

YEAR 1 SCIENCE – EVERYDAY MATERIALS

KNOWLEDGE ORGANISER



What have we learnt in this topic before, what we will learn this year and what will we learn next?

In reception we learnt- in our topic 'The Natural World', we learn about:

- The natural world around us and contrasting environments
- Seasons and changing states of matter

In Year 1 we will be learning to:

- Distinguish between an object and the material from which it is made
- Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock
- Describe the simple physical properties of a variety of everyday materials
- Compare and group together a variety of everyday materials on the basis of their simple physical properties

In Year 2 we will be learning to:

- Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses
- Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching

NATURAL OR MANMADE?

Some materials are natural and some are manmade. Natural materials are found in nature. Manmade materials are materials that have been produced by humans. In Year 1 we look at a range of materials and discuss where they are found or how they are made.



SORTING MATERIALS

The children have an opportunity to look in depth at the paper and wool making process, where they have a chance to order pictures and write instructions.



FOCUS SCIENTIST – CHARLES MACINTOSH – WATERPROOF MATERIAL

We will be focusing on the scientist Charles Macintosh and his famous invention of waterproof material. The children will discuss waterproof and non waterproof fabrics and through completing an experiment find out how waterproof they are.



KEY VOCABULARY

materials natural manmade transparent waterproof opaque stiff soft shiny rough smooth hard bendy wood plastic metal glass

SORTING OBJECTS ACCORDING TO THEIR MATERIAL

Wood	Plastic	Metal	Glass

Scientific language is learnt in Year 1 to describe different materials, ranging from how they feel to what they look like. This vocabulary is then used when explaining why a material has been chosen for a purpose.

YEAR 1 SCIENCE – SEASONAL CHANGES



WHAT HAVE WE LEARNT IN THIS TOPIC BEFORE AND WHAT WILL WE LEARN THIS YEAR?

In the early years, the topic of weather is broadly covered when the children learn about growing and plants.

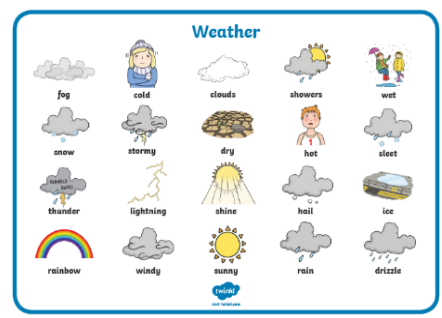
In Year 1, the children learn to; Observe changes across the four seasons, observe and describe weather associated with the seasons and how day length varies.

In Year 2, weather will be taught through two topics namely; living things and their habitats and plants, seeds and bulbs where the following criteria will be taught;

- Understanding the basic needs of different kinds of plants
- Finding out and describing how plants need water, light and a suitable temperature to grow and stay healthy

DESCRIBING THE DIFFERENT WEATHER ASSOCIATED WITH THE SEASONS

Weather is the way the air and the atmosphere feel. It includes the outside temperature, strength of the wind and whether it is raining, sunny, hailing, snowing, sleet, foggy or cloudy. The weather changes regularly and tends to be different during different season and across different regions of the United Kingdom.



THE FOUR SEASONS

There are four seasons: **Spring, Summer, Autumn and Winter.** During our seasons the weather plays a significant part in our day to day lives and can within minutes change dramatically.

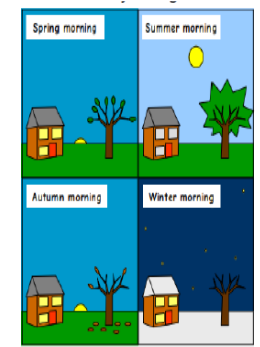


VARIATIONS IN DAY LENGTH THROUGH THE SEASONS

Not only does the weather change the day length also varies in different season. There is more daylight in summer. The nights are shorter in the summer and the weather is warmer. There is less daylight in the winter and the nights are longer and the weather is colder.

Table showing the number of hours of daylight on days in the middle of each season

Spring	11
Summer	16
Autumn	11
Winter	7



Hook



Is a magical fiction book which introduces children to the cycle of nature and teaches them about the months and seasons of the year.

Key Vocabulary

- Observe Temperature Seasons Spring Summer Autumn Winter Variations Day Length Colder Daylight

YEAR 1 HISTORY — CHANGES AROUND US

KNOWLEDGE ORGANISER



What knowledge have we learnt before, what we will learn this year and what will come after?

HOW HAVE I CHANGED SINCE I WAS A BABY?

In EYFS, the children started the building blocks to our Year 1 curriculum by starting to learn about the 'past' and 'now'. We also learnt about:

- Lives of people around us
- Similarities and differences between things in the past and now
- The past through setting, characters and storytelling

Lots of changes have happened to us since we were a baby! We have grown from a baby, to a toddler and now we are children.



We have learnt to walk and talk. We can now eat foods that are solid. We can jump, hop and skip. We can do lots of things now that we couldn't do in the past.



In Year 1, the children further their understanding of their own recent history by looking at how they have changed from when they were a baby. They will then learn about changes that have happened in 'living memory' focusing on:

- Changes in our town
- Changes in toys
- Changes to phones

THE OLD TOWN AND THE NEW TOWN

We live in Hemel Hempstead. A long time ago, Hemel was a market town with a small population. In the 1950's, the town was redeveloped to provide much more housing and a big shopping center was built called 'The Marlowes'.

OLD	NEW

CHANGES TO THE TELEPHONE/MOBILE PHONE

The telephone was originally invented in the 1800's and has changed many times over the last 200 years!



CHANGES IN TOYS

Toys have also changed over time. Old toys tended to be made of fabric, wood or metal. New toys tend to be made of plastic and may also be electronic.



Key Vocabulary

old	new	past	present	baby	child	toddler	house	flat	old town	new town	electronic	
The Marlowes		The Kodak Tower		telephone	mobile phone		dial	touchscreen	fabric	wood	metal	plastic

YEAR 1 HISTORY – THE VICTORIANS

KNOWLEDGE ORGANISER



What knowledge have we learnt before, what we will learn this year and what will come after?

Timeline

1819 Queen Victoria is born



1825 First passenger railway opened



1837 Victoria became Queen



1840 Married Albert



1863 Albert died



1901 Victoria died

In EVFS, the children will start to understand the concept of the "past" and "now" and will look at:

- Lives of people around us
- Similarities and differences between things in the past and now
- Understand the past through settings, characters and storytelling

In Year 1, the children will begin by further developing their understanding of their own recent history. Moving forward in time from Bonfirenight, they will learn facts about what life was like in the Victorian Era.

- Events beyond living memory: The Victorian 1837 to 1901 AD

In Year2, the children will learn how significant people from history have affected our lives for the better.

They will remain in the Victorian Era to discover Florence Nightingale and then take a small step backwards to learn about Mary Seacole.

- Significant individuals: Florence Nightingale (1820-1910) and Mary Seacole (1805-1881) AD

ENRICHING THE CURRICULUM

To bring this topic to life, the children will take part in a "Victorian day" where they will dress up in Victorian style clothes and experience what it was like to in the Victorian classroom.

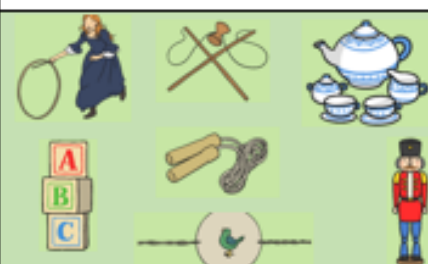
Victorian Home life



Victorian houses were cheap and most had between two and four rooms. One or two rooms downstairs and one or two rooms upstairs. However Victorian families were big with four or five children. There was no water, and no toilet. A whole street (sometimes more) would have to share a couple of outside toilets and a pump!

Sorting Toys – Past and Present

Toys in the Victorian Era

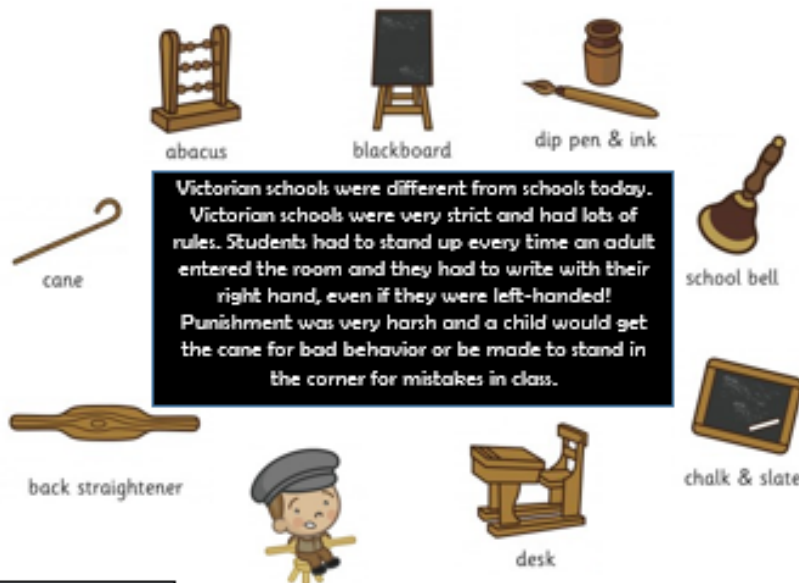


Toys Today

Toys Today



Victorian Schools






Victorian schools were different from schools today. Victorian schools were very strict and had lots of rules. Students had to stand up every time an adult entered the room and they had to write with their right hand, even if they were left-handed! Punishment was very harsh and a child would get the cane for bad behavior or be made to stand in the corner for mistakes in class.

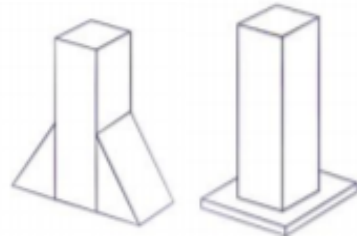
Key Vocabulary


Queen Victoria - Prince Albert - royalty - mangle - iron - washboard - bed pan - past - present - a long time ago - chimney sweep - workhouse - slate - chalk - abacus - bell - desk - cane - blackboard - dunce's hat - timeline - skipping rope - spinning top - peg doll - marbles - wooden blocks - yo-yo


YEAR 1 DT – MAKING A CHAIR FOR A TOY



LEARNING JOURNEY	FREESTANDING STRUCTURES
<p>In EYFS, we practiced and experimented with junk modelling and with rigid materials in our construction area.</p> <p>In Year 1, we will learn about Freestanding structures using rigid materials to make and design a chair for a toy.</p> <p>In Year 2, we will extend our construction skills by learning about Shell structures and designing and making our own emergency vehicles with wheels and axles.</p>	<p>Structures are things that are built for a purpose.</p>  <p>-Structures can be large (e.g. buildings and bridges) or small (e.g. chairs and tables).</p>  <p>- Freestanding structures are structures that can stand up without being attached to something else.</p>  <p>-Freestanding structures need to support their own weight and also the weight of the things/people using them. So that they can do this, freestanding structures need to be well-designed: <u>strong</u>, <u>rigid</u> and <u>stable</u>.</p>

MAKING A STRUCTURE STABLE
<p>A structure that is stable is less likely to fall over.</p> <p>-Structures are more stable when they have a wider base.</p>  <p>- Buttresses can also make a structure more stable. A buttress is something that is built against a structure to give it more stability.</p> <p>The buttress adds width or structure to the base, making the structure more stable.</p>

DESIGNING A PRODUCT FOR A PURPOSE
 <p>Products are designed for a purpose. When we design a chair for a toy, we need to think about:</p> <ul style="list-style-type: none"> • Which toy the chair is for • How to make the chair strong • Decorating the chair to suit the toy

RIGID MATERIALS
<p>Some <u>materials</u> are stronger and more rigid (stiffer) than others, e.g. card is stronger and more rigid than paper.</p> <p>-Structures can also be made stronger and more rigid by making sure that parts and materials are properly <u>joined together</u>, e.g. with glue or <u>tape</u>.</p> <p>-<u>Folding</u> and <u>layering</u> (adding an extra layer) of materials can also be used to <u>strengthen and stiffen</u> structures.</p> 

Key Vocabulary

- | | | | | | | | |
|------------------------|----------|---------|----------|-----------|-------|-------|-----------|
| freestanding structure | building | product | large | small | stand | rigid | construct |
| strong | flexible | stable | buttress | cardboard | glue | tape | design |
| join | weight | purpose | | | | | |

YEAR 1 ART – CREATING MOODS AND MOVEMENT

KNOWLEDGE ORGANISER



What have we learnt before in Art and what we will learn next?

In EYFS, we will study different artists and create art inspired by their work. We will begin to plan what we are going to create and develop ways to improve our work. We will be introduced to colour mixing and through exploration will discover what colours we can make.

In Year 1, we will extend our understanding of colour mixing so that we can name the primary and secondary colours. Developing our understanding of colour, we learn about moods and how to create movement in a dramatic sky.

In Year 2, we will continue to develop our colour mixing skills by making our own brown and adding white to colours to make different tints. We will also develop our pencil skills further, using patterns and texture in our sketching.

PRIMARY AND SECONDARY COLOURS

There are three primary colours and these are **red**, **blue** and **yellow**. Mixing two primary colours together will create a secondary colour.

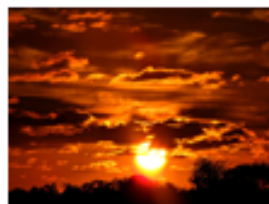
Blue + Yellow = Green

Blue + Red = Purple

Red + Yellow = Orange



MOODS FOR PAINTING – WARM AND COOL



Artists create various moods in their artwork by using different colours. Colours are classified as either warm or cool and these colours portray moods. The cool colours can show emotions such as calmness, sadness, loneliness and peacefulness. The warm colours portray opposite emotions such as happiness, excitement, anger and trepidation.

CREATING MOVEMENT IN OUR ART WORK

Artists use different techniques to create movement within their paintings. They do this by putting the paint on their brush, and with every stroke would move it in a way to appear that it was moving. This is called the 'impasto' technique.



Sideways



Swirls



Circles



Curves

The 'impasto' technique uses a series of lines in different ways to create the desired movement. The sideways dashed lines can show speed, the circles can show the impact of something being struck, the curves and swirls are good to show the movement of the wind in the sky.

RECREATING VAN GOGH'S 'STARRY NIGHT'

Vincent Van Gogh was a post-impressionist artist who lived from 1853-1890. His paintings focused on colour, line and emotion. He deliberately used colours to capture mood, rather than using colours realistically. No other artist was doing so at this time. Within 'Starry Night', Van Gogh used lines to show the movement of the sky and the glowing of the moon and stars.



Key Vocabulary

primary secondary mixing movement cool warm mood emotion lines sideways swirls
 circles curves Van Gogh post-impressionist self-portrait art feeling questions design

Year 1 - Dance Unit 1

Knowledge Organiser

Prior Learning

Followed simple instructions. Moved using simple rhythms and actions. Copying and repeating.

We are learning...

1. To show moods and feelings we would experience in the jungle
2. To move as if we were living in the jungle
3. To create and perform movements which show friendship
4. To perform leading and following movements
5. To perform a short dance with a clear start, middle and end
6. To use repeated actions in our dance

Assessment Overview

Head - Demonstrate understanding that dance has a start, middle and end.

Hand - Perform basic body actions to music.

Heart - Work with a partner to use repeating motifs.

Equipment

Music player, music, cones, hoops, throw down spots, balloons.

Vocabulary

Stretch, swing, mood, feeling, theme, story, static, friendship, start, middle, end.

Unit Focus

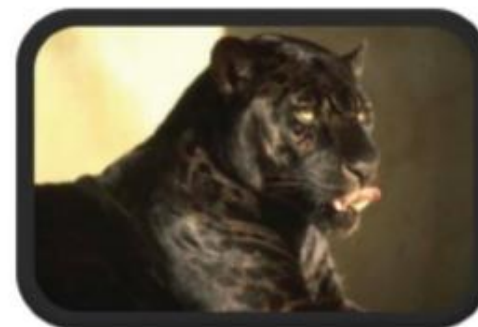
Respond to a range of stimuli. Explore space, direction, levels and speeds and performing with different body parts.

Key Questions

1. What was your favourite scene in *The Jungle Book*?
2. How can you show your favourite scene with your partner?
3. What would you like to improve in your dance phrase?

Concept

- Using mirroring as a tool for creating interesting partner work.
- A dance phrase has a beginning, middle and end.



Year 1 - Dance Unit 2

Knowledge Organiser

Prior Learning

Respond to a range of stimuli. Explore space, direction, levels and speeds and performing with different body parts.

We are learning...

1. To perform actions to well known nursery rhymes
2. To march in time to the beat and turn while marching
3. To march in time as a group
4. To perform actions in canon (one after the other)
5. To perform a short dance using canon
6. To perform in rounds in different groups

Assessment Overview

Head - Recognise that dances can have themes and stories.

Hand - Perform with an awareness of body shape required.

Heart - Engage with the class to perform together.

Equipment

Music player, music, cones, hoops, throw down spots, teacher cards, nursery rhyme print out, whiteboard and marker.

Vocabulary

Compose, choose, select, emotions, canon, rhyme, theme, character, round, respond.

Unit Focus

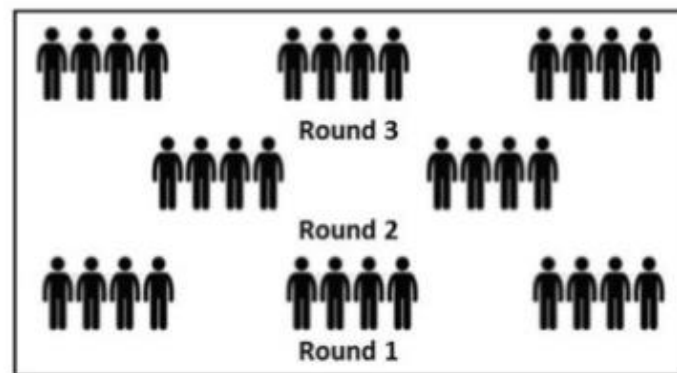
Able to build simple movement patterns from given actions.
Compose and link actions to make simple movement phrases.

Key Questions

1. Can you describe what is meant by a 'round' when singing or performing?
2. How is a round similar to canon from previous lessons?
3. What is a formation in dance?

Concept

- Using formation to perform as a group.
- Using canon as a tool to create interesting group work.



Year 1 PE - Autumn 1 Send and Return



Year 1 – Send and Return Unit 2

Knowledge Organiser

Prior Learning

Able to send an object with increased confidence using hand or bat. Can move towards a moving ball to return. Can send and return a variety of balls.

Unit Focus

Develop sending skills with a variety of balls. Track, intercept and stop a variety of objects. Select and apply skills to beat the opposition.

We are learning...

1. to send the ball over a net to our partner.
2. to track and stop a moving object using both hands.
3. why different muscles are important when playing games.
4. to send balls accurately from different positions, e.g. kneeling or sitting.
5. to spot space in the playing area and hit the ball there.
6. to play a game with a partner.

Key Questions

1. Can you remember a simple tactic you have used today? (hitting/throwing into space).
2. What is the role of the umpire?
3. How did/do you score a point?

Equipment

A variety of balls, a variety of bats/racquets, cones, hoops, targets, button cones, quoits, balloons, and bench/nets.

Vocabulary

Bowl, hit, net, pick up, roll, serve, stop, track, opposition, umpire.

Rules

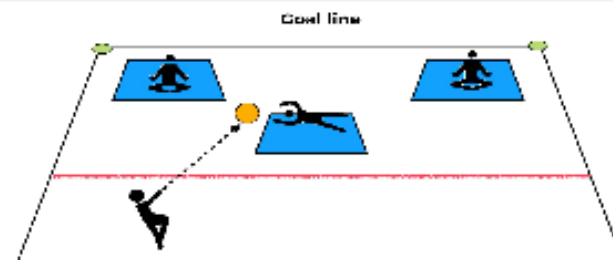
Pairs start with 100 points; they lose a point when they fail to return the ball in the given number of bounces. The team with the most points wins.

Assessment Overview

Head – Identify space to send a ball into.

Hand – Move towards a moving ball to return with your hand or bat.

Heart – Play cooperatively in a game situation.



Year 1 PE - Autumn 2 Hit, Catch, Run.

Year 1 – Hit Catch Run Unit 1

Knowledge Organiser

Prior Learning

Pupils will have used a variety of balls, beanbags, bats and markers. Can roll and follow a rolling ball - mastered movements such as walking, running and jumping.

Unit Focus

Able to hit objects with hand or bat. Track and retrieve a rolling ball. Throw and catch a variety of balls and objects.

We are learning...

1. to select a space to throw or roll a ball into.
2. to track and collect a rolling ball.
3. to catch a ball to stop an opponent from scoring.
4. to use our hands to hit a ball.
5. to run between bases to score points.
6. to work as a team to score points.

Key Questions

1. Now there are fielders in the striking zone, where should you aim to hit?
2. How can you improve your scores working in teams?
3. How are you working together to stop strikers from scoring points?

Equipment

A variety of balls, a variety of bats/racquets, cones, hoops, targets, batting tee, button cones, quoits.

Vocabulary

Batter, bowl, catch, collect, feed, field, hit, hitter, pick up, retrieve, roll, stop, strike, throw.

Rules

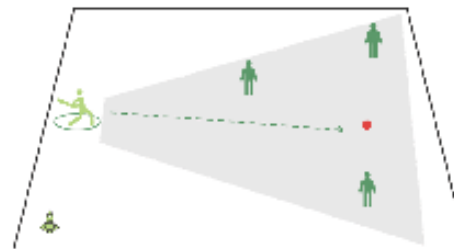
- Fielders must now stand in the zone.
- ALL fielders must touch the ball before it can be returned to the hoop.
- Players run between bases to score.

Assessment Overview

Head – Able to identify when a point has been scored and keep count of the score.

Hand – Run between bases to score points.

Heart – Work collaboratively to score runs showing encouragement and support.



COMPUTING SYSTEMS AND NETWORKS KNOWLEDGE ORGANISER

Overview



Technology Around Us

- Technology is something that has been made by people to help us.
- Technology is 'man-made' and not 'natural.' Examples include computers, phones, cars, bikes, and even pencils!
- Computers are a type of digital technology.
- Some of the different parts of a computer include the monitor, mouse and keyboard.
- There are a number of important rules to help us use computers safely.



Technology

- Technology is the name for man-made things that help us.
- Technology is all around us, and helps to make our lives easier.



- Digital technology is the name for electronic items that create and store information, e.g. computers, mobile phones, and televisions.



- Non-digital technology is the name for non-electronic items that do not create and store information.



Using Technology Safely

When using technology, we should:

- Hold the device carefully and use it gently.
- Not have food and drink around the device.
- Only use the programs that we are supposed to be using.
- Take turns with our partner, and stop using the device when we are being spoken to.



Computers



- Desktop computers need to be placed on a surface, e.g. a table or desk. Laptop computers are portable – they can be moved to different places.
- The screen (or monitor) displays what the computer is doing.
- The mouse lets you select and move objects (some computers have a trackpad instead).
- The keyboard lets you type letters and numbers.
- Computers can run different programs. Programs do different tasks on the computer. E.g. Microsoft Word, Microsoft PowerPoint and Paint.
- When we are using a program, we can save our work by pressing Ctrl + S or by clicking on this icon.



Using a Mouse



- The mouse can be used to click and drag.
- Clicking the left button lets us select something. Clicking twice quickly lets us open files and programs.
- Clicking the right button gives us options.
- Holding the left button down allows us to drag things.



Using a Keyboard



- Writing on a computer is called typing. We do this on a keyboard.
- Holding the shift key, or pressing caps lock, helps us to type a capital letter.
- Delete and backspace buttons can help us to remove typing.

Important Vocabulary

Technology

Man-made

Digital

Screen

Mouse

Keyboard

Program

Click/ Drag

Cursor

E-Safety



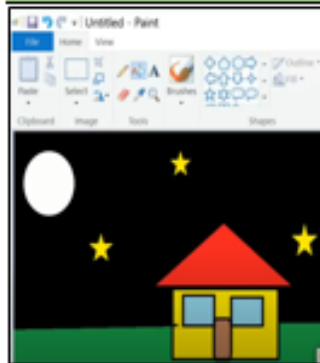
COMPUTING: CREATING MEDIA

KNOWLEDGE ORGANISER

Y1



Overview



Digital Painting

- We can use digital devices to help us to draw and paint pictures.
- Some of the programs that we can use to do this are Microsoft Paint, Paints, and Sketches (for iOS).
- When we use paint programs, we can use tools to create different effects.
- We can draw in different ways, using freehand, lines and shapes in our drawings.
- We can also change sizes and colours for effect.

More Complex Tools



This is the fill tool. It let us fill a shape with a colour of our choice. Be careful though, if the shape has any gaps in it, the fill tool will colour everything else!



This is the spray-paint tool. When you hold down the left button on the mouse, it is like you are spraying a can of spray-paint. With this tool, it is more difficult to colour neatly.



The line tools are useful when we need to draw a line more neatly than we can do with freehand. You can select the start and end points of your line, and choose if you want it to be straight or curvy.



The shape tools draw perfectly formed shapes! There are many different shapes to choose from. As we click and drag using the left mouse button, we make the shape bigger and smaller.

Simple Tools

- The buttons at the top/side of the page are called tools, and they all have different jobs.
- By clicking on a tool (with the left button on our mouse) we can select to use it.



When we want to save our painting, we should click on this icon. The first time that we save, we need to choose a file name and a location (folder) to save it in.

Making Careful Choices



This is the pencil tool. It draws freehand. As we click and hold the left mouse button, it draws on the page. As we hold and move the mouse, the pencil follows on the page!



This is the paintbrush tool. It works freehand, in much the same way as the pencil does. However, we can choose a number of different colours (by clicking on them) to paint with!



The eraser tool lets us rub out parts of our drawing when we have made a mistake. It works by clicking and holding the left mouse button over the areas to erase.



The undo tool reverses the last thing that you did. If you make a mistake, the undo tool can help you to get your drawing back to how it was beforehand!



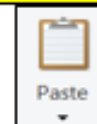
By clicking on this icon, we are able to choose the size of the lines that we draw with.

We can choose thick, bold lines, or thin, fainter lines for effect.

These tools mean that we don't have to draw the same things over and over again if we need to repeat them.

The copy tool makes a copy of the line, shape, drawing features that are selected. By pressing paste, the copy will then appear on the page.

The cut tool also makes a copy of the line, shape, or drawing, but removes the original. The paste option places the copy in the new location.



Important Vocabulary

Paint Program

Tool

Paintbrush

Erase

Fill

Undo

Click

Drag

Save

icon