Purpose of study

A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

Aims

The national curriculum for computing aims to ensure that all pupils:

♣ can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation

♣ can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems

♣ can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems

♣ are responsible, competent, confident and creative users of information and communication technology

Intent

At Caythorpe, we use Teach Computing, provided by the NCCE, as the basis of our sequence of learning.

All learning outcomes can be described through a high-level taxonomy of ten strands, ordered alphabetically as follows:

- Algorithms — Be able to comprehend, design, create, and evaluate algorithms
- Computer networks — Understand how networks can be used to retrieve and share information, and how they come with associated risks
- Computer systems — Understand what a computer is, and how its constituent parts function together as a whole
- Creating media — Select and create a range of media including text, images, sounds, and video
- Data and information — Understand how data is stored, organised, and used to represent real-world artefacts and scenarios
- Design and development — Understand the activities involved in planning, creating, and evaluating computing artefacts
- Effective use of tools — Use software tools to support computing work
- Impact of technology — Understand how individuals, systems, and society as a whole interact with computer systems
- Programming — Create software to allow computers to solve problems
- Safety and security — Understand risks when using technology, and how to protect individuals and systems

The taxonomy provides categories and an organised view of content to encapsulate the discipline of computing. Whilst all strands are present at all phases, they are not always taught explicitly.

Due to our mixed year groups, we have adapted the structure of the Teach Computing scheme. The 'Computing Systems and Networks' unit is combined for Year 1/2, Year 3/4, and Year 5/6. This is then repeated in each cycle; it is expected that children will be completely secure in their knowledge by the end of each phase. This approach allows all children in the class to learn the key knowledge which underpins all the other units. Some of the units have been reordered to ensure that prior knowledge that the children need is taught before moving onto more complex learning. Our use of flashbacks allows children to revisit knowledge regularly so that they can remember key knowledge more effectively and do not forget.

Our pedagogical approach allows children to work collaboratively towards a project-based goal. The sequence of learning is taught through key concepts and vocabulary. In the first instance, children are encouraged to unplug from technology and explore ideas in other familiar real-life contexts before applying this to the new technological context. Children are continually encouraged to work with physical computing to enhance learning. As well as this, they apply knowledge from the arts alongside computing to achieve a goal. In programming our sequence allows children to explore, read and comprehend block based and text base code; leading them to successfully being able to write code.

EYFS

There are no statutory requirements to use and learn about technology in EYFS. However, at Caythorpe we believe technology can play a role in supporting early communication, language and literacy. It can offer new learning opportunities through ebooks, digital cameras, programmable toys, apps, computers with appropriate software, iPads and video calling. Thus, by the end of the year the pupils at Caythorpe have a range of technologies available to them within the nursery's continuous provision which they can choose to use whenever they wish to for their own purposes. Whilst children are developing their understanding of these technologies, practitioners should be drawing their attention to the technology that's being used in the world around them, from mobile phones to pedestrian crossings. Practitioners should also provide a positive role model by showing children that adults use technology for their own purposes and by talking to the children about the value they place on this use. In this way children will see technology used for real purposes and will develop the understanding that technologies are tools to be used when they're needed and that they're not used just for the sake of it. They will develop a positive disposition towards technology and a motivation to use it both now and in the future.

Vocabulary: By the end of EYFS they will be able to *use the words…*		Outcomes for the end of EYFS: *Children will be able to:*	
Tablet Phone Computer Keyboard Keys Touch screen Code/ coding A range of vocabulary linked to appliances such as tills, calculators, etc. Switch Safe Safety Online Internet Danger	Kind Respect Permission Personal information Swipe Technology App games	▪ Children will use and access a range of technology equipment in the learning environment. ▪ For pieces of equipment that the children are expected to use with regularity such as CD player or tablet, children need to be taught how to turn it on and use it as it is intended. ▪ Children will know how to take care of electronic equipment – away from water, not left on the floor et. ▪ Children will know that technology is used throughout the whole of our world and should discuss in class time instances of use such as tills, medical equipment, computers. ▪ Children will be able to verbalise and remember technology that is in their homes and familiar environments. ▪ Role play planning needs to enable pupils to use technology in play activities and observations should assess where they use them and the language and skills they reflect during their self-initiated activities -consider the 'Domestic Role-play' area to have an office, telephone, iPad. ▪ Children will know specific uses for computers. ▪ Children will know how to swipe on a screen and access an app that they a) self -elect b) are directed to select. ▪ Children will know how to access and use independently a range of appropriate apps that support learning in the class. ▪ Children will know that there are some very positive uses of computers however sometimes there are scary things that happen when you are on games or on the internet. ▪ Children will know that you are responsible for being kind to each other when online. ▪ Children will have watched an adult modelling the use of Scratch to do simple coding exercise. ▪ Children will have had experience of directing each other to create a sequence of instructions. ▪ Adults will have taught children to undertake a simple coding procedure on Scratch to do a simple action. ▪ Children need to learn a simple coding sequence and to explain how they completed it	

Attainment targets

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study. Schools are not required by law to teach the example content in [square brackets].

Key stage 1 Pupils should be taught to:

♣ 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.

	Autumn		Spring		Summer	
	Non- Negotiables C8: Participate in class social media accounts, C9: Understand online risks and the age rules for sites., C10: Use a range of applications and devices in order to communicate ideas, work and messages.					
Topic	<u>Computer systems and networks – IT and Technology around us</u>	<u>Creating Media – Digital Writing</u>	<u>Programming B – Introduction to Animation</u>	<u>Data and information – Grouping data and Pictograms</u>	<u>Creating Media – Making Music</u>	<u>Programming B - Quizzes</u>
Progression	This combines the year 1 and year 2 units for 'computer systems and networks' and the same pieces of procedural and declarative knowledge are taught in both cycles due to the importance of knowledge: underpinning the rest of the computing curriculum. It is expected that by the end of year 2 all children will know and remember the key knowledge outlined.	This unit progresses students' knowledge and understanding of using computers to create and manipulate digital content, focussing on using a word processor. The learners will develop their ability to find and use the keys on a keyboard in order to create digital content. The learners are then introduced to manipulating the resulting text, making cosmetic changes, and	This unit introduces programming in the Scratch Jnr environment. It supports learners in how to provide a set of instructions/commands to create a programme. They will need some prior knowledge on giving sets of instructions.	This combines the year 1 and 2 Data and Information Units. Some of the year 1 objectives are covered within the EYFS White rose maths curriculum and have therefore been combined. To extend year 2 an additional WALT has been added to help move their learning forward further. The children will revisit the same key knowledge again in the next cycle with the aim that the children will know and	Learners will have experience of making choices on a tablet/computer, and they will be able to navigate within an application. Learners will also have some experience of patterns. This unit progresses students' knowledge through listening to music and considering how music can affect how we think and feel. Learners will then purposefully create rhythm patterns and music.	This unit progresses learners' knowledge and understanding of instructions in sequences and the use of logical reasoning to predict outcomes.

		justifying their reason for making these changes.			remember the key knowledge by the end of year 2.		
Hierarchies	C8: Participate in class social media accounts. C9: Understand online risks and the age rules for sites.	C10: Use a range of applications and devices in order to communicate ideas, work and messages.	C10: Use a range of applications and devices in order to communicate ideas, work and messages.	C10: Use a range of applications and devices in order to communicate ideas, work and messages. C11: Use simple databases to record information in areas across the curriculum.	C10: Use a range of applications and devices in order to communicate ideas, work and messages.	C1: Control motion by specifying the number of steps to travel, direction and turn. C2: Add text strings, show and hide objects and change the features of an object. C3: Select sounds and control when they are heard, their duration and volume. C4: Control when drawings appear and set the pen colour, size and shape. C5: Specify user inputs (such as clicks) to control events. C6: Specify the nature of events (such as a single event or a loop). C7: Create conditions for actions by waiting for a user input (such as responses to questions like: What is your name?).
Resources	Laptops, iPads, paint program	Laptops, Word	Ipads, Scratch Jnr	Laptops, I pads j2e pictogram tool.	Laptops/Ipads Chrome music lab/song maker or equivalent	Ipads, Scratch Jnr
Vocabulary	Technology, computer, mouse, screen, keyboard, information technology, devices, app, program, click, drag, button, bar code, bank card	Text, delete, keys, back space, enter/return,	Block, algorithm, sprite, start, run, join, background, program	Compare, tally, record, table, more than, less than, data,	Rhythm, music, patterns, create, select, combine,	Block, green flag, program, sequence,
Flashback	**Select technology for simple purposes** **They must be safe when using technology**	**How to use a keyboard to create and edit text.** **How to use a mouse to move the cursor, open a file and create a picture.** **We should always follow the rules given to use when using IT so that we can keep ourselves and others safe.**	**IT can be used for lots of different purposes and it is important to choose the right pieces of equipment for a particular purpose.** **We should always follow the rules given to use when using IT so that we can keep ourselves and others safe.**	**How to use a mouse to move the cursor, open a file and create a picture.** **IT can be used for a range of purposes** **We should always follow the rules given to use when using IT so that we can keep ourselves and others safe.**	**How to use letter, number and Space keys to input text into a computer.** **That you can use the shift key to change the output of the key press. They will use this to add punctuation such as question marks and exclamation marks.** **The appearance of text can be changed, including the size and font.**	**An algorithm is a set of instructions that we use to input a set of commands to create a programme.** **In order to run a program I need to use a start block such as pressing the character or pressing the green flag.** **A program can allow multiple sprites to move at one time.**
Lesson 1	**WALT:** identify technology and recognise the uses and features (Y1 L1-2) **Activities:** Look at examples of technology in the classroom, as well as identifying a	**WALT**: use a computer to write **Activities:** This is the first lesson in which Year 1 learners will experience using a computer to create and manipulate text. It is important that they know how to log	**WALT:** choose a command for a given purpose **Activities:** (As a piece of prior learning, children should practice giving and following a sequence of instructions)	**WALT:** label, group and count objects (Y1 L1-2)	**WALT:** know how music can make us feel **Activities:** The learners will listen to and compare two pieces of music from *The Planets* by Gustav Holst. They will then use a musical description word bank to	**WALT:** that a sequence of commands has a start **Activities:** During this lesson, learners will recap what they know already about the ScratchJr app. They will

(cont.)					
computer and its main parts. They should practice logging into a computer and use a mouse to click and drag. (Year 2 – recognise why we might need to drag objects) **Children will know:** examples of technology and how they help us, including technology in the classroom. the main parts of a computer how to switch on and log on to a laptop how to use a mouse to click and drag	on and follow the rules that keep them safe. In this lesson, the learners will familiarise themselves with a word processor and think about how they might use this application in the future. The learners will also be identifying and finding keys, before adding text to their page by pressing keys on a keyboard. **Children will know:** how to log on and open a word processor keys on a keyboard contain letters, numbers and symbols find and use keys on a keyboard	During this lesson learners will become accustomed to the ScratchJr programming environment. They will discover that they can move characters on-screen using commands. **Children will know:** How to give and follow a sequence of instructions. the commands needed to move a sprite how to use commands to move a sprite	**Activities:** Children will understand that we can use labels to put things into groups. They will also know that objects can fit into more than one group. In this lesson, pupils will begin to think about grouping objects based on what the objects are. They will demonstrate the ability to count a small number of objects before they group them, and will then begin to show that they can count groups of objects with the same property. Pupils will also begin to learn that computers are not intelligent and require input from humans to perform tasks. **Children will know:** how to label and match objects to existing groups. how to group objects how to count groups of objects	describe how this music generates emotions, i.e. how it makes them feel. **Children will know:** simple differences in pieces of music how to listen to a range of music (links to the Music curriculum) how music makes me feel, e.g. happy or sad	begin to identify the start of sequences in real-world scenarios, and learn that sequences need to be started in ScratchJr. Learners will create programs and run them in full-screen mode using the **Green flag**. **Children will know:** a program needs to be started how to create the start of a sequence how to run my program
Lesson 2 **WALT:** use a mouse in different ways and type on a keyboard. (Y1 L3-L4) **Activities:** Building on from last lesson. Learners will log in, open paint, draw a picture. They will then open Word and write their name. They can save their work using the save icon as a next step. (Year 2 will use paint to create complex drawings and making careful choices building upon their digital painting unit from) **Children will know:** how to use a mouse to create a picture. how to use a mouse to open a program. what a keyboard is and to type their name	**WALT:** add and remove text on a computer **Activities:** In this lesson, learners will continue to familiarise themselves with word processors and how they can interact with the computer using a keyboard. The learners will focus on adding text and will explore more of the keys found on a keyboard. Finally, they will begin to use the backspace button to remove text from the computer. **Children will know:** how to enter text into a computer how to use letter, number, and space keys how to use backspace to remove text	**WALT:** show that a series of commands can be joined together **Activities:** During this lesson learners will discover that blocks can be joined together in ScratchJr. They will use a **Start** block to run their programs. They will also learn additional skills such as adding backgrounds and deleting sprites. Learners will follow given algorithms to create simple programs. **Children will know:** how to use more than one block by joining them together how to use a **Start** block in a program how to run their program	**WALT:** To describe objects and count those with similar properties. (Y1 L3-4) **Activities:** In this lesson, pupils will begin to understand that objects can be described in many different ways. They will identify the properties of objects and begin to understand that properties can be used to group objects; for example, objects can be grouped by colour or size. Pupils will classify objects based on their properties. They will group objects that have similar properties, and will be able to explain how they have grouped these. Pupils will begin to group a number of the same objects in different ways, and will demonstrate their ability to count these different groups. **Children will know:** how to find objects with similar properties how to group objects in more than one way how to count objects that share a property	**WALT:** identify that there are patterns in music **Activities:** In this lesson, learners will explore **rhythm**. They will create patterns and use those patterns as rhythms. They will use untuned percussion instruments and computers to hear the different rhythm patterns that they create. **Children will know:** how to create a rhythm pattern how to play an instrument following a rhythm pattern that music is created and played by humans	**WALT:** explain that a sequence of commands has an outcome **Activities:** During this lesson, learners will discover that a sequence of commands has an 'outcome'. They will predict the outcomes of real-life scenarios and a range of small programs in ScratchJr. Learners will then match programs that produce the same outcome when run, and use a set of blocks to create programs that produce different outcomes when run. **Children will know:** how to predict the outcome of a sequence of commands how to match two sequences with the same outcome how to change the outcome of a sequence of commands

Lesson 3	**WALT:** use a keyboard to edit text (Y1 L5) **Activities:** Children will continue to practice learning to type, and **l**earners will log in and open their word document from last lesson. They will then practice deleting letters and using the arrow keys to select a particular letter that they want to delete or change. **Children will know:** how to delete letters how to open work from a file how to use arrow keys to move a cursor	**WALT:** identify that the look of text can be changed on a computer **Activities:** In this lesson, learners will begin to explore the different tools that can be used in word processors to change the look of the text. Learners will use the Caps Lock key to add capital letters to their writing and will begin thinking about how to use this successfully. The learners will match simple descriptions with the key that they relate to. Finally, learners will begin exploring the different buttons available on the toolbar in more detail, and use these to change their own text. **Children will know:** how to type capital letters how to explain what the keys that I have learnt about already do how to identify the toolbar and use bold, italic, and underline	**WALT:** identify the effect of changing a value **Activities:** During this lesson learners will discover that some blocks in ScratchJr have numbers underneath them. They will learn how to change these values and identify the effect on a block of changing a value. **Children will know:** which blocks have numbers how to change the value what happens when I change a value	**WALT**: compare and describe a group of objects and answer questions about these. (Y1 L5-6) **Activities:** In this lesson, pupils will decide how to group objects to answer questions. They will compare their groups by thinking about how they are similar or different, and they will record what they find. They will then share what they have found with their peers. **Children will know:** how to group objects to answer a question how to compare groups of objects how to record and explain what I have found	**WALT:** describe how music can be used in different ways **Activities:** In this lesson, learners will explore how music can be used in different ways to express emotions and to trigger their imaginations. They will experiment with the pitch and duration of notes to create their own piece of music, which they will then associate with a physical object — in this case, an animal. **Children will know:** how to connect images with sounds how to use a computer to experiment with pitch and duration how to relate an idea to a piece of music	**WALT:** create a program using a given design **Activities:** During this lesson, learners will be taught how to use the **Start on tap** and **Go to page (Change background)** blocks. They will use a predefined design to create an animation based on the seasons. Learners will then be introduced to the task for the next lesson. They will predict what a given algorithm might mean. **Children will know:** what the actions of a sprite in an algorithm will be which blocks to use to meet the design how to build the sequences of blocks they need
Lesson 4	**WALT:** recognise uses and features of technology at school (Y2 L1-2) **Activities:** Learners will identify devices that are computers and consider how IT can help them both at school and beyond. They will identify examples of IT and be able to explain the purpose of different examples of IT in the school setting. **Children will know:** examples of different types of computers and that it is part of a wide range of IT what school IT is used for some IT can be used in more than one way.	**WALT:** make careful choices when changing text **Activities:** In this lesson, learners will begin to understand when it is best to change the look of their text and which tool will achieve the most appropriate outcome. The learners will begin to use their mouse cursor to select text to enable them to make more efficient changes. They will explore the different fonts available to them and change the font for their lost toy poster. **Children will know:** how to select a word by double-clicking how to select all the text by clicking and dragging how to change the font	**WALT:** explain that each sprite has its own instructions **Activities:** During this lesson learners will be taught how to add and delete sprites in ScratchJr. They will discover that each sprite has its own programming area, and learn how to add programming blocks to give instructions to each of the sprites. **Children will know:** that a project can include more than one sprite how to delete a sprite how to add blocks to each sprite	**WALT:** know that we can count and compare using tally charts. (Y2 L1) **Activities:** During this lesson learners will begin to understand the importance of organising data effectively for counting and comparing. They will create their own tally charts to organise data, and represent the tally count as a total. Finally, they will answer questions comparing totals in tally charts using vocabulary such as 'more than' and 'less than'. **Children will know:** how to record data in a tally chart how to represent a tally count as a total they can compare totals in a tally chart	**WALT:** show how music is made from a series of notes **Activities:** In this lesson, learners will develop their understanding of music. They will use a computer to create and refine musical patterns. **Children will know:** that music is a sequence of notes how to use a computer to create a musical pattern using three notes how to refine their musical pattern on a computer	**WALT;** change a given design. **Activities:** During this lesson, learners will look at an existing quiz design and think about how this can be realised within the ScratchJr app. They will choose backgrounds and characters for their own quiz projects. Learners will modify a given design sheet and create their own quiz questions in ScratchJr. **Children will know:** how to choose backgrounds for the design how to choose characters for the design

Lesson 5	**WALT:** identify technology beyond school and it can help us. (Y2 L3-4) **Activities:** Learners will begin to explore IT in environments beyond school, including home and familiar places such as shops. They will talk about the uses of IT in these environments and be able to explain that IT is used in many workplaces. Learners will explore the benefits of using IT in the wider world. They will focus on the use of IT in a shop and how devices can work together. Learners will sort activities based on whether they use IT or not and will be able to say why we use IT. **Children will know:** common types technology how IT devices work together common uses of IT	**WALT:** explain why I used the tools that I chose **Activities:** In this lesson, learners will begin to justify their use of certain tools when changing text. The learners will decide whether the changes that they have made have improved their writing and will begin to use 'undo' to remove changes. They will begin to consolidate their ability to select text using the cursor, through double-clicking and clicking and dragging. The learners will be able to explain what tool from the toolbar they have used to change their writing. **Children will know:** what tool to use to change the text if the changes they have made have improved their writing how to use 'undo' to remove changes	**WALT** design the parts of a project **Activities:** During this lesson learners will choose appropriate backgrounds and sprites for a 'Space race' project. They will decide how each sprite will move, and create an algorithm based on the blocks available in ScratchJr that reflects this. **Children will know:** how to choose appropriate artwork for their project how each sprite will move how to create an algorithm for each sprite	**WALT:** know that objects can be represented as pictures and to create a pictogram. (Y2 L2-3) **Activities:** During this lesson learners will become familiar with the term 'pictogram'. They will create pictograms manually and then progress to creating them using a computer. Learners will begin to understand the advantages of using computers rather than manual methods to create pictograms and use this to answer simple questions. They will collect data to create a tally chart and use this to make a pictogram on a computer. Learners will explain what their finished pictogram shows by writing a range of statements to describe this. **Children will know:** How to enter data and use pictograms to answer simple questions How to use a tally chart to create a pictogram explain what a pictogram shows	**WALT:** create music for a purpose **Activities:** In this lesson, learners will choose an animal and create a piece of music using the animal as inspiration. They will think about their animal moving and create a rhythm pattern from that. Once they have defined a rhythm, they will create a musical pattern (melody) to go with it. **Children will know:** how to describe an animal using sounds how to create a rhythm pattern how to save their work	**WALT:** create a program using my own design **Activities:** During this lesson, learners will create their own quiz question designs including their own choices of question, artwork, and algorithms. They will increase the number of blocks used within their sequences to create more complex programs. **Children will know:** how to choose the images for my own design how to create an algorithm how to build sequences of blocks to match my design
Lesson 6	**WALT:** explain how to use information technology safely and that choices can be made. **Activities:** Learners will consider how they use different forms of information technology safely, in a range of different environments. They will list different uses of IT and talk about the different rules that might be associated with using them. Learners will then say how rules can help keep them safe when using IT. Learners will think about the choices that are made when using information technology, and the responsibility associated with those choices. They will use IT in different types of activities and explain that sometimes they will need to use IT in different ways. **Children will know:** rules for using IT and how these can keep them safe.	**WALT:** compare writing on a computer with writing on paper **Activities:** In this lesson, learners will make comparisons between using a computer for writing and writing on paper. The learners will discuss how the two methods are the same and different, and think of examples to explain this. They will demonstrate making changes to writing using a computer to compare the two methods. Finally, the learners will begin to explain which they liked best, and think about which method would be the best method to use in different situations. **Children will know:** how to write a message on a computer and on paper the difference between using a computer with using a pencil and paper	**WALT:** To use my algorithm to create a program **Activities:** During this lesson learners will use their project designs from the previous lesson to create their projects on-screen in ScratchJr. They will use their project design, including algorithms created in the previous lesson, to make programs for each of their rocket sprites. They will test whether their algorithms are effective when their programs are run. **Children will know:** how to select sprites that match their design how to add programming blocks based on my algorithm how to test the programs they have created and debug if necessary.	**WALT:** compare group of objects by attributes and recognise that people can be described by attributes. **Activities:** During this lesson learners will think about ways in which objects can be grouped by attribute. They will then tally objects using a common attribute and present the data in the form of a pictogram. Learners will answer questions based on their pictograms using mathematical vocabulary such as 'more than'/'less than' and 'most'/'least'. Learners will understand that people can be described by attributes. They will practise using attributes to describe images of people and the other learners in the class. The learners will collect data needed to organise people using attributes and create a pictogram to show this pictorially. Finally, learners will draw conclusions from their pictograms and share their findings. **Children will know:**	**WALT:** review and refine our computer work **Activities:** In this lesson, learners will retrieve and review their work. They will spend time making improvements and then share their work with the class. **Children will know:** how to reopen their work how to explain how they made their work better how to describe how music makes them feel	**WALT:** decide how a project can be improved **Activities:** During this lesson, learners will compare their projects to their designs. They will think about how they could improve their designs by adding additional features. They will modify their designs and implement the changes on their devices. Learners will find and correct errors in programs (debug) and discuss whether they debugged errors in their own projects. **Children will know:** how to compare a project to their own design how to improve a project by adding features. how to debug

the choices that are made when using IT and the responsibility associated with these. the need to use IT in different ways.	how to give reason for their choices about which they prefer		how to answer 'more than'/'less than' and 'most/least' questions about an attribute how to collect the data I need how to create a pictogram and draw conclusions from it		
			Year 2 Extension **WALT:** to use a computer program to present information in different ways **Activities:** During this lesson learners will understand that there are other ways to present data than using tally charts and pictograms. They will use a pre-made tally chart to create a block diagram on their device. Learners will then share their data with a partner and discuss their findings. They will consider whether it is always OK to share data and when it is not OK. They will know that it is alright to say no if someone asks for their data, and how to report their concerns. **Children will know:** how to interpret what they have found out. simple examples of why information should not be shared.		

	Children will know:	**Children will know:**	**Children will know:**	**Children will know:**	**Children will know:**	**Children will know:**
Key Knowledge	How to use a keyboard to create and edit text. How to use a mouse to move the cursor, open a file and create a picture. IT stands for information technology and includes things such as computers, phones, tablets, printers, digital cameras, smart speakers, Beebots or games consoles. IT can be used for lots of different purposes and it is important to choose the right pieces of equipment for a particular purpose. We should always follow the rules given to use when using IT so that we can keep ourselves and others safe.	How to use letter, number and Space keys to input text into a computer. That you can use the shift key to change the output of the key press. They will use this to add punctuation such as question marks and exclamation marks. The appearance of text can be changed, including the size and font.	An algorithm is a set of instructions that we use to input a set of commands to create a programme. In order to run a program I need to use a start block such as pressing the character or pressing the green flag. A program can allow multiple sprites to move at one time.	Groups of objects can be counted and then be compared with one another to answer questions. Data can be presented on a computer in a variety of forms including pictograms, block diagram and tally charts. That some data can be shared, and other data cannot. It is important that we ask permission before sharing information about others.	Music is created by humans and can make people feel emotions – this music can be created digitally on a device. How to create pieces of music with a clear rhythm pattern and tempo. How to review their work and describe how it makes them feel.	A sequence needs to have a start to run a program. This could be pressing the character or pressing the green flag. Different blocks can be used for different purposes. These could be movement blocks, size changing blocks or speaking blocks. A sequence can be improved and changed by adding or removing blocks.