

## ICT– Branching databases

**Class 3**

### Previous knowledge

To know what a sequence is.	To build a sequence of commands.	To order commands in a program.	To use commands to create a piece of music.	To edit and improve a sequence.
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### Key Vocabulary

<b>attributes</b>	<b>A word or a phrase that can be used to describe an object such as its colour, size, or price</b>	<b>data</b>	<b>Information which is recorded as numbers, words or pictures.</b>	<b>database</b>	A way of storing data so that it can be compared and used.
<b>organise</b>	To arrange in order or into groups.	<b>sort</b>	To separate into groups	<b>branching database</b>	A collection of data organised into a tree structure using yes/no or true/false questions.

### Key knowledge

<b>A database is a collection of data</b> that is organised in such a way that it can be searched and information found easily.	<b>Yes or no questions can be used to sort objects in a database</b> based on their attributes or properties.	Questions which will sort objects need to identify their attributes.	<b>A branching database is collection of data organised into a tree structure using yes/no or true/false questions.</b>
The questions in a branching database need to be ordered carefully so that they split objects into similarly sized groups.	In real-life, branching databases are used to identify objects e.g., minibeasts	<b>Branching databases</b> can also be used to diagnose health problems.	<b>Branching databases</b> can also be used to <b>see which children are absent from school.</b>

### Next steps

To use text and images to communicate.	To change the impact of text by altering its font, size and colour.	To use landscape and portrait orientation.	To use placeholders.	To edit a template.
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# ICT– Creating media Desktop publishing

# Class 3



## Previous knowledge

<b>To recognise text and images.</b>	To know how digital images can be created.	To be able to edit digital images.	To be able to save my work to My Work folder.	To be able to open my work from My Work.
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## Previous knowledge

<b>text</b>	Data in the form of words.	<b>templates</b>	A template is a document that has already been laid out in a certain way. It might have columns for text, or spaces for pictures or text.	
<b>images</b>	A picture, drawing or photograph.	<b>orientation</b>	The way that a document is positioned.	
<b>edit</b>	To change text on a computer.	<b>placeholders</b>	Placeholders are boxes that hold the place of text or images that you are going to add to your document.	
<b>font</b>	A style of text.	<b>desktop publishing</b>	A way of creating documents that include both text and images.	

## Key Knowledge

<b>Text and images can be used separately or together to communicate messages.</b>	<b>The font style, size and colours of text can be edited to alter its impact.</b>	A page can be orientated in two ways: landscape  portrait. 	<b>Placeholders are boxes that hold the place of text and images to be added to a document.</b>	Templates can be helpful because they give you different page layouts to choose from. They either come with software, or you can make your own.
Images can be added in different ways to a document.	<b>Copyright free images can be added to a publication using <a href="http://www.pixabay.com">http://www.pixabay.com</a></b>	<b>The layout of a document affects the meaning and impact on the reader.</b>	Desktop publishing is a way of creating documents using page layout software. It was originally called desktop publishing because people used desktop computers to create their documents.	To make comparisons between handwritten and word-processed documents.

## Next steps

To identify the tools which have been used to make changes to an image.	To alter the composition of an image in different ways independently.	To always use copyright free images in my work. To cite images which are not copyright free.	To be able to retouch an image positively and negatively.	To recognise fake images. To combine parts of images to create new images.
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# ICT– Computing Systems and networks Class 3

## Previous knowledge

How to use IT safely	Where IT is used in real life	What a barcode is	What a scanner does	What information I can share safely
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## Key Vocabulary

<b>computer</b>	A way that computers receive data e.g. keyboard, mouse, touch, sensors etc	<b>connection</b>	A link between digital devices.	<b>packet</b>	Small parts of the messages that the digital devices are sharing. data can be text, pictures, sound.
<b>output</b>	A response made by computers to the user e.g. audio, visual, motion.	<b>internet</b>	A network of computers.	<b>network switch</b>	A device that enables many devices in a network to be connected.
<b>wireless access point</b>	A device connected to a wired network via a wire. It sends and receives wireless signals for and from devices with wireless connectivity network.	<b>network</b>	Two or more computers joined together.	<b>server</b>	A place to store computer files.

## Previous knowledge

Digital devices accept inputs and produce outputs.	A process is a series of actions or steps which achieve a goal.	<b>Input devices included keyboards, mouse, microphones, button on a pedestrian crossing.</b>	<b>Output devices included speakers, monitors, printers, traffic lights.</b>	Digital devices help us complete tasks. Often, they make tasks easier and faster.	<b>Computers can be connected together to make a network.</b>
A network switch is a device that allows many computers to be connected.	<b>A computer can send information to another computer on the network using a network switch.</b>	<b>Many networks contain a server which is an important computer that stores files and manages the network.</b>	Some devices in a network are not connected by wires but by wireless networking ( Wi-Fi)	Wireless devices connect to the network through a WAP- wireless access point which connect them to the network switch.	At school the network connects to the internet through a router which has a connection to the internet through a cable.

## Next steps

What sensors are	What an I.P. address is	How information can be sent over the internet	How people can work collaboratively on documents.	What a remix is.
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# ICT– Programming A Sequencing sounds Class 3

## Previous knowledge

How to program a Beebot.	How to sequence instructions accurately.	How to open a hyperlink.	How to save my work.	How to use the mouse pad accurately.
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## Key Vocabulary

<b>blocks</b>	A command which controls the sprite.	<b>program</b>	A set of instructions or algorithms that are given to the computer.
<b>commands</b>	An instruction for the computer.	<b>Scratch</b>	<b>A drag and drop programming environment.</b>
<b>sprites</b>	A computer graphics object (2 dimensional bitmap) that is integrated into a larger scene.	<b>sequence</b>	A pattern or process in which one thing follows another.
<b>backdrop</b>	The appearance of the stage.	<b>algorithm</b>	A precise set of ordered instructions, or rules for performing a task.

## Key Knowledge

Scratch is a programming environment which contains sprites, backdrops, programming blocks, programming area and a stage with the sprite.	Commands in Scratch are represented as blocks.	<b>Sprites have 3 attributes which can be changed- code, costumes and sounds.</b>	<b>Motion blocks are used to program the movement of the sprite.</b>
<b>Event blocks start a project. Blocks are combined to make a sequence.</b>	Ordered commands make sequences of notes. <b>A chord is created when certain notes are played at the same time.</b>	To check a program does what you want, you must test it and if necessary debug it to correct any mistakes.	Sprites, costumes and backdrops can be combined to create a piano on Scratch. You can look at the code blocks and predict what will happen.

## Next steps

To explain the relationship between an event and an action.	To move a sprite in 4 directions.	To use a programming extension.	To build complex sequences of commands.	To make and justify design choices.
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## ICT- Programming B Events and Actions in programs

Year 3


### Previous knowledge

How to use Scratch Junior.	That a command is an instruction for the computer.	What a sprite looks like.	What a motion block looks like.	How to build a simple sequence in Scratch.
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### Key Vocabulary

<b>blocks</b>	A command which controls the sprite.	<b>event</b>	An action that the program takes.
<b>sequence</b>	A pattern or process in which one thing follows another.	<b>output</b>	Information that a computer sends.
<b>sprites</b>	A computer graphics object (2 dimensional bitmap) that is integrated into a larger scene	<b>algorithm</b>	<b>A set of step-by-step instructions given to the computer.</b>
<b>programming</b>	Making a set of instructions for the computer to follow.	<b>input</b>	Information given to the computer through the mouse or keyboard.

### Key Knowledge

Scratch is a programming environment which contains sprites, backdrops, programming blocks, programming area and a stage with the sprite.	In Scratch we move the blocks into the position we want, based on our algorithm.	<b>Events cause actions.</b>	<b>The mouse and the keyboard can be used to start event blocks.</b>
The pencil sprite will draw lines. Pen down enables you to draw lines. Pen up stops the sprite drawing lines.	The pencil sprite is an extension you can add onto Scratch. 	Algorithms must be tested and debugged.	To debug you might need to add, change or remove blocks.

### Next steps

Repetition is an action, event, or task that once completed, is performed again.	Computers need specific, correctly sequenced instructions.	How to use Logo.	How to use repetition in my work.	How to remix a project.
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## ICT- Creating media Stop frame animation

Class 3

### Previous knowledge

To identify changes which can be made to an image.	To alter the composition of an image.	To always use copyright free images in my work.	To be able to retouch an image.	To recognise fake images.
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### Key Vocabulary

<b>animation</b>	A sequence of drawings or photographs	<b>consistent</b>	Staying the same over a period of time.
<b>images</b>	A picture, drawing or photograph.	<b>transition</b>	The way that one frame from changes to another.
<b>frame</b>	The pictures taken to make an animation are called frames.	<b>onion skinning</b>	Shows the previous frame faintly to help you see where to draw.
<b>stop frame animation</b>	An animated filmmaking technique where objects are moved in very small amounts between individual photograph frames.	<b>storyboard</b>	A sequence of drawings which represent the shots planned for a film or tv production

### Key Knowledge

<b>Animation is a sequence of drawings or photographs.</b>	<b>Stop frame animation means making a short film from a series of pictures or images.</b>	iMotion app can be used to make stop frame animations.	<b>Onion skinning helps to make small changes between frames. The iMotion app has an onion skinning feature.</b>
<b>Some things- like the background or position of the figures- must be kept consistent in the animation. The camera should be still.</b>	Good quality animations should have pictures in the right sequence, no unwanted objects in shot, and the camera should be still.	Text, music and transitions can be added to an animation.	Animations can be evaluated and improved. Unwanted objects in the frame can be removed.

### Next steps

To recognise video as moving pictures that can be combined with audio.	To plan a video production using a storyboard.	To recognise some of the digital devices that can capture video using a camera.	To use a recording device and a computer to make a video.	To apply effects to a section of video.
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