognise that you can edit digital content to change its appearance. • Select basic tools/options to change the appearance of digital content • Combine media with support to present information 	<ul style="list-style-type: none"> • Create digital content for a purpose • Recognise that we can use technology to record and playback audio or take and view photographs. • Apply edits to digital content to achieve a particular effect • Present ideas and information by combining media • Identify the common features of digital content • Recognise that we can use different types of media to convey information. 	<p align="center">Covered in Art / DT</p>	<ul style="list-style-type: none"> • Collect, organise and present information using a range of media. • Design and create digital content for a specific purpose. • Edit digital content to improve it according to feedback. • Explain the benefits of using technology to present information. • Know where to find copyright-free content. • Collaborate with peers using online tools. 	<p align="center">Covered in Art / DT</p>	<p align="center">Covered in Art / DT</p>

<p style="text-align: center; background-color: #4F81BD; color: white; padding: 10px;">Data</p>	<p>Covered in Maths</p>	<p>Covered in Maths</p>	<ul style="list-style-type: none"> • Recognise charts, pictograms and branching databases, and why we use them. • Identify an object using a branching database • Recognise an error in a branching database. • Create a branching database using pre-prepared images and questions • Identify the features of a good question in a branching database. • Independently plan out and create a branching database. 	<p>Covered in Science</p>	<ul style="list-style-type: none"> • Use filters in a database to find out specific information. • Name the key parts of a database, e.g. record, field, search. • Answer questions about information in a database. • Name some benefits of using a computer to create charts and databases. Recognise that search engines store information in databases. 	<ul style="list-style-type: none"> • Recognise what a spreadsheet is and what it is used for. • Use simple formulae in a spreadsheet to find out information from a set of data. • Collect data for a purpose and plan out a spreadsheet to present it effectively, using relevant formulae. • Produce graphs from data in a spreadsheet to answer a question. • Analyse and evaluate data and information in a spreadsheet, chart or database. • Recognise that poor-quality data leads to unreliable results.

Programming

<ul style="list-style-type: none"> • Recognise that computers don't have a brain. • Explain that we control computers by giving them instructions. • Create a simple program e.g. to control a floor robot. • Predict the outcome of a simple algorithm or program. • Explain what an algorithm is • Recognise that the order of instructions in an algorithm is important. • Debug an error in a simple algorithm or program 	<ul style="list-style-type: none"> • Create a program with multiple steps e.g. to control a floor robot. • Predict the outcome of an algorithm or program with multiple steps. • Recognise that the instructions in an algorithm need to be clear. • Identify and correct errors in a given algorithm or program, and recognise the term debugging. • Plan out a program by creating an algorithm, and evaluate its success. 	<ul style="list-style-type: none"> • Predict the outcome of a block or text-based program (Scratch/Logo). • Successfully modify an existing program. • Identify repeated steps in a program or algorithm. • Create examples of algorithms containing count-controlled loops. • Recognise that we can create an algorithm to help plan out a program. • Recognise a forever loop in a program or algorithm. • Identify errors in a block or text-based program and correct them. • Recognise that different inputs can be used to control a program. 	<ul style="list-style-type: none"> • Create a program using a range of events/inputs to control what happens. • Recognise that we can decompose a problem into smaller parts to help solve it. • Explain when to use forever loops and count-controlled loops, and use them in programs. • Use selection in algorithms in programs to alter what happens when a condition changes, e.g. if...then... • Design a program for a purpose. • Recognise common mistakes in programs and how to correct them. 	<ul style="list-style-type: none"> • Predict what will happen in a program or algorithm when the input changes • Use two-way selection in programs and algorithms, i.e. if...then...else... • Recognise variables in a program and what they do. • Create and use simple variables, e.g. to keep score. • Evaluate a program and make improvements to the code or design accordingly. 	<ul style="list-style-type: none"> • Recognise and use procedures (sub-routines) in programs. • Plan out a program in detail, including task, algorithm, code and execution level. • Explain common errors in programs and how to fix them. • Combine a variable with relational operators (< = >) to determine when a program changes, e.g. if score > 5, say "well done". • Recognise key concepts (sequence, selection, repetition and variables) in a range of languages and contexts.
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e-Safety (covered in Jigsaw, Antibullying Week and Safer Internet Day)

- Use a simple password when logging on, where relevant.
- Explain why we use passwords.
- Recognise examples of personal information e.g. name, image.
- Know who to tell if concerned about content or contact online.
- Recognise that digital content belongs to the person who created it.

- Identify rules for acceptable use of technology in school.
- Recognise what personal information is and the need to keep it private.
- Recognise that spending a lot of time in front of a screen can be unhealthy.
- Recognise that some information found online may not be true.

- Explain why we need to keep our password safe.
- Recognise that digital content belongs to the person who first created it, but we can give permission for others to use it. Recognise when to share personal information and when not to.
- Recognise that some people lie about who they are online.
- Are aware that games and films have age ratings.

- Recognise what kinds of websites are trustworthy sources of information.
- Recognise the benefits and risks of different apps and websites.
- Recognise that the media can portray groups of people differently.
- Can rate a game or film they have made and explain their rating.

- Know where to find copyright free images and audio, and why this is important.
- Critically evaluate websites for reliability of information and authenticity.
- Demonstrate responsible use of an online services, and know a range of ways to report concerns

- Explain what makes a strong password and why this is important at school and in the wider world.
- Explain how algorithms are used to track online activities with a view to targeting advertising and information.
- Know that there are laws around the purchase of games; the production, sending and storage of images; what is written online; and around online gambling.