

Woldgate School

Of great merit, character & value

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Wonder
Learning Partnership
Educate | Empower | Engage | Enrich

Knowledge Book 2024-25

Name:

Form:

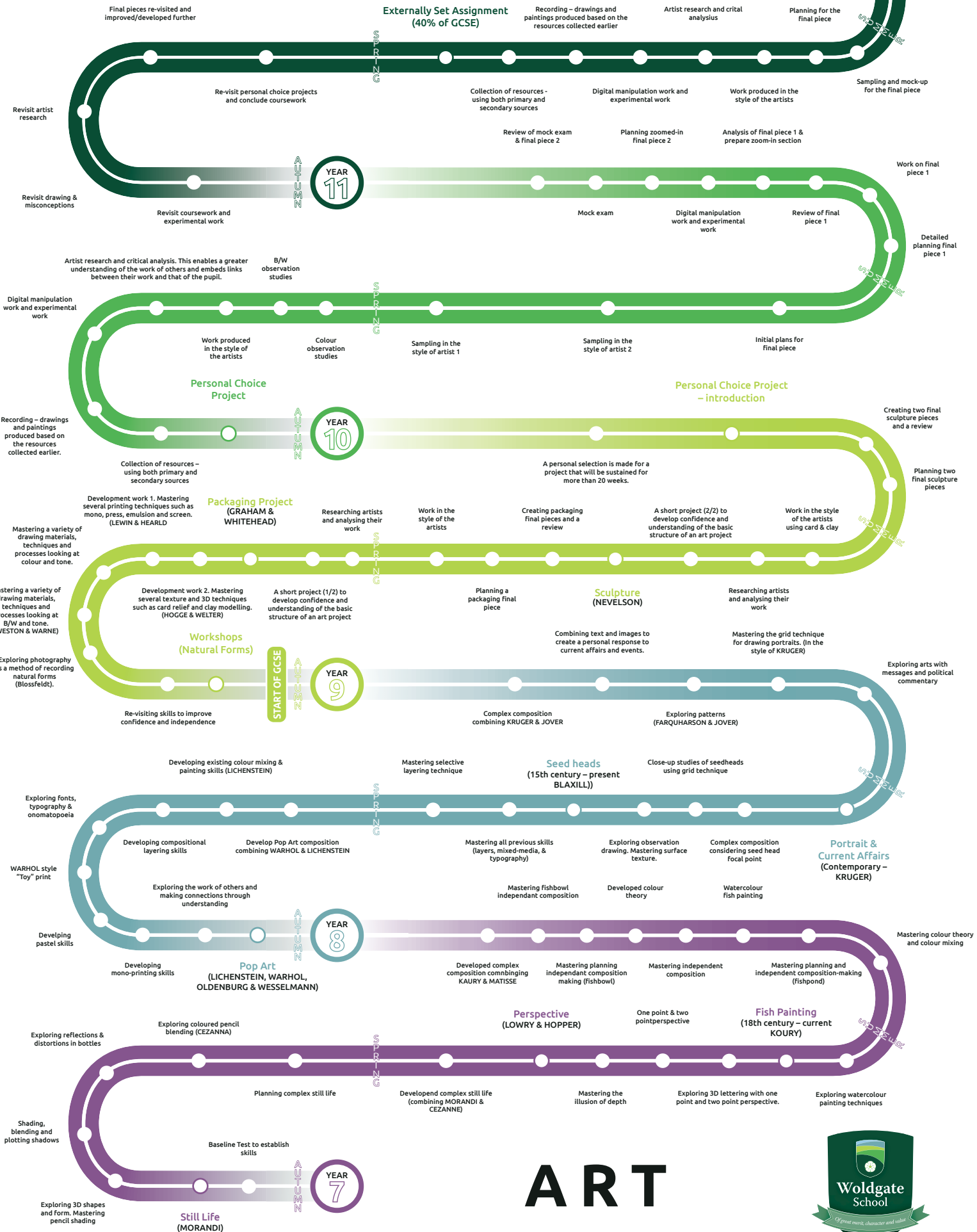
YEAR

7



GCSE EXAMINATIONS

Final piece produced under exam conditions (10 hours)



ART



- LINE
- TONE
- SHAPE & FORM
- COLOUR
- TEXTURE
- PATTERN

Vincent van Gogh

one of the most popular of the Post-Impressionist painters. He painted 900 paintings over 10 years, including the 'Sunflowers' series. He is well known for cutting off his ear lobe.

Can you name examples of 1 Point and 2 Point Perspective?

Key Words

Perspective art
representation of 3D objects or space in 2D artworks

1 Point Perspective
a drawing method that shows how things appear to get smaller as they get further away, converging towards a single 'vanishing point' on the horizon line.

Horizon
a physical or visual boundary where sky separates from land or water.

Eye level
the position of the eye of the viewer if the object is viewed from below.

Parallel Line
lines that never intersect, and they form the same angle when they cross another line.

Primary Colours
Colours that when mixed all other colours can be obtained (red, blue, yellow)

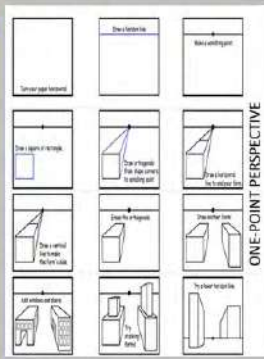
Secondary Colours
2 primary colours mixed together (purple, green, orange).

Vanishing point
The point in space where items seem to disappear.

Depth of field
the distance between the nearest and the furthest objects giving a focused image

Illusion
an instance of a wrong or misinterpreted perception of a sensory experience.

Station Point
the position of the observer

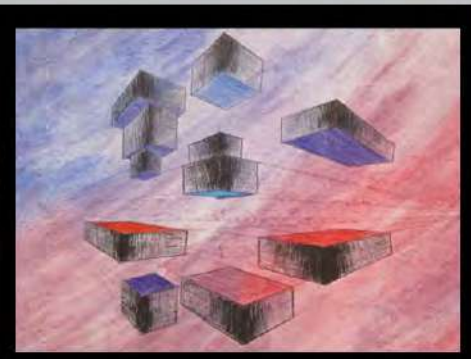
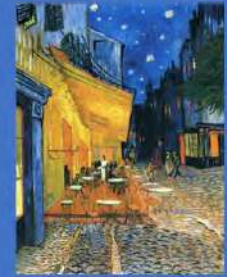


1 POINT PERSPECTIVE

JOHANNES VERMEER (1632-1675)
DUTCH PAINTER
THE MUSIC ROOM (1662)



VINCENT VAN GOGH (1853-1890)
DUTCH POST-IMPRESSIONIST PAINTER
CAFÉ TERRACE AT NIGHT (1888)



Challenge Questions:
Why is it important to learn about perspective?
Why is it important to learn about colour mixing?
What changes occur when you move the vanishing point (VP)?

- LINE
- TONE
- SHAPE & FORM
- COLOUR
- TEXTURE
- PATTERN

L.S. LOWRY

Laurence Stephen Lowry. Although best known for his mill scenes and industrial landscapes, Lowry's work covers a wide range of themes and subjects, from landscapes and seascapes to portraits and surreal imaginings.

What is the difference between 1 and 2 Point Perspective?

Key Words

Two Point Perspective
Is when you can see two vanishing points from your point of view (from a corner) and they are often used in architectural drawings and interior designs.

Three Point Perspective
Third vanishing point above gives the viewer the feeling of height and depth

Atmospheric perspective
Shows the colour changing (is lighter) the further away from you.

Sfumato
The word is derived from the verb "fumare", which means "to smoke." The sfumato technique refers to a painting with no bold or harsh outlines. By blurring and blending carefully, artists use sfumato to give a smoky, atmospheric effect to a painting.

Graduation
a gradual change of tone going from light to dark

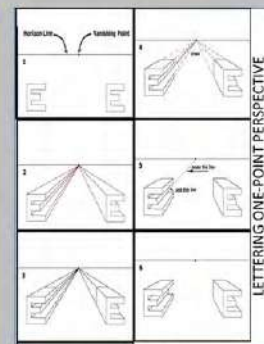
Linear
arranged in or extending along a straight or nearly straight line.

Scale
the appearance of size that our eyes see

Hues
A shade or colour.

Tertiary colours
One primary and one secondary colour mixed together.

Orthogonal lines
imaginary lines which are parallel to the ground plane and the line of sight of the viewer

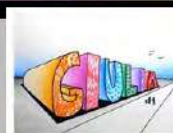


1 POINT PERSPECTIVE

GUSTAVE CAILLEBOTTE (1848-1894)
FRENCH IMPRESSIONIST PAINTER
LE PARC MONCEAU (1877)



L.S. LOWRY (1887-1976)
BRITISH ARTIST
THE ORGAN GRINDER (1934)



2 POINT PERSPECTIVE

Challenge Questions:
How do you show atmospheric perspective? What happens to your perspective drawing if you change the position of the horizon line?

PERSPECTIVE ART TIMELINE

EGYPTIAN WALL PAINTING (PRE-PERSPECTIVE)
1000 BC

MASO ACCIUSI (1270-1345)
RENAISSANCE PAINTER & MATHEMATICIAN
EARLY WORKS (UNKNOWN)

VINCENT VAN GOGH (1853-1890)
DUTCH POST-IMPRESSIONIST PAINTER
CAFÉ TERRACE AT NIGHT (1888)

SARKIS (1870-1927)
SPANISH CUBIST ARTIST
DINER IN LA VILLE (1910) (WINDSOR)

ALDO ROSSI (1931-1997)
ITALIAN ARCHITECT AND DESIGNER
LA STAZIONE (1964)

TRESTRAAM HILLER (1905-1983)
ENGLISH SURREALIST PAINTER
ALACORN (1951)

EDWARD HOPPER (1892-1967)
AMERICAN REALISM PAINTER
NIGHTHAWKS (1942)

EDWARD RUSCHA (1937-)
AMERICAN POP ARTIST
STANDARD STUDY #3 (1963)

ANDRÉ DERAIN (1864-1954)
FRENCH FAUVIST ARTIST
THE OLD TOWN CAGNES (1910)

L.S. LOWRY (1897-1990)
BRITISH ARTIST
THE OMBON GRANDE (1951)

HENRY MOORE (1895-1986)
BRITISH ARTIST & SCULPTOR
TUBE DIRECTOR PERSPECTIVE (1941)

ATKINS CALVELE (1916-2000)
BRITISH POP ARTIST
SUN GEORGE (1970)

JOHN PIPER (1903-1992)
BRITISH WORLD WAR II ARTIST
COVER THE CHURCH (1983)

THOMAS STRUTH (1954-)
GERMAN PHOTOGRAPHER
SCHLOSSSTRASSE, WITTENBERG (1991)

JOHN WONNACOTT (1946-)
THE NOTTINGHAM SCHOOL OF ART (1982-4)

PAUL NASH (1883-1946)
BRITISH SURREALIST PAINTER AND WAR ARTIST
THE BATTLEFIELDS OF THE SOMME (1915-42)

ANTHONY HERNANDEZ (1927-)
AMERICAN PHOTOGRAPHER
ROOF #17 (1999)

LUCA MONDO (1989-1984)
ARTIST FROM ITALIAN PHOTOGRAPHY
VIEW FROM VENEZIA (1984) (FOR THE POSTAL OFFICE)

BRIDGET RILEY (1931-)
ENGLISH OP ART PAINTER
FRANKS (1959)

JIRO TAKAMIZUKI (1916-1981)
JAPANESE OIL AND SURREALIST ARTIST
PERSPECTIVE PAINTING (1947)

JULIAN OPE (1958-)
ENGLISH OIL & DIGITAL ARTIST
IMAGINE YOU ARE DRIVING (1998-9)

SANDRO BOTTEICELLI (1465-1510)
ITALIAN PAINTER
ARCADE (1490)

BARHAEL (1580-1620)
DUTCH PAINTER
SCHOOL OF ARTISTS (1611)

JOHANNES VERMEER (1632-1675)
DUTCH PAINTER
THE MUSIC LESSON (1662)

PIERRE-AUGUSTE VALETTE (1876-1942)
FRENCH IMPRESSIONIST PAINTER
OXFORD ROAD MANCHESTER (1911)

GUSTAVE CAILLEBOTTE (1848-1894)
FRENCH IMPRESSIONIST PAINTER
LE PARC MONSIEUR (1877)

FRANCOIS BASTIEN LEPAGE (1734-1804)
FRENCH ARCHITECT
DESIGN OF THE THEATRE DE MONTPELLIER (1780)

DON MCCOLLUM (1915-)
BRITISH PHOTOJOURNALIST
THE BATTLEFIELDS OF THE SOMME, FRANCE (2000)

CAREY YOUNG (1970-)
BRITISH VISUAL ARTIST
BODY TECHNIQUES (ARTER SCULPTURE II)
KIRSTEN JUSTISEN 1969 (2007)

LEONID FEDIMOV (1962-2019)
RUSSIAN-SOVIET MODERN
IMPRESSIONISM ARTIST
ALLEY BY THE LAKE (UNKNOWN)

MICHELLE HUGHES (UNKNOWN)
BRITISH FINE ARTIST PRINTMAKER
WHITBY ABBEY STEPS (2022)

PATRICK BORREBAUM (1959-)
AMERICAN CITYSCAPE ARTIST
EMERSON (1984)

ANDY BURGESS (1969-PRESENT)
BRITISH AMERICAN ARTIST
PARATY HOUSE BRAZIL (2014)

DAVID HOCKNEY (1937-)
BRITISH POP ARTIST
SALT'S MILL, BRADFORD (2011)

21ST CENTURY



- LINE
- TONE
- SHAPE & FORM
- COLOUR
- TEXTURE
- PATTERN

Aleah Koury
Contemporary American artist that uses watercolour in a very soft and delicate way to show detail and colour in his work. He uses complementary colours to show contrast

Can you name 2 complement ary colours?
How do you darken a colour?

Key Words

Complementary
colours opposite each other on the colour wheel and used to darken a colour.
Colour Wash
2 primary colours mixed together (purple, green, orange).
Harmonious
colours sit beside each other on the colour wheel (red orange)
Analogous
the color grouping has similarities. These color scheme types have close relationships to one another. Here are a few examples of analogous color schemes: Yellow, yellow-green, green. Violet, red-violet, and red.
Warm & Cool Colours
Warm: Red Orange Yellow and Red-Purple. Cool: Blue Green Purple and Yellow-Green.
Monochromatic colours
single colour scheme varying in shades and tints
Wet-on-wet
Applying wet paint on to a wet surface.
Aerial View
to any view from a great height, even at a wide angle, as for example when looking sideways from an airplane window or from a mountain top.
Birds Eye View
a general view from above
Movement
colour, line, shape and composition, to create an illusion of motion or dynamism in a two-dimensional artwork

ALEAH KOURY (1952-)
AMERICAN CONTEMPORARY IMPRESSIONIST ARTIST
KOI (UNKNOWN)



HENRI MATISSE (1869-1954)
FRENCH ARTIST
THE GOLDFISH (1912)



MIKE SAVLEN (1963-)
AMERICAN EXPRESSIONIST ARTIST
EXPRESSIONIST PERMIT (2021)



ASSESSMENT: FISH PAINTING



Always put the 3 primary colours on the colour wheel first, then half-way between the primaries, place the 3 secondaries. The tertiary colours fill in the remaining gaps. Add white to create the lighter hues in the central circle.

Challenge Questions:
What does working wet-on-wet do to the paint? How can you paint highlights (2 different ways)? Why do we layer watercolour paint? Why are there different sizes and shapes of paint brush?

- LINE
- TONE
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M.C. ESCHER
Maurits Cornelis Escher was a Dutch graphic artist who made mathematically inspired woodcuts, lithographs, and mezzotints.

What is Tessellation? What subject uses tessellation?

Key Words

Pattern
A repeated decorative design.
Reflection
A mirror image.
Repetition
A shape or design repeated multiple times.
Rotation
The movement of something like a shape through 90 degrees or more.
Tessellation
An arrangement of shapes closely fitted together in a repeated pattern without gaps or overlapping. Another word used is tiling.
Chroma
the strength or dominance of the hue (colour)
Saturation
refers to the intensity and vividness of colour
Value
defines how light or dark a given colour or hue can be
Tint
any hue or mixture of pure colours to which white is added to lighten it
Shade
Any hue mixed with the opposite colour to darken it

M.C. ESCHER (1898-1972)
DUTCH GRAPHIC ARTIST
BIRD FISH NO. 110 (1961)



ERNST HAECKEL (1834-1919)
GERMAN ZOOLOGIST AND ARTIST
OSTRACIONTES (1904)

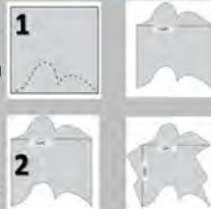


PAUL KLEE (1879-1940)
SWISS GERMAN ARTIST
FISH MAGIC (1925)



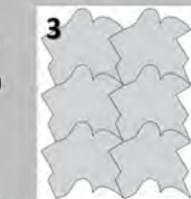
TRANSLATION TESSELLATION

- CUT ALONG BOTTOM EDGE & TAPE ON TOP EDGE
- CUT ALONG RIGHT EDGE & TAPE ON THE LEFT EDGE
- ON A CLEAN PAGE TRACE ROUND YOUR SHAPE (SIDE A)
- FLIP YOUR SHAPE (SIDE B) MOVE AND TRACE YOUR SHAPE
- REPEAT FLIPPING & MOVING YOUR SHAPE COVERING THE PAGE



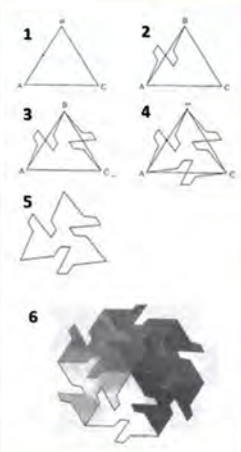
REFLECTION TESSELLATION

- CUT ALONG BOTTOM EDGE & TAPE ON TOP EDGE
- CUT ALONG RIGHT EDGE & TAPE ON THE LEFT EDGE
- ON A CLEAN PAGE TRACE ROUND YOUR SHAPE (SIDE A)
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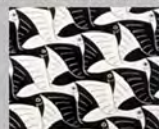


ROTATION TESSELLATION

- CUT ALONG BOTTOM EDGE & TAPE ON TOP EDGE
- CUT ALONG RIGHT EDGE & TAPE ON THE LEFT EDGE
- ON A CLEAN PAGE TRACE ROUND YOUR SHAPE (SIDE A)
- FLIP YOUR SHAPE (SIDE B) MOVE AND TRACE YOUR SHAPE
- REPEAT FLIPPING & MOVING YOUR SHAPE COVERING THE PAGE



NOW DRAW A BIRD OR ANIMAL TO YOUR SHAPE & ADD COLOUR TO YOUR TESSELLATION



Challenge Questions: How do you create a tessellation pattern? Can you name examples of tessellation patterns?

FISH ARTIST TIMELINE

AGADES EGYPTIAN WALL PAINTING
(1422-1411 BC) OF FISH, TOADS OF
MENNIA THE SCORP, TREES.



1500 BC

CLARA PEETERS (1607-1621)
FLEMISH STILL LIFE PAINTER
STILL LIFE OF FISH AND CAT (1620)



17th CENTURY

VINCENT VAN GOGH (1853-1890)
DUTCH POST-IMPRESSIONIST
PAINTER
STILL LIFE WITH MACKEREL,
LEMONS AND TOMATO (1886)



GUSTAVE COURBET (1819-1877)
FRENCH REALIST PAINTER
THE TROUT (1871)



19th CENTURY

TURUKOYA YOSHITARI (1819-1872)
JAPANESE PRINTMAKER
EARLY WORKS (UNKNOWN)



KATSUSHIKA HOKUSAI (1760-1849)
JAPANESE ARTIST
FISHING BY TOUCHICHIKI IN KAIKI PROVINCE
(1833)



MIKE SAVLEN (1963-)
AMERICAN EXPRESSIONIST ARTIST
EXPRESSIONIST PERMIT (2021)



ANDREA LARKO (1984-)
AMERICAN ARTIST
NO TITLE (UNKNOWN)



J VINCENT SCARBINE (1971-2009)
AMERICAN ARTIST
THE BLUE FISH (UNKNOWN)



ROBERT DAVIDSON (1946-)
CANADIAN HAIDA HERITAGE ARTIST
FISHERMAN'S DELIGHT (2019)



21st CENTURY

YUSETI NAGASHIMA (UNKNOWN)
JAPANESE PAINTER
LETHRINUS NEBULOSUS (UNKNOWN)



MARCIA BALDWIN (UNKNOWN)
AMERICAN FINE ARTIST
HAPPINESS KOI (2016)



16th CENTURY

ADRIAN VAN OOSTADE (1540-1596)
DUTCH STILL LIFE PAINTER
ADRIAN VAN OOSTADE (1540-1596)



ADRIAEN COENEN (1514-1587)
DUTCH ILLUSTRATOR
VORSCHEK (1570)



PETER BRUGEL THE ELDER (1525-1569)
DUTCH PAINTER
BIG FISH EAT LITTLE FISH (1557)



18th CENTURY

CLARA PEETERS (1607-1621)
FLEMISH STILL LIFE PAINTER
STILL LIFE OF FISH AND CAT (1620)



ANNE VALLAYER-COSTER (184-1878)
FRENCH ARTIST
MACKEREL, GOATFISH,
A LOAF OF BREAD AND LEMON (1787)



KATSUSHIKA HOKUSAI (1760-1849)
JAPANESE PAINTER & PRINTMAKER
FISH (1795)



TERRY GALECKI (1964-)
AMERICAN COLLEMBIAN FINE ARTIST
IT'S A SMALL WORLD (UNKNOWN)



HENRI MATTISSE (1869-1954)
FRENCH ARTIST
THE GOLDFISH (1912)



20th CENTURY

KEN SCOTT (UNKNOWN)
AMERICAN TEXTILES DESIGNER
A FISH IS A FISH (1961)



ERNST HAECKEL (1834-1919)
GERMAN ZOOLOGIST AND
ARTIST
OSTRACIANTES (1904)



M.C. ESCHER (1898-1972)
DUTCH GRAPHIC ARTIST
BIRD FISH NO. 110 (1961)



PAUL KLEE (1879-1940)
SWISS GERMAN ARTIST
FISH MAGIC (1925)



ALEAH KOURY (1952-)
AMERICAN CONTEMPORARY
IMPRESSIONISM ARTIST
KOI (UNKNOWN)



ABDUS HALIM BADOWI (1939-2006)
SAUDI ARTIST
STILL LIFE WITH FISH (1973)



CLIFFORD POSSUM TINDALBAIR (1932-2002)
AUSTRALIAN ABORIGINAL PAINTER
FISH (UNKNOWN)



PABLITA VELARDE (1918-2006)
AMERICAN PAINTER
EARTH (1980)





GCSE EXAMINATIONS

2 GCSE Exam Papers

Revision

Search with SQL

Purpose and functionality of systems software

Programming languages

Functions of the OS

Files, fields and attributes

Sort with SQL

Operating systems

Translators and facilities of languages

Utility system software

Structured Query Language

Logic

RAM and ROM

CPU components and their functions

CPU

YEAR 11

Structured data

Truth tables

Types of storage and their suitability

Storage and memory

Hardware

Data mine

Sorting algorithms

Networks

Hardware

Transmission methods

Protocol stack

VPN

Library code

Searching algorithms

Trace tables

Types of networks, PAN, LAN, WAN

Protocols

Addressing

WiFi

Algorithms

Compression

Using Binary data

Use of data types

Data

Ascii Art

Using Hexadecimal data

Analog

Functions

Data types

Negative numbers in computing

Hex

Algorithms

Producing algorithms

Chat app

Lists

Converting between number bases

Maths for Computer Science

Computational thinking

Story game

Types of error

Quiz host

Pixels, resolution and colour depth

YEAR 9

Number bases – decimal binary and hexadecimal

Analysing data

The investigative cycle

Using software to visualise data sets

Sound editing

Image editing

Digital images

Layers of computing systems

Hardware

Operating systems

Artificial Intelligence

Introduction to Python programming

Using assignment statements

Using binary selection

Boolean variables

Locating and correcting syntax errors

Operations on strings

Representations going audiovisual

Using data

Collecting data

Modelling data using spreadsheets

Using block based programming

Mobile apps

Modifying markup

Working with multiple objects

Using variables to track counts and sums

YEAR 8

Making calculations on a spreadsheet

Spreadsheets

Developing an app

GUI elements

Programming using scratch

Paths

Manipulating shape

Credibility of sources

Networks

Wired and wireless networks

Programming using scratch

Sequence and variables

Iteration

Website building blocks

Searching the web

Media vector graphics

Word processing

Promoting a cause

Networking hardware

The internet

Programming essentials

Operators

Developing for the web

Shortcuts

Navigating the web

Using Media to gain support for a cause

Branding

Digital Media

YEAR 7

Presenting

Adding content

Getting the message across

COMPUTING


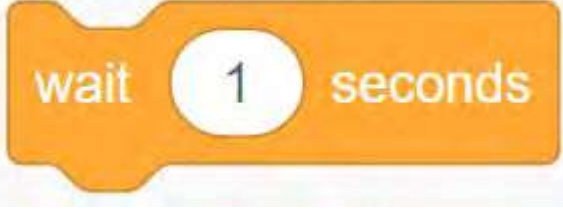




Knowledge Organiser - Scratch Programming

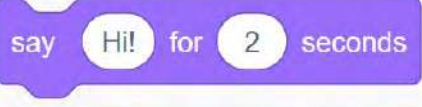
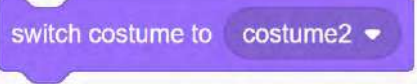
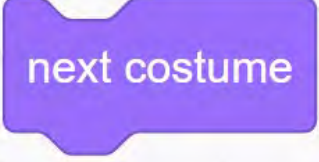
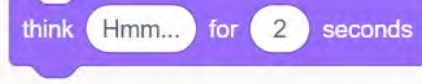
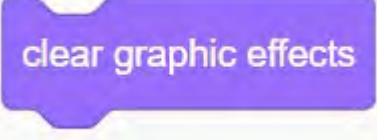
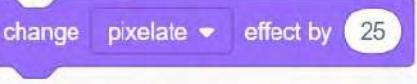
Key Terms & Definitions

Sequence	One of the three basic programming constructs. Instructions that are carried one after the other in order.
Selection	One of the three basic programming constructs. Instructions that can evaluate a Boolean expression and branch off to one or more alternative paths.
Iteration	One of the three basic programming constructs. A selection of code that can be repeated either a set number of times (count-controlled) or a variable number of times based on the evaluation of an expression (condition-controlled).
Variable	A value that can change depending on conditions or information passed to the program.
Operators	Operators in Scratch are symbols or functions that perform specific operations on data or variables. Scratch provides various types of operators, including arithmetic operators (+, -, *, /), comparison operators (>, <, =), logical operators (AND, OR, NOT), and string operators (concatenation).
Count-controlled iteration	Count-controlled iteration, also known as a loop or repetition, allows programmers to repeat a set of instructions a specific number of times.
Computer bug	Code that causes your computer to behave in an unexpected way
Subroutine	A block of code within a program that is given a unique, identifiable name. Supports code reuse and good programming technique.
Decomposition	Breaking down a problem into smaller, more manageable parts in order to make the problem easier to solve
List	A data structure that allows multiple pieces of data under a single name
Data structure	A way of organising and managing data in a programming language that ideally enables efficient access and modification of the data

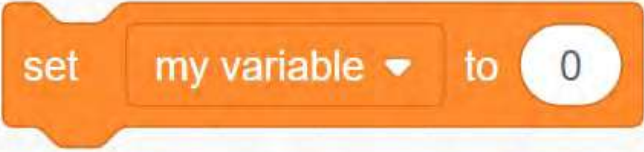
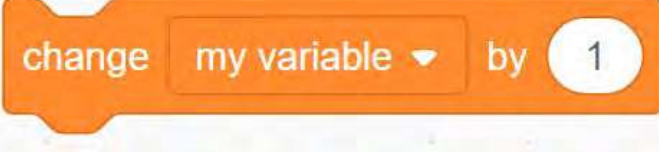
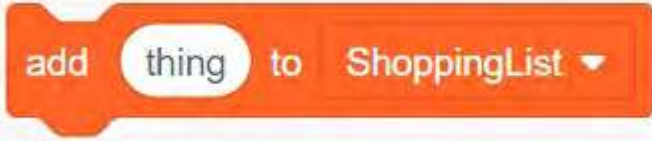

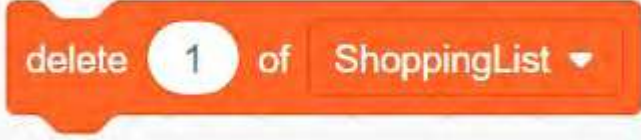

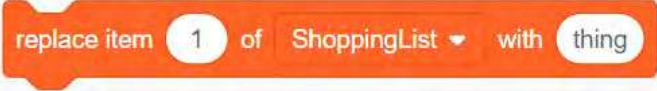


Control/Event Blocks

	
<p>Used to identify the starting point of the program. When you click the green flag, the program will start by running the block after this one</p>	<p>Forces the program to wait a certain amount of time before moving onto the next instruction</p>
	
<p>Used to run sprite code when a certain message is received from another sprite</p>	<p>Used to send a message to other sprites</p>

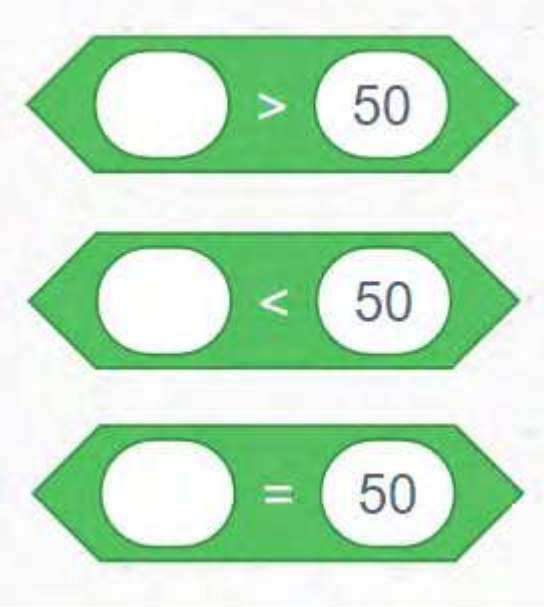
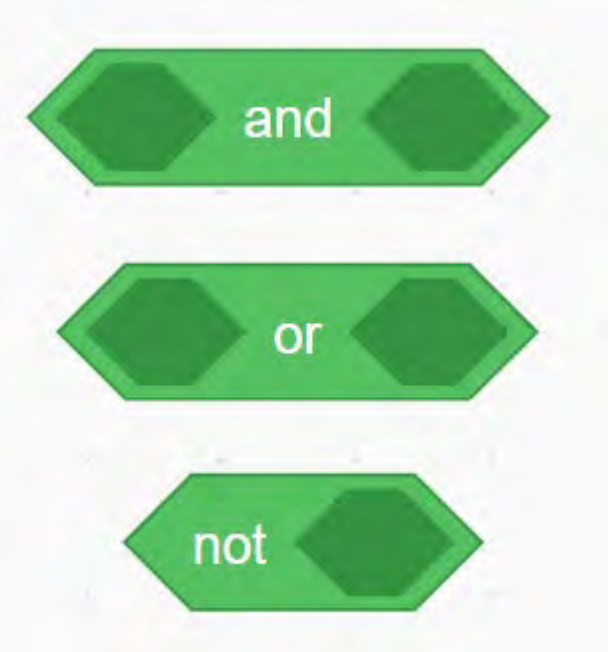


Looks Blocks

		
<p>Causes the sprite to say a message for a certain amount of time</p>	<p>Used to change the appearance of a sprite</p>	<p>Changes the costume (appearance) of the sprite to the costume after the current costume</p>
		
<p>Another way to output to the screen. Causes the message to appear in a 'thought bubble' next to the sprite</p>	<p>Removes any graphical effects that have been applied to the sprite</p>	<p>Used to apply a graphical effect to a sprite</p>

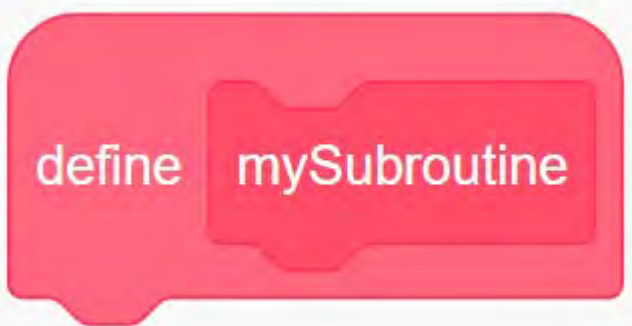

Variables Blocks

	
Used to set the value of a variable.	Used to change the value of a variable.
	
Adds an item to a list variable	Deletes all the items in a list variable
	
Deletes a certain item in a list variable	Checks if an item is in a list variable
	 
Swaps an item in the list out with another item	Used to display or hide a list on the screen


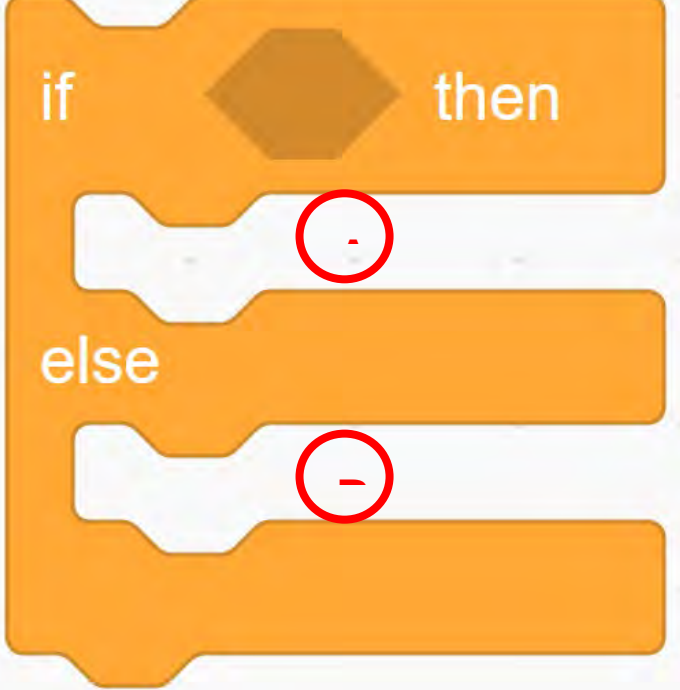
Operator Blocks

	
<p>Comparison operators. Used to make a comparison between two values or variables.</p>	<p>Logical operators. Used to create boolean expressions.</p>
	
<p>Joins together (concatenates) two strings into a single string.</p>	<p>Finds the length of a string.</p>

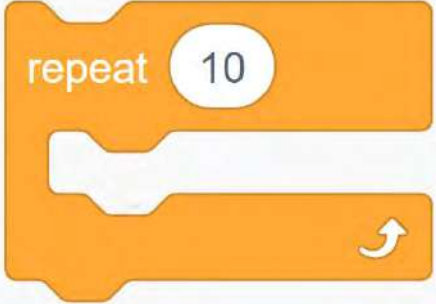


Subroutine Blocks

	
<p>Used at the start of a subroutine to identify where the subroutine begins.</p>	<p>Used to tell Scratch to run code in a subroutine.</p>

Selection Blocks

	
<p>Runs the code in the block if the condition is true</p>	<p>Runs the code in gap A if the condition is true. Runs the code in gap B if the condition is not true (false)</p>

Iteration Blocks

		
<p>Count-controlled iteration - code inside the block repeats a set number of times</p>	<p>Condition-controlled iteration - code inside the block repeats until the condition is met (true)</p>	<p>Infinite iteration - repeats the code inside the block until the program is stopped by the user</p>

HTML & CSS

HTML uses tags to create a basic page structure.

Each tag has an open and close part.

Eg

```
<html></html>
```

Some tags sit inside of other tags and are used to build the page structure.

```
<html>
  <head>
    <title>A Meaningful Page Title</title>
  </head>

  <body>
    <h1>Heading</h1>
    <p>Some Text</p>
    <p>More Text</p>
    <ul>
      <li>Item 1</li>
      <li>Item 2</li>
    </ul>
  </body>
  <footer>
    <p>This is the footer</p>
  </footer>
</html>
```

CSS is used to alter the layout and appearance of a web page

```
h2 {
  color:DarkRed;
}
```

Writing CSS

A benefit of using CSS is that changes only need to be made in one place

```
h2 {
  color:DarkGreen;
}
```

Linking CSS

The CSS file link is placed in the head of the HTML document.

```
h2 {
  color:DarkBlue;
}
```

The start of the process

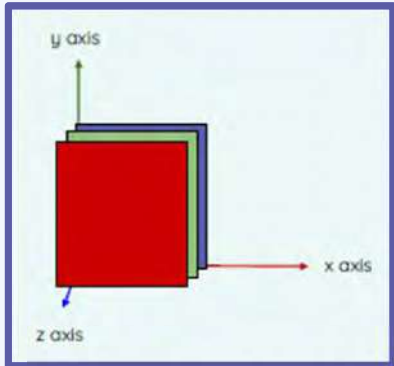
The first step in digesting food is its breakdown by the mouth.

```
<!DOCTYPE html>
```

```
<html>
  <head>
    <meta charset="utf-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <title>Website Example</title>
    <meta name="description" content="">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="format.css">
  </head>
  <body>

  </body>
</html>
```

Style Sheet Link in HTML



<p>Icon</p>	<p>Illustration</p>	<p>Logo</p>
--------------------	----------------------------	--------------------

In Inkscape you can draw your own lines and shapes.

The lines can be:

- Straight
- Curved
- Freehand

Vector

Source
A B is layer based

Union
The set of elements that belong to either A or B, or possibly both

Difference
Subtraction A - B

Intersection
The set of elements that belong to both A and B

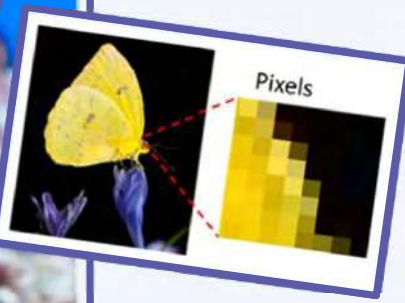
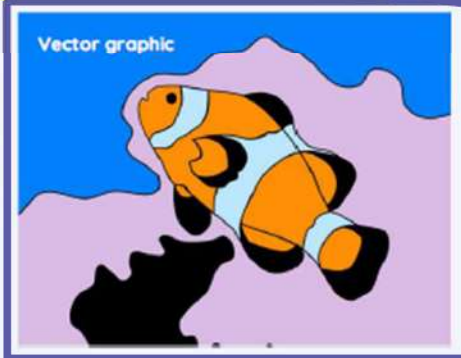
Object **Path**

Shapes that are created in Inkscape can be converted into editable paths.

Raster

A vector path has **nodes** at the start, end, and at changes of direction.

Nodes can be moved or removed. They can also be added at any point along a line.



Year 7 Computer Science Mobile App Development Knowledge

Key Word	Definition
Decomposition	Breaking complex problems down into smaller, more manageable ones.
Object Ids	Used for referencing the object in event handlers or other UI element modification functions.
Object Properties	Control things like the object's size, rotation, and position.

The collage illustrates various aspects of mobile app development:

- Tappy Tap App Screens:** Three screens showing the app's progression from a splash screen to a game screen with a score counter.
- KS2 Maths App:** A screen featuring a calculator icon and a space-themed graphic.
- Your Weight in Space:** A screen with a space-themed graphic.
- Clicky Biscuits:** A screen featuring a chocolate chip cookie.
- Virtual Pet:** A screen featuring a cartoon cat.
- Event-Driven Programming:** A diagram showing a hand tapping a button on a screen, which triggers code execution (e.g., `onEvent` and `setScreen`), leading to a new screen state.
- Score Display:** A large screen showing "Your score was: 10" with a dashed box around the number 10. A code snippet next to it defines the label: `id: userScoreLbl`, `text: 10`, `font size: 50`, and `type: label`.

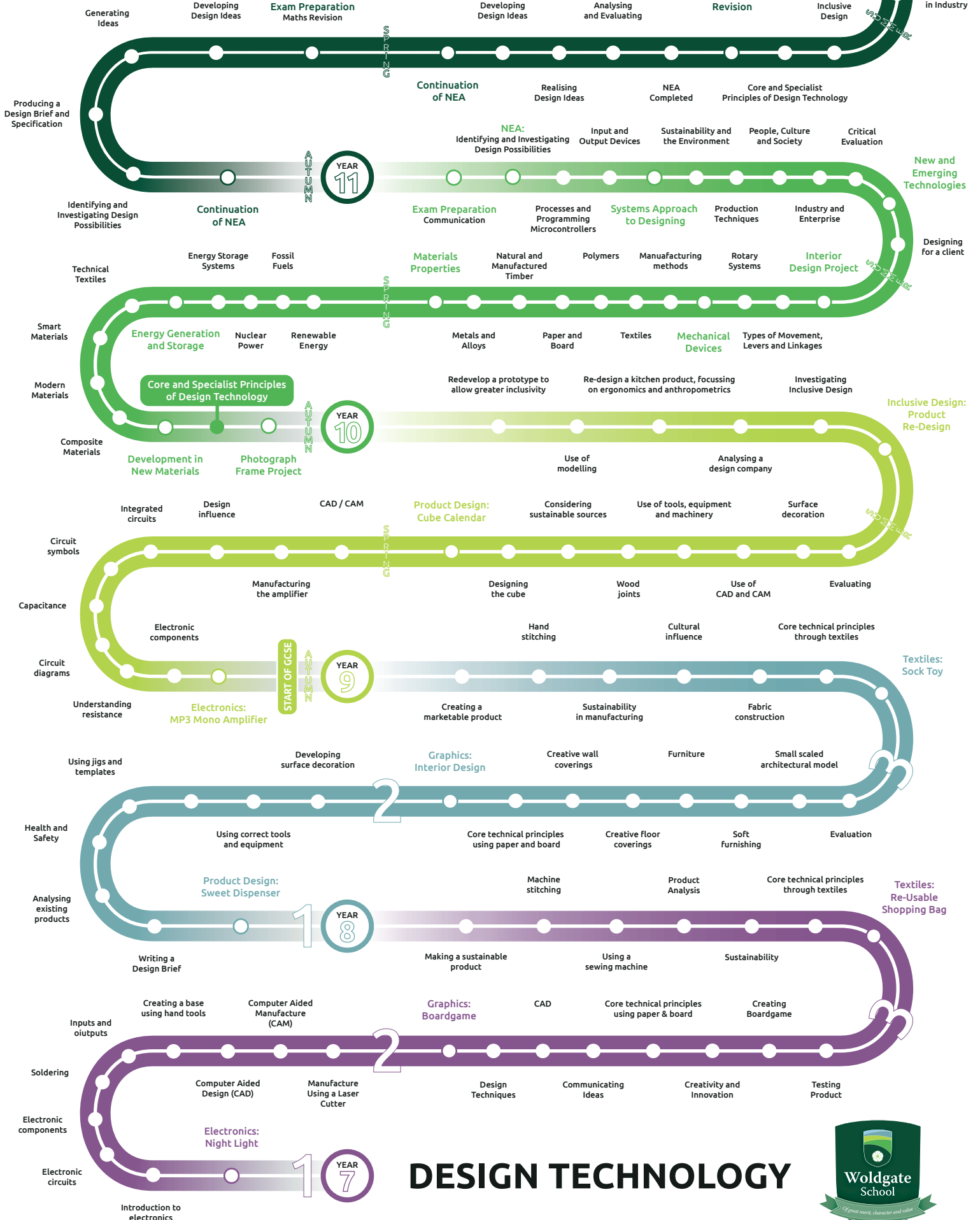


GCSE EXAMINATIONS

1 Written Paper

Maths Revision

Manufacturing in Industry



DESIGN TECHNOLOGY

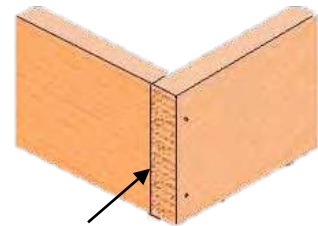


Y7 Materials:

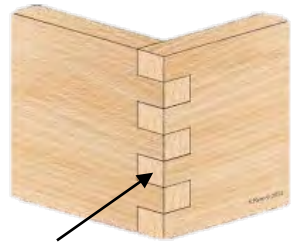
Timber types.
Polymer types.
Joining techniques
3D drawing.
Marking, cutting and finishing skills.

	Hardwood	softwood
leaves	Broad leaves	needles
Evergreen / deciduous	Deciduous (loses leaves in Autumn)	Coniferous (evergreen)
growth	Slow growing- broad	Faster growing – tall and thin
Cost of wood	expensive	cheaper

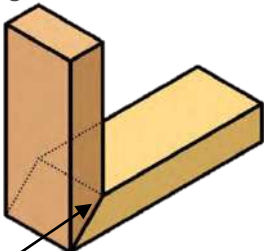
	ThermoFORMING plastics	ThermoSETTING plastics
Heat forming	Can be heated and re-formed again and again.	Can only be heated and formed ONCE then it is 'SET'.
Recyclability	Easy to recycle	Very difficult to recycle
Qualities	Strong, lightweight, low melting point.	Strong, heat resistant, hard.
Uses	Bottles, packaging.	Plugs, sockets



A **butt joint** is when two pieces of wood are connected end-to-end without any special cuts and connected using glue, nails or screws. Butt joints are weak.



Finger-joints are used to join short pieces of wood form longer ones. "Fingers" of wood are cut and held together with glue. Finger joints are strong with a larger surface area.



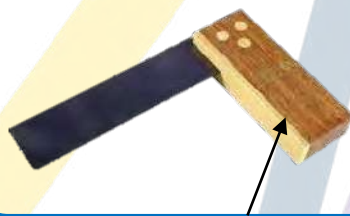
A **mitre joint** is a joint made by cutting each of two parts at a 45° angle, to form a corner, usually to form a 90° angle. They are used in picture frames and are weak.

Plywood is a composite material manufactured from thin layers, of wood **vener** that have been stacked and glued together. It is a manufactured board. The sheets of wood are stacked such that each layer has its grain set at 90 degrees to its adjacent layers. This reduces the tendency of wood to split, and it increases its strength.

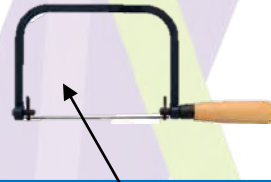
THERMOFORMING PLASTICS - TYPES

1	2	3	4	5	6	7
PETE	HDPE	PVC	LDPE	PP	PS	OTHER
Polyethylene Terephthalate	High Density Polyethylene	Polyvinyl Chloride	Low Density Polyethylene	Polypropylene	Polystyrene	Other
Recyclable	Recyclable	Recyclable at specialist points	Recyclable at specialist points	Recyclable	Recyclable at specialist points	Not easily recyclable

Acrylic is a strong, rigid thermoforming plastic which comes in a range of colours and transparencies. It is easy to form as it has a low melting point. It is safe and suitable for use in signage, displays and windows.



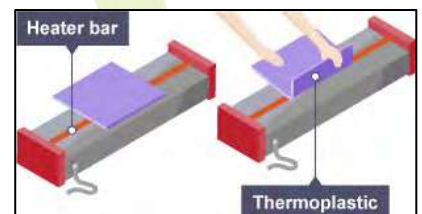
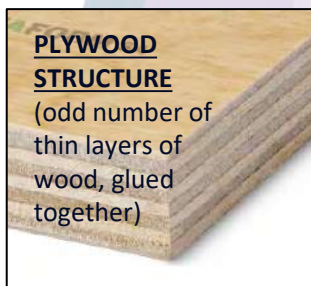
Try Square: Used for marking out straight lines at 90 degrees.



Coping Saw: Used for cutting Woods or plastics with the ability to turn corners..



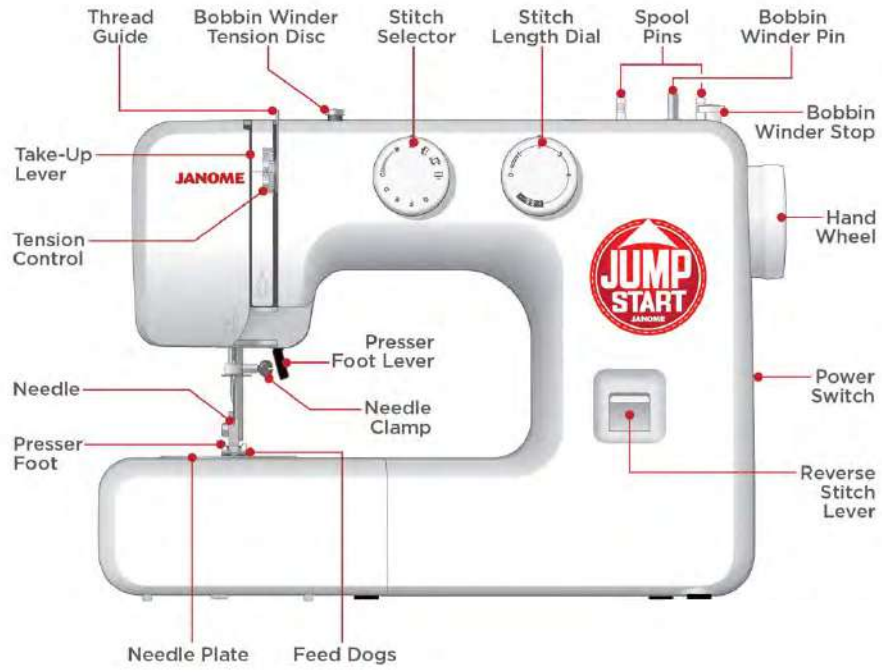
Files: Used for filing down material for an accurate shape and fit.



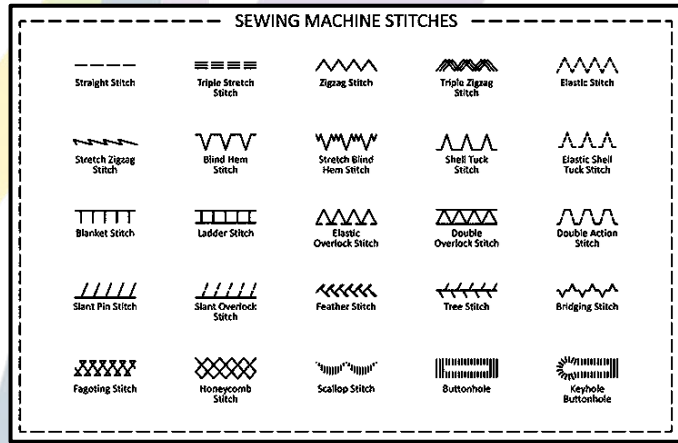
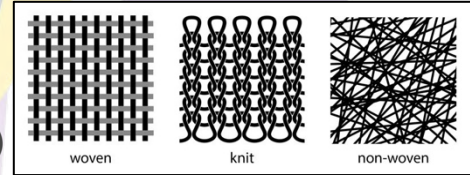
LINE BENDER: hot wire used to heat areas of acrylic to then bend.



Fabrics are made in many different countries around the world. Some of the largest producers of textiles and fabrics include China, India, and Pakistan, which are known for their large-scale textile manufacturing industries.



Fabrics can be:
WOVEN
KNITTED
NON_WOVEN (BONDED)



Fabric	Source	Attribute
cotton	shrub	Lightweight and absorbent.
silk	Silkworm	Smooth, high shine, strong fabric finish.
Lambs' wool	sheep	Softness, elasticity, warmth.
cashmere	Indian cashmere goat	softness
bamboo	Grass pulp	Lightweight, pliable fibre.
jute	Vegetable plant	Strength, durability
acrylic	Crude oil / petroleum	Lightweight, warm, dries quickly.
nylon	Crude oil / petroleum	Durable, strong, lightweight, dries quickly.
polyester	Crude oil / petroleum	Durable, strong, lightweight, dries quickly.
kevlar	aramid	Very strong – hence Kevlar's use in bullet-proof vests.



A component is a product which has not been made as part of the manufacturing process. It is instead brought in from an external source. Examples of components are screws, bolts, zips, press-studs.

CLOCK COMPONENTS:

- Brass nut
- Hour hand
- Minute hand
- Second hand
- Rubber washer
- Battery (AA)



CAD (COMPUTER AIDED DESIGN):

What is CAD: Computer Aided Design (CAD) is software which is used by designers, architects and engineers to create drawings which are precise. These drawings can then be used to create 3D models or products using Computer Aided manufacturing processes (CAM), such as laser cutting.

CAD advantages:

1. Drawings are accurate.
2. Intricate and detailed work can be achieved.
3. Files are easier to store than hand drawn designs
4. Corrections can be made easily.
5. Ease of repetition for identical parts.
6. Easy to link to CAM to produce 3D outcomes.
7. Easy to communicate ideas between professionals.
8. Can be used to create simulations to show clients.

CAD disadvantages:

1. Work can be lost or corrupted.
2. Work can be stolen or hacked.
3. It takes time and money to train staff on software.
4. Initial set up costs of machines and software are high.
5. Less workers are required, creating a job shift.

Vector Line (stroke)	Raster Shape (fill)
<ul style="list-style-type: none"> • laser-cutting or engraving • laser moves in the path of the line cutting partway or all the way through the material 	<ul style="list-style-type: none"> • laser-engraving • laser moves back and forth like a ink jet printer vaporising material
digital vector drawing	digital raster drawing
cross section engraving (left) cutting (right)	cross section engraving

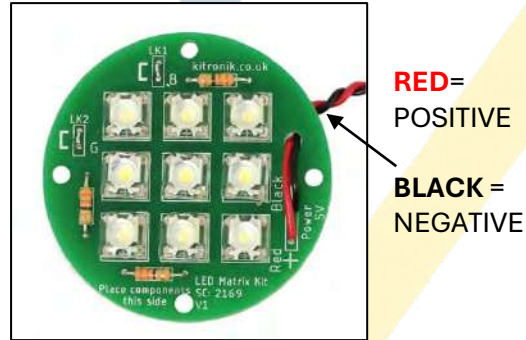
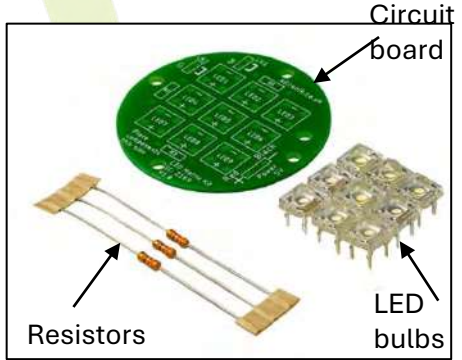
select, Straight line, Circle, Arc, shapes, curve, Double line, Fill, path, Text, dimensions, contour, Alignment, Vectorise, Clipping mask, Select zoom, Undo last move, delete, Grid lock, Step lock, Refresh screen, Zoom in, Zoom out, last, media, all, select, UNDO LAST, DEL ANY

Listed below are the 8 steps of the laser cutting process:

- Material Preparation. Workpieces must be set up in order to ensure a precise cut.
- Ensure setting are correct:
 - RED = ENGRAVE
 - BLACK = CUT
- Laser Beam Focusing.
- Cutting Process with extraction on.
- Check design is cutting correctly.
- Removal of pieces and Finishing.

Biomimicry in product design.
Designing from nature.
Electronics Sustainable materials.

Y7 Biomimicry:



BIOMIMICRY DEFINITION:

BIO = LIFE
MIMIC = COPY

The designs and structures that are modelled on natural forms.

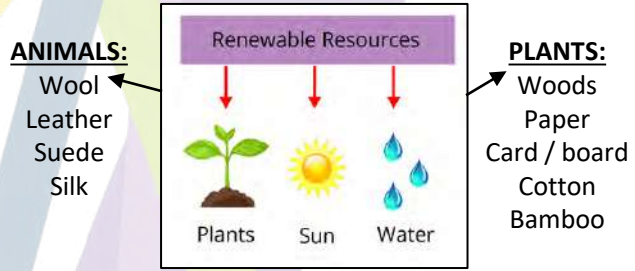
Advantages of LED bulbs

1. LEDs are more energy efficient than traditional bulbs, therefore cost less to use.
2. LED bulbs have a longer life span so do not need to be replaced as often.
3. LEDs have less environmental impact.
4. LEDs have low UV and heat emissions.
5. LEDs are safer than traditional bulbs.
6. LED bulbs are brighter.
7. LED bulbs are able to be dimmed.
8. LEDs come in a wide range of colours.



Renewable materials come from sources which are sustainable (can be re-grown or bred). Animals need plants, sun and water to survive, therefore these are the ultimate renewable resources.

Below are examples of materials which come from animals and plants (as a result of plants, sun and water)



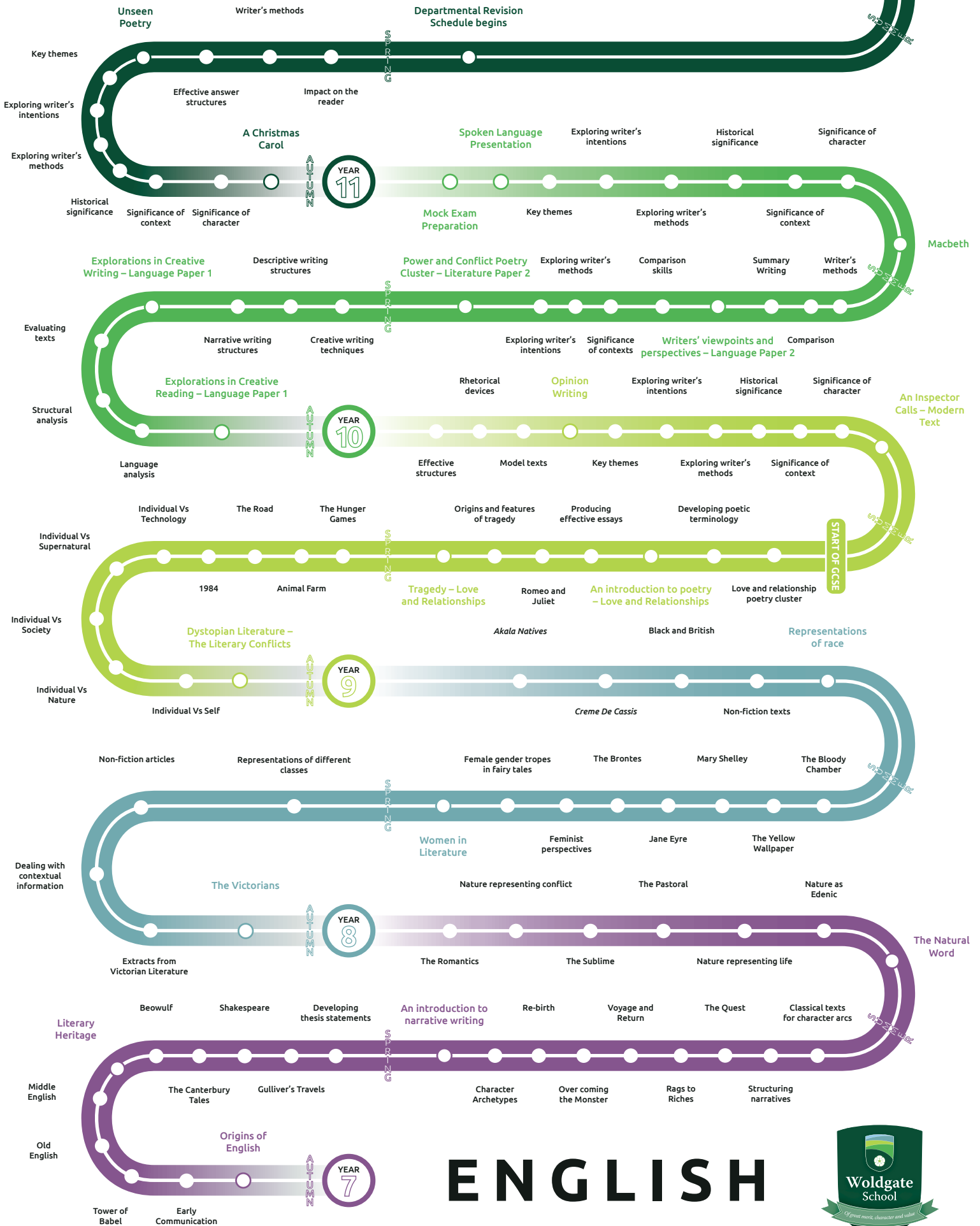
SUSTAINABLE TIMBER: We all use things made from wood every day. From the books we read and paper we write and draw on, to the furniture we sit, eat and sleep on. When forests are looked after properly, they can provide a renewable source of wood forever. In England, the nation's forests are independently certified, meeting both national and international standards of sustainable forestry. We manage our forests to balance the benefits they offer, providing habitats for wildlife to thrive and spaces for people to enjoy. By providing homegrown timber to the nation, we can also reduce demand on the resources of other countries where forests may not be managed responsibly. Growing and using sustainable wood also helps tackle the climate crisis. For a sustainable future we need to use more wood to replace fossil fuel intensive products, like plastic, and to lock up carbon from the atmosphere.



GCSE EXAMINATIONS

Two English Language Papers

Two English Literature Papers



ENGLISH



The Natural World

Glossary Words

Edenic	(adjective) Relating to or characteristic of the garden of Eden
Pastoral	Pastoral poetry is known for exploring the relationship between humans and nature, and for romanticizing the ideals of a simple country life
The Sublime	A meeting of the subjective-internal (emotional) and the objective-external (natural world): when we allow our emotions to overwhelm our rationality as we experience the wonder of creation The sublime is associated with objects and events that, while threatening, are yet a source of 'delight'. E.g., In nature, lofty mountains, raging seas and erupting volcanoes may all, when viewed under the right circumstances (not too close, but not too distant), be regarded as sublime.
Stanza	(A verse) A group of lines in a poem organised together – often with a recurring pattern
Caesura	A pause in a poetic line or a sentence. It often occurs in the middle of a line, or sometimes at the beginning and the end
Enjambment	A line of poetry carries its idea or thought over to the next line without a grammatical pause
Sonnet	A poem of fourteen lines using any of a number of formal rhyme schemes, in English typically having ten syllables per line
Form	Form is a term that means the style in which a text is written
Rhythm	the measured flow of words and phrases in verse or prose as determined by the relation of long and short or stressed and unstressed syllables
Rhyme	similarity of sound between words or the <u>endings</u> of words, especially when these are used at the ends of lines of poetry.
Blank Verse	poetry written in unrhymed but metered lines, almost always iambic pentameter
Iambic Pentameter	a line of verse with five metrical feet, each consisting of one short (or unstressed) syllable followed by one long (or stressed) syllable
Simile	A simile is a figure of speech that directly compares two things. Similes differ from metaphors by highlighting the similarities between two things using comparison words such as "like", "as", "so", or "than"
Metaphor	A metaphor makes a comparison by stating that one thing is something else
Pathetic Fallacy	The phrase pathetic fallacy is a literary term for the attribution of human emotion and conduct to things found in nature that are not human.

What is a theme?

An idea that runs through a text, which helps to shine a light on the meaning of a work.

Romantic Poetry

-Romantic poetry was a major part of the Romantic movement that occurred between 1800 to 1850.

-Romantic poetry is all about expressing the poet's emotions and individual view of the world.

-Romantic poetry often focuses on nature, beauty and imagination. Despite its name, Romantic Poetry is not normally about romantic love.

-It is all about one's inner thoughts and spirituality.

Romantic poetry emerged as a rejection of the industrial revolution and the realist ideas of the time.



Spring in War-Time

BY SARA TEASDALE

I feel the spring far off, far off.
The faint, far scent of bud and leaf—
Oh, how can spring take heart to come
To a world in grief,
Deep grief?

The sun turns north, the days grow long,
Later the evening star grows bright—
How can the daylight linger on
For men to fight,
Still fight?

The grass is waking in the ground,
Soon it will rise and blow in waves—
How can it have the heart to sway
Over the graves,
New graves?

Under the boughs where lovers walked
The apple-blooms will shed their breath—
But what of all the lovers now
Parted by Death,
Grey Death?

Source: *A Treasury of War Poetry* (1917)

Context (AO3)

Romanticism is the name given to a movement in literature in the period from the 1770s to the mid-19th century. It was developed in reaction to the dominant style of the preceding period, and involved a revival of classical ideas, with Greek and Roman authors used as models. In its early years, Romanticism was associated with radical and revolutionary political ideas, again in reaction against the generally conservative mood of European society.

William Blake:

William Blake was born in 1757 and was originally an engraver. In 1789 he published an illustrated set of poems called *Songs of Innocence* and in 1793 followed this with *Songs of Experience*.



The Garden of Eden

"The Lord God planted a garden to the east in Eden. He put the man there whom He had made. 9 And the Lord God made to grow out of the ground every tree that is pleasing to the eyes and good for food. And He made the tree of life grow in the centre of the garden, and the tree of learning of good and bad.



Prepare Task Vocabulary

Mutiny	Illegal, bad, or dishonest behaviour	Victorious	A male piece of clothing
Nonsensical	Deal with or describe in an idealized or unrealistic fashion	Woeful	Evergreen shrub
Obliterate	Relating to farmers or their way of life	Perpetual	Existing or happening now, and therefore seeming modern
Swarmed	A type of music not related to religion	Quash	Simple and often rough in appearance; typical of the countryside
Treacherous	A violent storm	Radical	A sweet sound – often musical
Uniquely	Part of the ship that needs to be taken in, in very bad weather		

Key Vocabulary

Corruption	Illegal, bad, or dishonest behaviour	Kirtle	A male piece of clothing
Romanticizing	Deal with or describe in an idealized or unrealistic fashion	Myrtle	Evergreen shrub
Agrarian	Relating to farmers or their way of life	Swains	Lovers
Contemporary	Existing or happening now, and therefore seeming modern	Levelled	Something that has been flattened
Rustic	Simple and often rough in appearance; typical of the countryside	Whetstone	A sharpening stone used for knives
Melodious	A sweet sound – often musical	Wildered	To be lead astray
Madrigals	A type of music not related to religion	Masque	A ball/performance/opera
Tempest	A violent storm	Auxiliary	Giving help or support
Topsail/Topmast	Part of the ship that needs to be taken in, in very bad weather	Oppose	"to put near, side by side, or alongside."

The Tempest opens in the midst of a fierce storm. The location is a ship at sea, with a royal party on board. As the sailors fight to save the ship, several of the royal passengers enter, and Alonso, the king, demands to know where the master (captain) is to be found. The boatswain, worried that the passengers will interfere, orders them to go below deck.





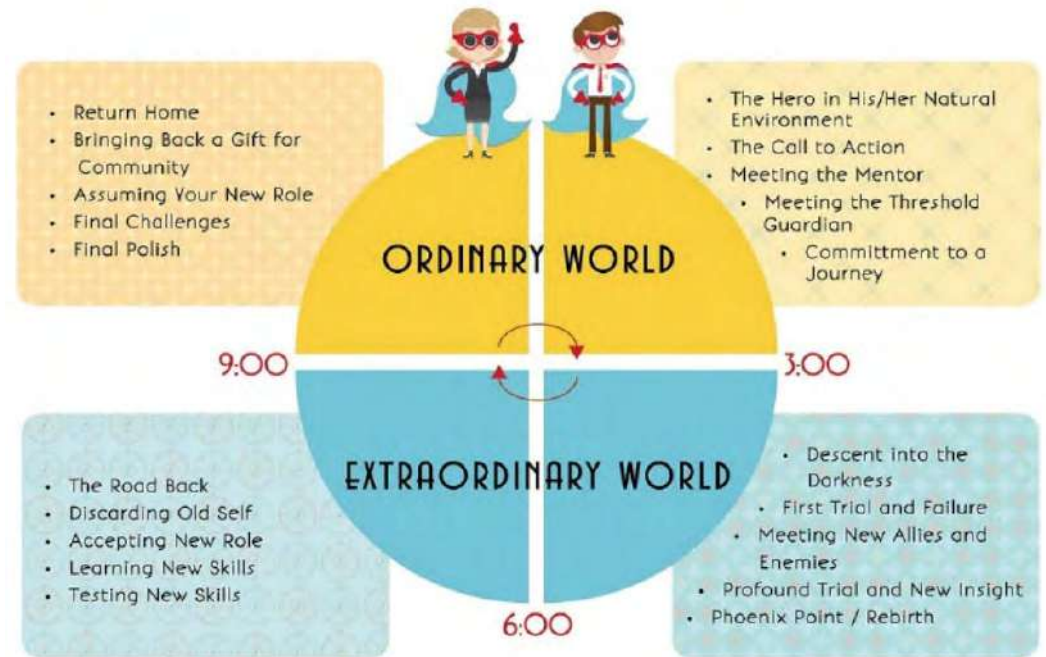
Key Stage 2 grammar		
Adjective	Adjectives can be used: <ul style="list-style-type: none"> before a noun, to make the noun's meaning more specific after the verb <i>be</i>, to add more information about the verb 	The pupils did some really good work. [adjective used before a noun, to modify it] Their work was good. [adjective used after the verb <i>be</i> , as its complement]
Adverb	Adverbs modify a verb, an adjective, another adverb or even a whole clause.	Usha soon started snoring loudly. [adverbs modifying the verbs started and snoring] That match was really exciting! [adverb modifying the adjective exciting] Fortunately, it didn't rain. [adverb modifying the whole clause 'it didn't rain']
Antonym	Two words are antonyms if their meanings are opposites.	hot – cold light – dark
Clause	A clause is a special type of phrase whose head* is a verb. Clauses can sometimes be complete sentences. Clauses may be main or subordinate. *See phrase	It was raining. [single-clause sentence] <u>It was raining</u> but <u>we were indoors</u> . [two clauses] If you are coming to the party, please let us know. [subordinate clause + main clause]
Conjunction	A conjunction links two words or phrases together. There are two main types of conjunctions: <ul style="list-style-type: none"> co-ordinating conjunctions link two words or phrases together as an equal pair subordinating conjunctions introduce a subordinate clause. 	James bought a bat <u>and</u> ball. [links the words bat and ball as an equal pair] Kylie is young <u>but</u> she can kick the ball hard. [links two clauses as an equal pair]
Noun	The surest way to identify nouns is by the ways they can be used after determiners such as <i>the</i> . For example, most nouns will fit into the frame "The __ matters/matter."	Our <u>dog</u> bit the <u>burglar</u> on his <u>behind</u> ! My big <u>brother</u> did an amazing <u>jump</u> on his <u>skateboard</u> .
Noun phrase	A noun phrase is a phrase with a noun as its head.	<u>Adult foxes</u> can jump. [adult modifies foxes, so adult belongs to the noun phrase]
Phrase	A phrase is a group of words that are grammatically connected so that they stay together, and that expand a single word, called the 'head'.	She waved to <u>her mother</u> . [a noun phrase, with the noun mother as its head]
Preposition	A preposition links a following noun, pronoun or noun phrase to some other word in the sentence. Prepositions often describe locations or directions, but can describe other things, such as relations of time.	Tom waved goodbye <u>to</u> Christy. She'll be back from Australia <u>in</u> two weeks. I haven't seen my dog <u>since</u> this morning.
Pronoun	A pronoun is a word used in place of a noun.	In the examples, each sentence is written twice: once with nouns, and once with pronouns (underlined). Where the same thing is being talked about, the words are shown in bold. Amanda waved to Michael . <u>She</u> waved to <u>him</u> .
Relative clause	A relative clause is a special type of subordinate clause that modifies a noun. It often does this by using a relative pronoun such as who or that to refer back to that noun.	In the examples, the relative clauses are underlined, and both the pronouns and the words they refer back to are in bold. That's the boy <u>who lives near school</u> . [who refers back to boy] The prize <u>that I won</u> was a book. [that refers back to prize] The prize <u>I won</u> was a book. [the pronoun that is omitted]
Verb	The surest way to identify verbs is by the ways they can be used. They can usually have a tense, either present or past. Verbs are sometimes called 'doing words' because many verbs name an action that someone does. However, many verbs name states or feelings rather than actions.	He <u>lives</u> in Birmingham. [present tense] The teacher <u>wrote</u> a song for the class. [past tense]

Stock characters

Hero	Leads the narrative and is often on a quest to find, do or solve something. Does not have to be male.
Villain	Comes into conflict with the hero and tries to thwart his quest.
Heroine	Usually a prize or a reward for the hero. Does not have to be female.
Dispatcher	This is the person who sends the hero off on his quest, either deliberately, or by showing them that something is needed.
Helper	Someone who helps the hero when they are stuck. This could be a sidekick or friend.
Donor	The character who helps the hero by giving them something – either an object or powers or self-realisation.
False Hero	A character who tries to take credit for the hero's actions.

Monomyth: *The Hero's Journey*

A monomyth is a sequence of actions that is found in many stories. Joseph Campbell believed that the monomyth could be summarised as *The Hero's Journey*.



Glossary words

Oral tradition	Stories that have been handed down over generations using speech or song.	Archetype	A model example of a particular type, exhibiting a set pattern of characteristics.
Myth	<ul style="list-style-type: none"> A story often based on religion and involves gods as characters A story that explains the origins of the world or events A story that often comes from the classical worlds of Greece and Rome 	Stereotype	A simplified, image or attitude that is widely held of a particular group.
Folk story	<ul style="list-style-type: none"> A tale told by a particular culture or group of people in one place A tale often based on everyday events that go wrong A tale that is almost always fictional 	Countertype	A (typically more positive) representation that goes against commonly held beliefs.
Narrative	A story.	Epic hero	A type of hero that was made popular by the Greeks.
Convention	A way in which something is usually done.	Dodekathion	The name given to the 12 gods of Mount Olympus.
Characterisation	The ways in which writers create characters and make them believable.	Genre	A category of literature such as romance, tragedy, comedy etc.
Allusion	A passing, often indirect, reference to a person, place, thing or idea of historical or cultural significance.		