



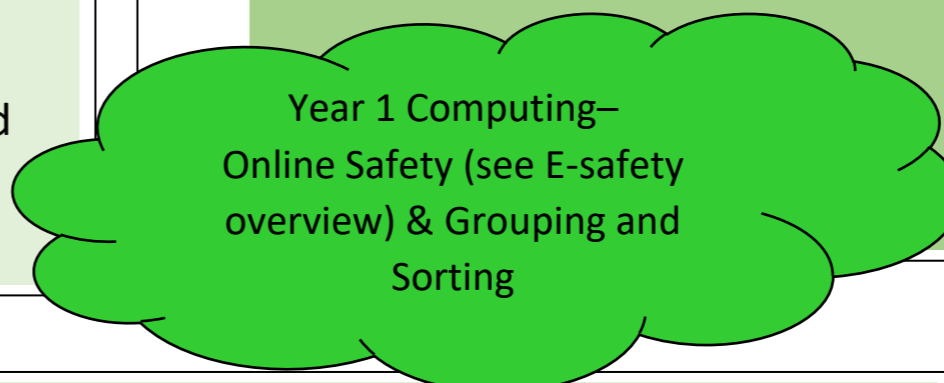
### The Big Picture

In this unit, pupils will be able to better understand the dangers of releasing personal information, as well as how to recognise unethical behaviours or prevent cyberbullying. Grouping and sorting activities will be extremely beneficial as they can help children to put objects into groups, and label these groups. Pupils will demonstrate that they can count a small number of objects, before and after the objects are grouped. They will then begin to demonstrate their ability to sort objects into different groups, based on the properties they choose. Eventually, pupils will be able to answer questions about the sorted objects.

### What do we already know?

#### Knowledge Retrieval:

- To talk to an adult when something happens that they are unsure or uncomfortable with.
- To recognise a mouse and be able to use it.
- To know a mouse is used to move and click on a computer.



### NC objectives

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

### Key unit objectives

- To sort items using a range of criteria.
- To sort items on the computer using the 'Grouping' activities in Purple Mash.
- To follow the school's safer internet rules.
- To act if they find something inappropriate online or something they are unsure of (including identifying people who can help; minimising screen; online reporting using school system etc.)
- To know that personal information should not be stored online.
- To log in safely and understand why that is important.
- To understand the importance of logging out when they have finished.

### Key Questions

- Can they log in to Purple Mash using their own log in?
- Can they log out of Purple Mash when they have finished using it and why that is important?
- Can they sort various items offline using a variety of criteria?
- Have they used Purple Mash activities to sort various items online using a variety of criteria?

### Key vocabulary and understanding for concept connectors

Log in – using a username and password to access a system.

Log out – leaving a computer system.

Username – a name that is used by a person to access an online site.

Password – a series of letters, numbers and special characters that is entered after the username to access an online site. In Purple Mash, this can also be a series of pictures.

Sort – put things together by features they have in common.

Criteria – a way in which something is judged.



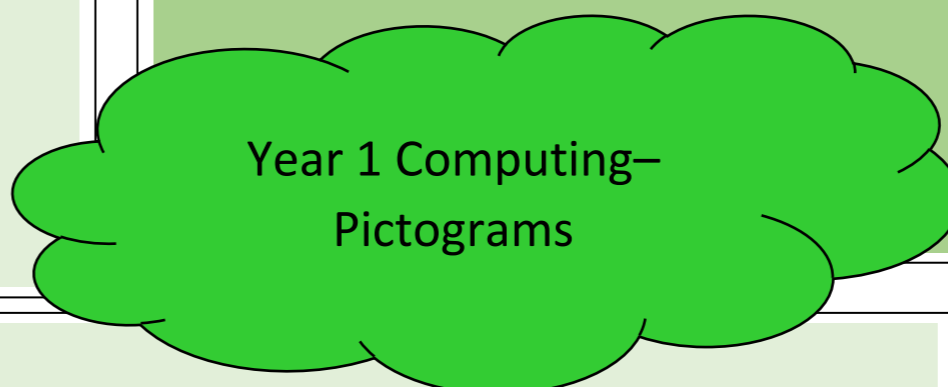
### The Big Picture

In this unit, pupils will be able to understand that pictograms help someone to gather information using pictures or symbols to represent data. It will support pupils with the understanding of how to read data using visual representations and will encourage pupils to have discussions about their results. Pupils will also have the opportunity to gather data as a class which will help them to see how the data is collected and represented.

### What do we already know?

#### Knowledge Retrieval:

This is a starter unit, there is no knowledge needed to begin this unit.



### NC objectives

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### Key unit objectives

- To understand that data can be represented in picture format.
- To contribute to a class pictogram.
- To use a pictogram to record the results of an experiment.

### Key Questions

- Can children contribute to the collection of class data?
- Can children use illustrations to create a simple pictogram?
- Can children contribute to a class pictogram?
- Can children discuss what the pictogram shows?
- Can children represent results as a pictogram?
- Can children begin to understand why pictograms are used?

### Key vocabulary and understanding for concept connectors

Pictogram – a diagram that uses pictures to represent data.

Data – facts and statistics collected together that can provide information.

Collate – collect and combine (texts, information, or data)

Illustration – a picture or a drawing.



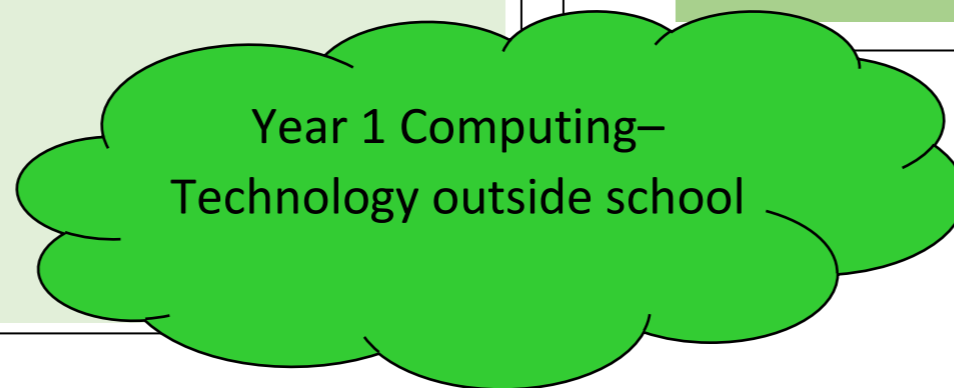
### The Big Picture

This unit gives pupils the opportunity to understand the power of technology and how it has evolved over time. Pupils will begin to learn how Computing is used within school and the outside world and how it has helped people to communicate across the globe. Understanding that technology does not stop at a computer, but in fact continues to things we use in our everyday lives.

### What do we already know?

#### Knowledge Retrieval:

- To know a phone is used to speak to others.
- To recognise a computer.
- To recognise a keyboard.
- To recognise a mouse.



Year 1 Computing-  
Technology outside school

### Key vocabulary and understanding for concept connectors

Technology – Science and engineering knowledge put into practical use to solve problem or invent useful tools.

Communication – giving, receiving, and sharing information.

Application – a computer software package that allows a user to do something.

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### Key unit objectives

- To find and understand examples of where technology is used in the local community.
- To record examples of technology outside school.
- To know about some of the applications of ICT and computing in everyday life.
- To know how technology has helped people over the years.
- To know digital technology is use of electronic devices.
- To know technology is used everyday across the world.
- To use the spacebar, back space, enter, shift and arrow keys.

### Key Questions

- Can children understand the meaning of ‘technology’?
- Have children considered types of technology used in school and out of school and name examples?
- Can pupils name examples of applications they may use in school to help them with their learning?
- Can pupils explain how technology has helped people?
- Can pupils use the spacebar, back space, enter, shift and arrow keys?
- Can pupils capture images with the camera?
- Can they record a sound and play it back?



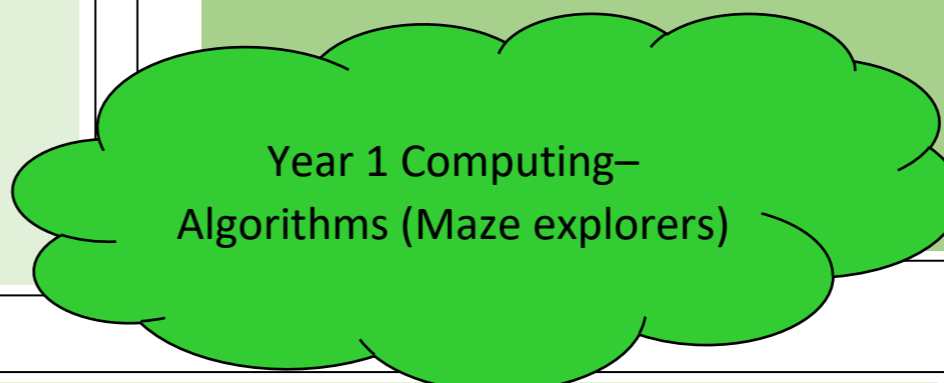
### The Big Picture

This unit allows children to develop their understanding of building an algorithm. It helps children to build a strong foundation in logical thinking and problem solving. Algorithmic thinking in children develops cross-disciplinary skills to generate creative, original solutions to a wide array of problems in Computing and beyond. By starting with basic algorithms such as using the Beebot, it begins their algorithm journey.

### What do we already know?

#### Knowledge Retrieval:

- To know forward is the direction that one is facing or travelling.
- To know backwards is to move in the opposite direction to which one is facing.
- To know a right turn is moving an object in a clockwise direction.
- To know a left turn is moving the object in an anti-clockwise direction.



### NC objectives

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### Key unit objectives

- To emphasise the importance of following instructions.
- To plan and give instructions to make things happen using a floor robot and online technology.
- To understand the functionality of basic direction keys.
- To use the additional direction keys as part of their algorithm.
- To begin to provide an opportunity for the children to set challenges for each other.

### Key Questions

- Can they create a simple series of instructions – left and right?
- Can they record their routes?
- Do they understand forwards, backwards, up and down?
- Can they give their Beebot clear instructions?
- Are they able to explain the instructions they have given their Beebot/software?
- Can pupils use direction keys to move their character?
- Do children know how to undo their last move?
- Can children attempt each other's challenges?
- Can they begin to plan and test a Bee-bot journey?

### Key vocabulary and understanding for concept connectors

Instruction – information about how something should be done.

Algorithm – a precise, step-by-step set of instructions used to solve a problem or achieve an objective.

Direction – a course along which someone or something moves.

Challenge – a task or situation that tests someone's abilities.

Arrow – a mark or sign used to show direction or position.

Undo – cancel or reverse an instruction.



### The Big Picture

This unit helps children to develop problem-solving skills. They will begin to learn to quickly fix and try again in different ways when something doesn't work out. Coding also equips children with the ability to stick with a problem and work on finding a solution. This problem-solving technique is transferable to a lot of other aspects of their learning.

### What do we already know?

#### Knowledge Retrieval:

- To understand that an algorithm is a type of command which can be run on an object.
- To know a command is a single computer instruction in a computer program.

### Key vocabulary and understanding for concept connectors

Action – types of commands, which are run on an object. They could be used to move an object or change a property.

Algorithm – types of commands, which are run on an object. They could be used to move an object or change a property.

Code – instructions written using symbols and words that can be understood by a computer.

Command – a single instruction in a computer program.

Debug/debugging – finding a problem in the code and fixing it.

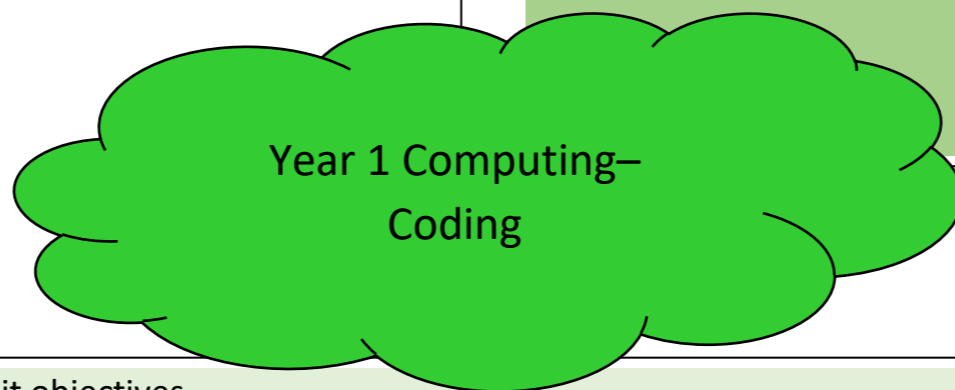
Input – information going into the computer. Can include moving or clicking the mouse, using the keyboard, swiping and tilting the device.

Object – an element in a computer program that can be changed using actions or properties.

Execute – to run a computer program.

Run – to cause the instruction in a program to be carried out.

When clicked – an event command. It makes code run when you click on something.



### NC objectives

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### Key unit objectives

- To understand what instructions are.
- To predict what will happen when instructions are followed.
- To understand that computer programs work by following instructions called code.
- To use code to make a computer program.
- To understand what actions are.
- To begin to understand how code executes when a program is run.

### Key Questions

- Can pupils put two instructions together to control a programmable toy?
- Can children give and follow instructions?
- Can children arrange code blocks to create a set of instructions?
- Can children create a simple program using code blocks?
- Can children notice when their code executes when they program is run.



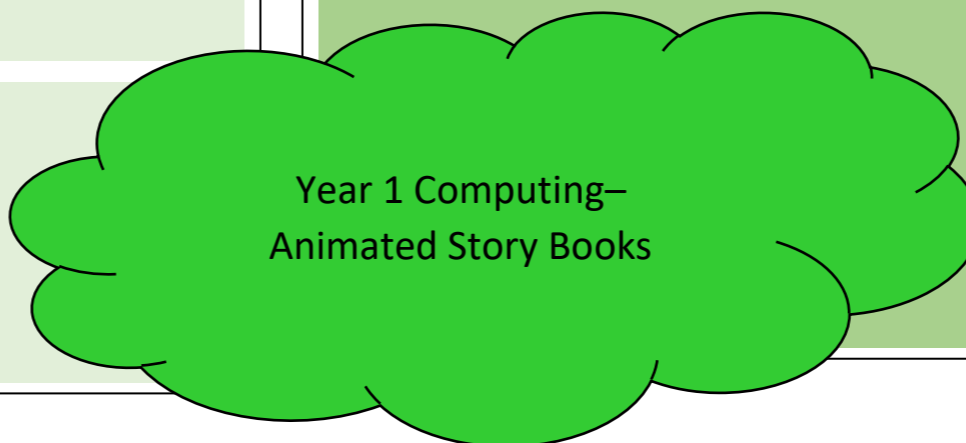
### The Big Picture

With all the developments in technology, it has never been easier for children to get involved in photography and being creative. This unit enables pupils to learn a new skill which also allows children to display their potential through creativity. It provides children with the opportunity to be innovative and gives children the chance to communicate their ideas, thoughts and feelings.

### What do we already know?

#### Knowledge Retrieval:

This is a starter unit, there is no knowledge needed to begin this unit.



Year 1 Computing-  
Animated Story Books

### NC objectives

Pupils should be taught to:

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### Key unit objectives

- To understand the differences between traditional books and e-books.
- To explore the tools of 2Create.
- To save the page they've created.
- To add animation to a picture.
- To add a sound effect to a picture.
- To add a voice recording to a picture.
- To add a background to the story.

### Key Questions

- Can children use the different drawing tools to create a picture on the page?
- Can children add text to a page?
- Can children open previously saved work?
- Can children add animation to a page?
- Can children change the font style and size?
- Can they capture images with a camera?

### Key vocabulary and understanding for concept connectors

Animation – process of giving the illusion of movement to drawings and models.

E-Book – short for electronic book; a book that can be read on the computer or other electronic device.

Font – they style of text used in a piece of writing on the computer or iPad.

File – a piece of work on the computer.

Sound effect – a sound other than speech or music made for use in a play, film or computer file.

Pic collage – an application that allows children to gather multiple images.