Woldgate School

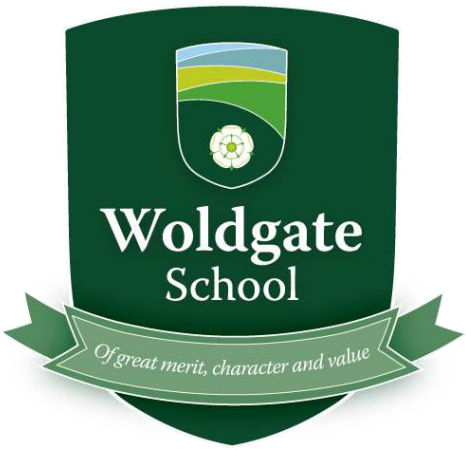
Of great merit, character and value

Year 7 Knowledge Book

Autumn Term

Wonder Learning Partnership

Educate | Empower | Engage | Enrich



Art

Wonder
Institute of Education
Educate | Empower | Engage | Enrich

GCSE EXAMINATIONS

Final piece produced under exam conditions (10 hours)
Component 2

YEAR 11

SUMMER
Planning for the final piece
Work produced in the style of the artists
Artist research and critical analysis.
Externally Set Assignment (40% of GCSE)
SPRING
Sampling and mock-up for the final piece
Recording – drawings and paintings produced based on the resources collected earlier.
Collection of resources - using both primary and secondary sources
Final assessment of component 1 (coursework)
AUTUMN
Final piece produced
Planning for zoomed in section of final piece to explore refinement skills
Developed planning for final piece
Mock-up for final piece
Work produced in the style of the artists 2
Recording – drawings and paintings produced based on the resources collected earlier.
Digital manipulation work and experimental work
Coursework re-visited and improved/developed further

YEAR 10

SUMMER
Planning for final piece
Work produced in the style of the artists 1
SPRING
Lorem ipsum
Researching artists and analysing their work
Planning a final piece
Personal Choice Project – introduction
Personal Choice Project
AUTUMN
Packaging Project (Whitehead and Graham)
A short project (2/2) to develop confidence and understanding of the basic structure of an art project
Work in the style of the artists
Creating a final piece and a review
A personal selection is made for a project that will be sustained for more than 20 weeks.
Collection of resources – using both primary and secondary sources
Artist research and critical analysis. This enables a greater understanding of the work of others and embeds links between their work and that of the pupil.

YEAR 9

SUMMER
Creating a Landscape final piece and a review
Work in the style of the artists
A short project (1/2) to develop confidence and understanding of the basic structure of an art project
Development work 2. Mastering several texture and 3D techniques such as card relief and clay modelling.
Mastering a variety of drawing materials, techniques and processes looking at colour and tone.
SPRING
Planning a Landscape final piece
Researching artists and analysing their work
Landscape Project (Dodge and Mullan)
Development work 1. Mastering several printing techniques such as mono, press, emulsion and screen.
Exploring photography as a method of recording natural forms (Blincoe).
Mastering a variety of drawing materials, techniques and processes looking at B/W and tone
AUTUMN
Portraits (Contemporary – Loui Jover and Barbara Kruger)
Exploring art with messages and political commentary.
Lorem ipsum
Workshops (Natural Forms)
Exploring photography as a method of recording natural forms (Blossfeldt).
START OF GCSE
Mastering the grid technique for drawing portraits
Combining text and images to create surreal portrait.
Re-visiting skills to improve confidence and independence

YEAR 8

SUMMER
Close-up studies of seedheads
Seed heads (Angie Lewin, Blaxill)
Mastering selective layering technique
Andy Warhol-style "Toy" print
Developing mono-printing skills
SPRING
Exploring layered composition and pattern using mixed-media and / or clay
Exploring observation drawing. Mastering surface texture.
Mastering all previous skills (layers, mixed-media, typography)
Jasper Johns-style layered "Numbers" piece using mixed media
Developing oil pastel skills
Lichtenstein-style "sound burst" painting
AUTUMN
Mastering colour theory and colour mixing
Watercolour fish painting
African Pattern (contemporary)
Exploring the work of others and making connections through understanding
Developing existing colour mixing and painting skills
Fish Painting (Aleah Koury, MC Escher)
Exploring watercolour painting techniques
Mastering independent design – tessalations
Mastering planning and independent composition-making
Pop Art (Roy Lichtenstein, Andy Warhol, Jasper Johns)
Exploring fonts, typography and onomatopoeia
Developing compositional layering skills

YEAR 7

SUMMER
Exploring 3D shapes with one point perspective.
Perspective (Van Gogh, LS Lowry)
Mastering biro cross-hatching techniques
Exploring complex compositions
Mastering aerial perspective
SPRING
Exploring 3D lettering with one point and two point perspective.
Mastering the illusion of depth
Exploring surface texture and tone on more complex objects (tools) (J Dine)
Exploring reflections and distortions on bottles and glasses (Morandi)
Exploring stacking and overlapping shapes
AUTUMN
Still Life (B Hepworth, G Morandi, J Dine)
Baseline Test to establish skills
Exploring 3D shapes and form. Mastering pencil shading
Shading, blending and plotting shadows

ART

Woldgate School
Of great merit, character and value

The Formal Elements In Art and Design

YEAR 7 STILL LIFE PROJECT KNOWLEDGE ORGANISERS

TECHNICAL INOFRMATION

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

What is Art?

It is the expression of human creative skill in visual forms such as painting, drawing, sculpture and photography

Can you draw a complex shape?

DODECAHEDRON

Key Words

Line & Tone
Line is the mark left behind by a moving point such as a pencil or paint brush. The lightness or darkness of something. Tone or shading can help 2D shapes look 3D (form).

Shape & Form
A shape is an area enclosed by a line such as a circle. Form is a 3D shape such as a sphere.

Shading
The darkening or colouring of a picture or object.

Two dimensional (2D)
A shape that only has 2 dimensions such as height and width.

Three dimensional (3D)
A shape that has 3 dimensions such as height, width and depth.

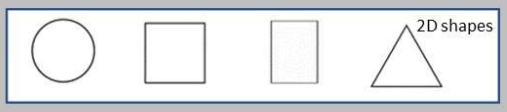
Negative Space
light projected onto an object or figure creates lights, darks, and cast shadows.

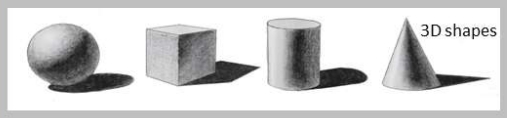
Angle of View
the area around and between a subject or object

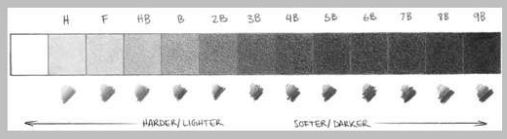
Reflected Light
light that bounces off one object & strikes another.

Ambient Light
natural light sources, such as the sun.

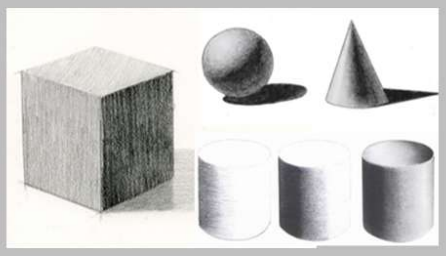
Artificial Light
any light source that is not naturally occurring, such as flash on phone or camera.

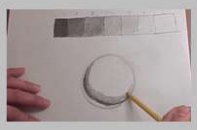




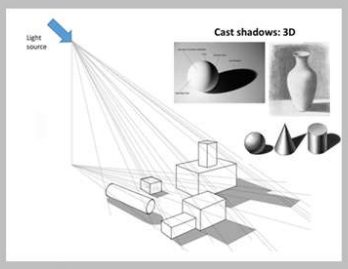


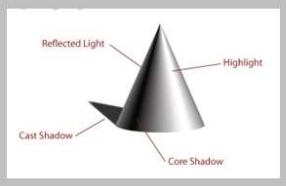
Tone varies from light to dark and can be achieved by pressing hard or lightly with a pencil. B pencils have a soft lead and produce the darkest tone.

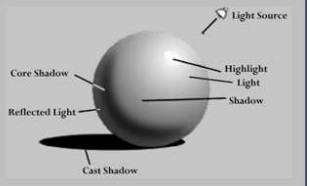


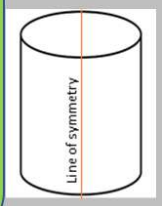


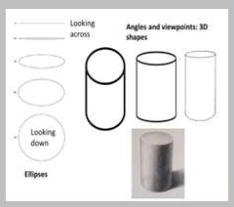
BLENDED SHADING











Why are guidelines such as symmetry lines important?

Challenge Questions:
Why do you think drawing is important?
What other materials could you use to draw and shade with?
What happens if the direction of the light changes?
What do you call an arrangement or collection of objects that you can draw from?
Can you name 2 artists that worked in black and white?

The Formal Elements In Art and Design

YEAR 7 STILL LIFE PROJECT KNOWLEDGE ORGANISER

ARTISTS EXPLORED THROUGH CLASSWORK

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

What is Still Life?

a painting or drawing of an arrangement of inanimate objects, typically including fruit and flowers and objects contrasting with these in texture, such as bowls and glassware.

HANS MEMLING

Key Words

Blend
Mix or combine colours or tone.

Cross-hatching
shading an area with intersecting sets of parallel lines.

Ellipse
An oval shape on top of the cylinder

Shadow
A dark area produced by an object blocking a light source

Symmetrical
The exact reflection of form on opposite sides of a shape.

Overlapping
when shapes are in front of other shapes

Inanimate objects
Things that are "still" and don't move

Mark-making
describes the different lines, dots, marks, patterns, and textures we create in an artwork. It can be loose and gestural or controlled and neat.

Memento Mori art
Still Life paintings with skulls symbolising death. Latin meaning 'remember that you [have to] die'

Nature Morte
Is the French way of saying Still Life and translate as 'dead nature'

BARBARA HEPWORTH (1903-1975)
ENGLISH SCULPTOR AND ARTIST
THE FAMILY OF MAN (1970)

GOIRGIO MORANDI (1890-1964)
ITALIAN STILL LIFE PAINTER
STILL LIFE WITH LARGE COFFEE POT (1933)

JASPER JOHNS (1930-)
AMERICAN POP ARTIST
NO TITLE (1973)

MAN RAY

PAUL CÉZANNE

IRVING PENN

STILL LIFE ARTISTS

Challenge Questions: How do you create form? How do you create a good composition? What makes a still life? Can photography be a still life? Do you prefer the traditional still life (like Memling and Cézanne) or the more modern still life (like Ray and Penn)?

STILL LIFE ARTIST TIMELINE

70AD

POMPEIAN PAINTER (70AD)
ROMAN PAINTER
GLASS BOWL OF FRUIT & VASES (70AD)

16TH CENTURY

MICHELANGELO MERISI DA CARAVAGGIO (1571-1610)
ITALIAN STILL LIFE PAINTER
FRUITBASKET (1595-96)

19TH CENTURY

EUGÈNE DELACROIX (1798-1863)
FRENCH ROMANTIC ARTIST
STILL LIFE WITH LOBSTER & TROPHIES OF HUNTING & FISHING (1826-27)

ANNE VALLAYER-COSTER (1744-1818)
FRENCH STILL LIFE PAINTER
THE ATTRIBUTES OF MUSIC (1770)

VINCENT VAN GOGH (1853-1890)
DUTCH POST-IMPRESSIONIST PAINTER
STILL LIFE WITH COFFEE POT (1888)

ODILON REDON (1840-1916)
FRENCH SYMBOLISM PAINTER
FLOWERS (1903)

PABLO PICASSO (1881-1973)
SPANISH CUBISM PAINTER
COMPOTIER AVEC FRUITS, VIOLON ET VERRE (1912)

GIORGIO MORANDI (1890-1964)
ITALIAN STILL LIFE PAINTER & PRINTMAKER
'NATURA MORTA' (1919)

GOIRGIO MORANDI (1890-1964)
ITALIAN STILL LIFE PAINTER
STILL LIFE WITH LARGE COFFEE POT (1933)

BARBARA HEPWORTH (1903-1975)
ENGLISH SCULPTOR AND ARTIST
THE FAMILY OF MAN (1970)

ANDRE LHOTE (1885-1962)
FRENCH CUBISM ARTIST
STILL LIFE WITH BOWL OF FRUIT (1919)

GEORGES BRAQUE (1882-1963)
FRENCH CUBISM PAINTER
VIOLIN AND CANDLESTICKS (1910)

HENRI MATISSE (1869-1954)
FRENCH FAUVISM PAINTER
STILL LIFE WITH GERANIUMS (1910)

MARGETHE MATHER (1943-)
AMERICAN PHOTOGRAPHER
ALPHABET&ONE A FLOWER
GEORGIA O'KEEFFE (1926)

MAN RAY (1890-1976)
AMERICAN RAYOGRAPHER AND SURREALIST ARTIST
COMB, STRAIGHT RAZOR BLADE, NEEDLES AND OTHER FORMS (1922)

JUAN GRIS (1887-1927)
SPANISH CUBISM PAINTER
VIOLIN & CHECKERBOARD (1913)

JEAN METZINGER (188-1956)
FRENCH CUBISM PAINTER
FRUIT & JUG ON TABLE (1916)

FERNAND LEGER (1881-1955)
FRENCH CUBISM PAINTER
STILL LIFE WITH A BEER MUG (1921)

KARL BLOSSFELDT (1865-1932)
GERMAN PHOTOGRAPHER AND SCULPTOR
COBAEA SCANDENS (1928)

EDWARD WESTON (1886-1958)
AMERICAN PHOTOGRAPHER
CABBAGE LEAF (1931)

15TH CENTURY

HANS MEMLING (1430-1494)
GERMAN STILL LIFE PAINTER
VASE OF FLOWERS (1480)

17TH CENTURY

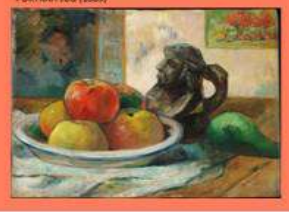
JUAN SÁNCHEZ COTÁN (1560-1627)
SPANISH BAROQUE PAINTER
STILL LIFE WITH QUINCE, CABBAGE, MELON & CUCUMBER (1602)

18TH CENTURY

PAUL CÉZANNE (1839-1906)
FRENCH POST-IMPRESSIONISM PAINTER
THE BASKET OF APPLES (1893)

CLAUDE MONET (1840-1926)
FRENCH IMPRESSIONIST PAINTER
STILL LIFE WITH APPLES & GRAPES (1880)

PAUL GAUGIN (1848-1903)
FRENCH POST-IMPRESSIONIST PAINTER
STILL LIFE WITH APPLES, A PEAR & A CERAMIC PORTRAIT JUG (1889)



20TH CENTURY

ANDY WARHOL (1928-1987)
AMERICAN POP ARTIST
GREEN COCK-COLA BOTTLES (1962)

AUDREY FLACK (1931-)
AMERICAN ARTIST
TIME TO SAVE (1979)

LISA MILROY (1959-)
CANADIAN STILL LIFE PAINTER
MELONS (1986)

TONI WESSELMANN (1933-2017)
AMERICAN POP ARTIST
STILL LIFE #36 (1963)

ROY LICHTENSTEIN (1923-1997)
AMERICAN POP ARTIST
STILL LIFE WITH PALETTE (1972)

ALLAN KAPROW (1927-2006)
AMERICAN PAINTER & ASSEMBLAGIST ARTIST
YARD (1990)

OLIVIA PARKER (1941-)
AMERICAN STILL LIFE PHOTOGRAPHER
INTERRUPTED INFORMATION (1985)

PATRICK CAULFIELD (1936-2005)
BRITISH POP ARTIST
WINE GLASSES (1969)

ANDY WARHOL (1928-1987)
AMERICAN POP ARTIST
STILL LIFE (1976)

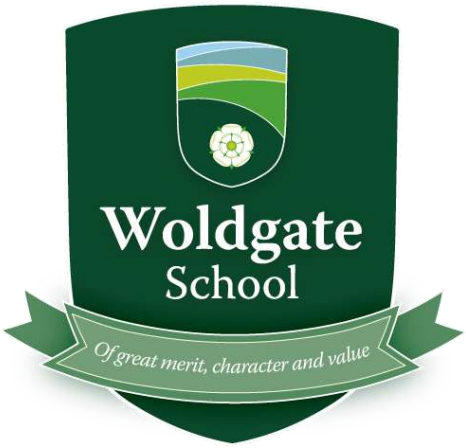
IRVING PENN (1917-2009)
AMERICAN PHOTOGRAPHER
CONSTRUCTION LEFTOVERS (1980)

21ST CENTURY

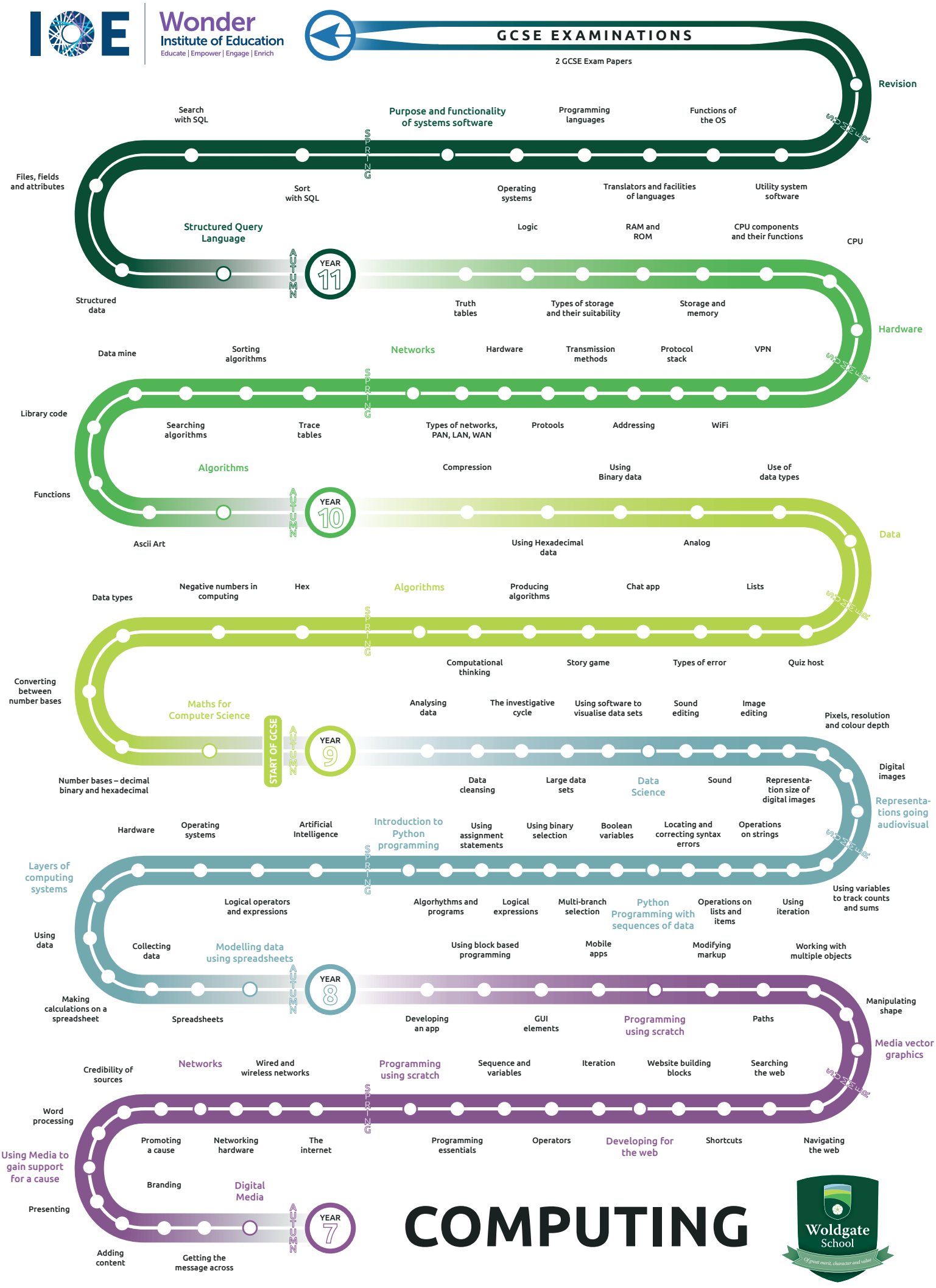
ANGIE LEWIN (1963-)
BRITISH FINE ARTIST PRINTMAKER
TWISTED STEM (LINEN/WAX)

MICHAEL CRAIG-MARTIN (1941-)
IRISH CONCEPTUAL ARTIST
EYE OF THE STORM (2002)

JIM DINE (1935-)
AMERICAN NEO-DADA ARTIST
FIVE HAMMER ETUDES (2007)



Computer Science


Wonder
Institute of Education
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GCSE EXAMINATIONS
2 GCSE Exam Papers
Revision
SUMMER
Search with SQL
Purpose and functionality of systems software
Programming languages
Functions of the OS
SPRING
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
AUTUMN
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
Protools
Addressing
WiFi
Algorithms
Compression
Using Binary data
Use of data types
Functions
YEAR 10
Ascii Art
Using Hexadecimal data
Analog
Data
Data types
Negative numbers in computing
Hex
Algorithms
Producing algorithms
Chat app
Lists
Computational thinking
Story game
Types of error
Quiz host
Converting between number bases
Maths for Computer Science
Analysing data
The investigative cycle
Using software to visualise data sets
Sound editing
Image editing
Pixels, resolution and colour depth
START OF GCSE
YEAR 9
Number bases – decimal binary and hexadecimal
Data cleansing
Large data sets
Data Science
Sound
Representation size of digital images
Digital images
Representations going audiovisual
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
Layers of computing systems
Logical operators and expressions
Algorhythms and programs
Logical expressions
Multi-branch selection
Python Programming with sequences of data
Operations on lists and items
Using iteration
Using variables to track counts and sums
Using data
Collecting data
Modelling data using spreadsheets
Using block based programming
Mobile apps
Modifying markup
Working with multiple objects
YEAR 8
Making calculations on a spreadsheet
Spreadsheets
Developing an app
GUI elements
Programming using scratch
Paths
Manipulating shape
Media vector graphics
Networks
Credibility of sources
Wired and wireless networks
Programming using scratch
Sequence and variables
Iteration
Website building blocks
Searching the web
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
Presenting
YEAR 7
Adding content
Getting the message across
COMPUTING
Woldgate School
Of great merit, character and value

USING MEDIA

Different Software s and their uses

Icon	Software name	Description
	Spread-sheet software	Made up of rows, columns and cells. Used mainly for holding formulas to automatically complete calculations. Real-world use: A building company would use this soft-ware to add in all of the materials and costs for a project in order to give their invoice/bill to the customer.
	Word processing software	A modern-day typewriter used for typing text and chang-ing the appearance of the text (such as making text bold or changing the colour). Real-world use: A supermarket would use this software to write a letter to their customers to let them know of new offers that they have in store.
	Email soft-ware	Software that allows you to read and compose electronic messages that are sent between recipients across the network (usually the internet). You can send messages to multiple people at the same time and include attach-ments (such as files for people to open, read or edit). Real-world use: A teacher would use this software to send homework as an attachment to all members of the class. Each member of the class would then have their own copy of the worksheet.
	Image editing software	Software that allows you to create or edit images. It in-cludes tools such as overlaying text, cropping, and recol-ouring. Real-world use: A publisher would use this software to create the front page of a magazine.
	Presenta-tion soft-ware	Software that allows you to present information in the form of a slide show. The presenter would use this to pro-vide a visual aid to support what they are saying. Real-world use: A history teacher would use this software to show examples of castles so that learners can under-stand the key parts of the castle that the teacher is dis-cussing
	Web au-thoring software	Software that creates web pages/websites without you having to write code. You can write, edit, and position text, add images, and embed videos, and the software will write the required code for it. Real-world use: A start-up business would use this soft-ware to build a website to promote their services and display their contact details.

Copyright Law

The Copyright, Designs and Patents Act 1988, is the cur-rent UK copyright law. It gives the creators of literary, dramatic, musical and artistic works the right to control the ways in which their material may be used.

Types of work covered - Literacy / Dramatic / Musical / Artistic / Magazines / Sound Recording / Films

"Copyright infringement can lead to substantial penalties."

Penalties can include:

A fine up to £50,000

and/or

A jail sentence of up to 6 months

Microsoft Word - Tools

Tool icon	Tool name	Brief description
B	BOLD	Changes the text to be bold, i.e. thicker and more noticeable
Arial	FONT	Allows you to change the style/ appearance of the text
	CENTRE ALIGN	Moves the text so that it is in the mid-dle of the page, rather than having a margin on the left- or right-hand side of the page
A	TEXT COLOUR	Allows you to change the colour of the text
	BULLETED LIST	Allows you to create a bullet-pointed list

How to evaluate and record the credibility of the information

Check the author and the source / What's the purpose of the article? / Check when the article was written / Check the facts

Article/website title	URL	Notes/quotations/who to credit or cite	Evaluate the credibility of the source. How can you prove that this is a reliable source?
WHY IS THE PLASTIC WASTE IN OUR WATERWAYS IN-CREASING?	http://www.itsgettinghotinhere.org/go-green/why-is-the-plastic-waste-in-our-waterways-increasing/	"It is estimated that the current population has pro-duced a 320 million tonnes of plastic waste! And if we carry on as we are and do not change, this figure could double by 2034"	• Written in June last year • These facts also appear on other websites

KEY TERM

Credibility	the quality of the source from where the information is gathered
Source	a place, person, or thing from which facts or information can be obtained.
Audience	A group of people of whom your project/work would be aimed at
Plagiarism	The process or practice of using another person's ideas or work and pretending that it is your own

Referencing	When you provide (a book or article) with citations of sources of information.
Citation	A word or piece of writing taken from a written work
Paraphrase	To repeat something written or spoken using different words, often in a humorous form or in a simpler and shorter form that makes the original meaning clearer
Blog	A regularly updated website or web page,

NETWORKS FROM SEMAPHORES TO THE INTERNET

Key Terms (Networks)

Network	A group of **devices** connected together, either wirelessly or with a network cable.
Protocol	A set of rules
Network cable	Used to connect different devices together. They are often made up of a number of wires.
Hub	Connects a number of computers together. Ports allow cables to be plugged in from each connected computer.
Server	A powerful computer which provides services to a network
Router	Used to connect two separate networks together across the internet
Wired	Wired networks send data along cables.
Wireless	Wireless networks send data through the air using radio waves
3G /4G /5G	Wireless communications standards designed to provide different speeds for mobile devices, such as smartphones, tablets, and wireless hotspots
WiFi	a facility allowing computers, smartphones, or other devices to connect to the Internet or communicate with one another wirelessly within a particular area.
Bandwidth	Bandwidth is the amount of data that can be moved from one point to another in a given time.
Broadband	a high-capacity transmission technique using a wide range of frequencies, which enables a large number of messages to be communicated simultaneously.
Data capacity	How much **data** the storage type can hold, measured in **bits**
Buffering	In streaming audio or video from the **Internet**, **buffering** refers to downloading a certain amount of data before starting to play the music or movie.

What am i?

Wired versus wireless

Advantages of a wired network	Disadvantages of a wired network
Faster connection (little to no interference)	Cables can be a trip hazard and look unpleasant
Higher bandwidth	More expensive and time-consuming to add devices, as each device needs cables
Better security	Devices are in fixed positions (no portability
Advantages of wireless network	**Disadvantages of wireless network**
No trailing/trips/hazards	Lower bandwidth
It is quick and cheap to connect to new devices	Wireless connections can be weakened by walls and ceilings
Allows portability	Less Secure

Network Protocols

Layer	Protocols in this layer cover	Protocol Examples
1	Passing data (as electrical signals) over the physical network	**Ethernet**
2	Making connections between networks and directing data	**IP** (Internet protocol)
3	Controlling data flow eg checking data is sent and delivered	**TCP** (Transmission Control Protocol)
4	Turing data into websites and other applications and vice versa	**HTTP / FTP / SMTP**

Part of a website address

Web Browsers / Search Engines / Websites

Browsers	Google Chrome	
	Internet Explorer	
	Safari	
Search engines	Google	Google
	Bing	Bing
Websites	bbc.co.uk	
	youtube.com	

Key Terms (Internet)

Internet	The internet in a network of networks.
Internet Protocol	a set of rules governing the format of data sent over the Internet or other network.
IP address	a unique string of numbers separated by full stops that identifies each computer using the Internet Protocol to communicate over a network.
VoIP	Voice Over Internet Protocol - the set of rules that makes it possible to use the Internet for telephone or videophone communication.
IoT	A network of **Internet** connected objects able to collect and exchange data
Spam	irrelevant or unsolicited messages sent over the Internet, typically to a large number of users, for the purposes of advertising, phishing, spreading malware, etc.
WWW (World Wide Web)	Part of the internet that contains websites, web pages, and the links between them.
Web browser	A **browser** is a software application used to locate, retrieve and display content on the World Wide **Web**, including webpages, images, video and other files. FOR example Chrome / FireFox
Web server	A *web server* is a computer that runs websites. ... The basic objective of the *web server* is to store, process and deliver *web* pages to the users.
Web page	A hypertext document connected to the World Wide Web.
Search engine	A type of website that allows you to look up information on the World Wide Web.
URL	Uniform Resource Locator (**URL**) is another name for a web address
HTTPS	Stands for Hypertext Transfer Protocol Secure. This encrypts messages between a browser and the website so the messages cannot be understood by other devices.
HTTP	Stands for Hypertext Transfer Protocol. Messages are sent between a browser and a website in plain text and can be read and understood by other devices.
Domain Name	A **domain name** is a unique **name** that identifies a **website**.

DIGITAL CITIZENSHIP

Where are the hazards

Roles of a Computing Lab

1	No Food
2	Drinks are allowed, as long as they are in no-spill containers
3	Keep your password safe
4	Computers and peripherals are not to be moved around
5	Do not install software on the computers
6	Do not display or print sexually explicit graphics
7	No Mobile Phones
8	Behaviour and activities that disrupt other users or disrupt the learning in the computer labs is not allowed
9	Remember to log out whenever you are done using your computer.
10	Each person may use one computer at a time, unless otherwise instructed.

What are Online Activities

- Socialising online on a range of social apps
- Watching TV online through YouTube
- Building their digital footprint by sharing details about their day to day life with friends and family or people they've met online
- Gaming online with friends online regularly
- Doing homework through video chats with friends
- Taking part in online challenges with friends

Where can you get Support for Cyber bullying

- Report abuse on the CEOP site
- Child line
- Talk to a trusted adult
- Tell a teacher
- Report behavior to the social media site

CLICK CEOP
Advice Help Report

Email Etiquette: Golden Rules

- Include a clear subject matter
- Always use an appropriate greeting.
- Consider the purpose of your **email**.
- Do not use emojis
- Don't hit reply all or CC everyone.
- Reply in a timely fashion.
- Never use inappropriate language
- Spell Check

What makes an effective presentation?

- Only Text Prompts are used (Keywords)
- Text is kept to a minimum
- All images used are relevant and appropriate to the subject
- All content used is relevant to the subject
- Appropriate font style, size and colour is used

How should you communicate with Peers

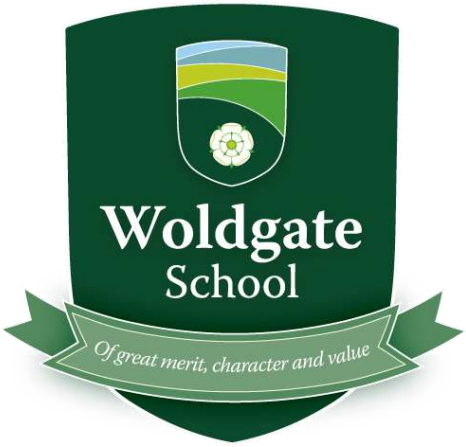
- You write one positive, one critical, and another positive comment on somebody's work

Characteristics of a strong password

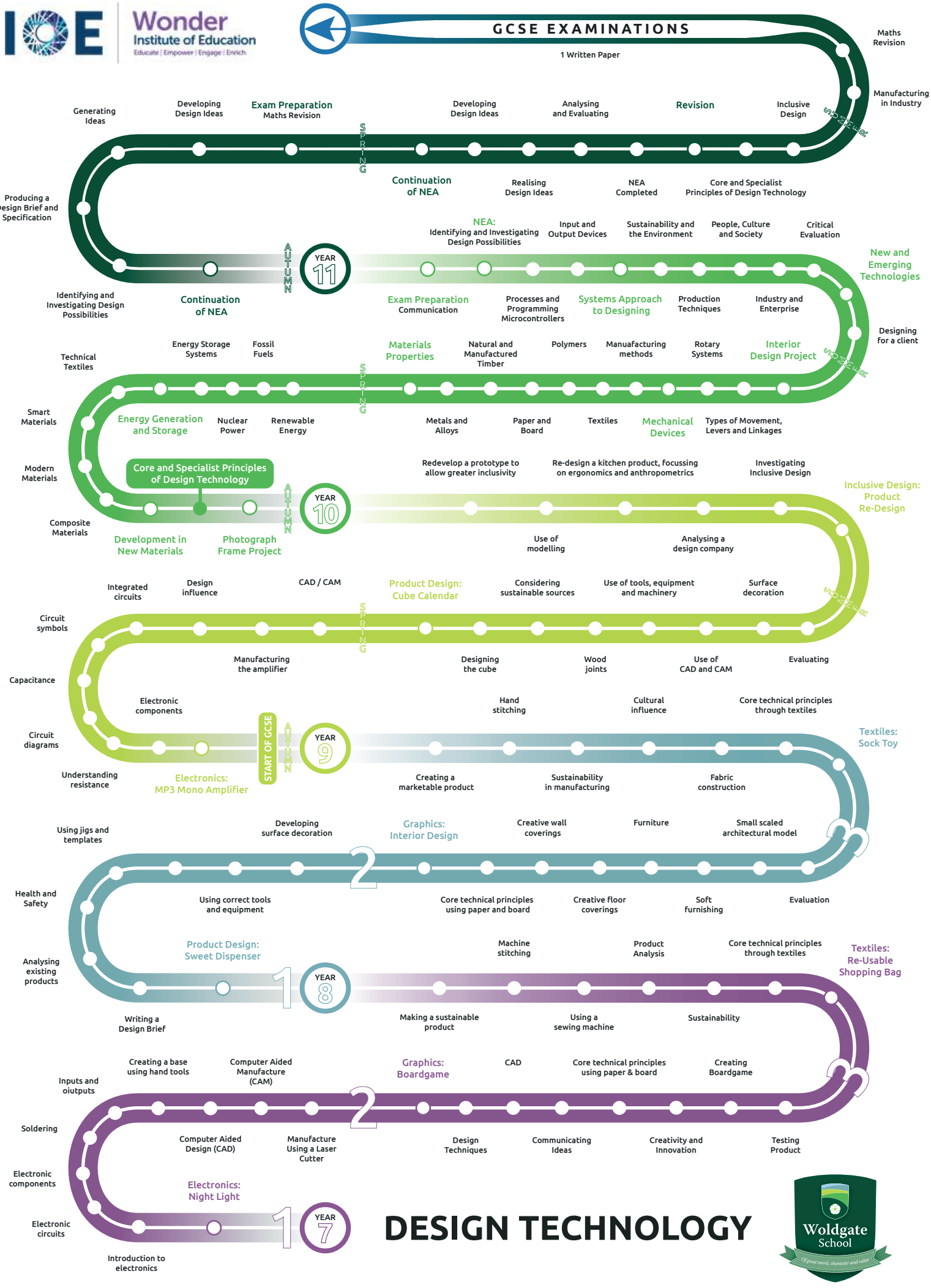
- At least 8 characters - the more characters, the better.
- A mixture of both uppercase and lowercase letters.
- A mixture of letters and numbers.
- Inclusion of at least one special character, e.g., ! @ # ?]

Key Terms

Password	A secret word or phrase which allows access to a computer system or service.
Computing Lab	A **computer lab** is a space which provides **computer** services to a **defined** community.
Screen Time	Time spent using a device such as a computer, television, or games console.
Email	Messages distributed by electronic means from one computer user to one or more recipients via a network.
Email Recipient	An **email recipient** is an individual who has opted-in to receive **email** from either an individual or a business
Email Subject	An **email subject** line is the first text recipients see after your sender name when an **email** reaches their inbox. It is important to keep an **email subject** line informative, catchy, and brief.
CC / Carbon Copy	(Carbon Copy) - Put the email address(es) here if you are sending a copy for their information (and you want everyone to explicitly see this)
BC / Blind Copy	(Blind Carbon Copy) - Put the email address here if you are sending them a Copy and you **do not** want the other recipients to see that you sent it to this contact
Etiquette	The way you behave online
Sexting	TO send (someone) sexually explicit photographs or messages via mobile phone.
Cyber bullying	The use of electronic communication to bully a person, typically by sending messages of an intimidating or threatening nature.
Digital Footprint	A **digital footprint** is a trail of data you create while using the Internet. It includes the websites you visit, emails you send, and information you submit to online services.
Presentation Software	A software application that is specifically designed to allow users to create a presentation of ideas
Audience	A group of people who your presentation would be aimed at



Design & Technology


Wonder
Institute of Education
Educate | Empower | Engage | Enrich
GCSE EXAMINATIONS
1 Written Paper
Maths Revision
Manufacturing in Industry
Generating Ideas
Developing Design Ideas
Exam Preparation
Maths Revision
Developing Design Ideas
Analysing and Evaluating
Revision
Inclusive Design
SUMMER
SPRING
Producing a Design Brief and Specification
Continuation of NEA
Realising Design Ideas
NEA Completed
Core and Specialist Principles of Design Technology
NEA:
Identifying and Investigating Design Possibilities
Input and Output Devices
Sustainability and the Environment
People, Culture and Society
Critical Evaluation
AUTUMN
YEAR 11
New and Emerging Technologies
Identifying and Investigating Design Possibilities
Continuation of NEA
Exam Preparation
Communication
Processes and Programming Microcontrollers
Systems Approach to Designing
Production Techniques
Industry and Enterprise
Designing for a client
Technical Textiles
Energy Storage Systems
Fossil Fuels
Materials Properties
Natural and Manufactured Timber
Polymers
Manuafacturing methods
Rotary Systems
Interior Design Project
SUMMER
SPRING
Smart Materials
Energy Generation and Storage
Nuclear Power
Renewable Energy
Metals and Alloys
Paper and Board
Textiles
Mechanical Devices
Types of Movement, Levers and Linkages
Modern Materials
Core and Specialist Principles of Design Technology
Redevelop a prototype to allow greater inclusivity
Re-design a kitchen product, focussing on ergonomics and anthropometrics
Investigating Inclusive Design
AUTUMN
YEAR 10
Inclusive Design: Product Re-Design
Composite Materials
Development in New Materials
Photograph Frame Project
Use of modelling
Analysing a design company
Integrated circuits
Design influence
CAD / CAM
Product Design: Cube Calendar
Considering sustainable sources
Use of tools, equipment and machinery
Surface decoration
SUMMER
SPRING
Circuit symbols
Manufacturing the amplifier
Designing the cube
Wood joints
Use of CAD and CAM
Evaluating
Capacitance
Electronic components
Hand stitching
Cultural influence
Core technical principles through textiles
START OF GCSE
AUTUMN
YEAR 9
Textiles: Sock Toy
Circuit diagrams
Understanding resistance
Electronics: MP3 Mono Amplifier
Creating a marketable product
Sustainability in manufacturing
Fabric construction
Using jigs and templates
Developing surface decoration
Graphics: Interior Design
Creative wall coverings
Furniture
Small scaled architectural model
3
2
Health and Safety
Using correct tools and equipment
Core technical principles using paper and board
Creative floor coverings
Soft furnishing
Evaluation
Product Design: Sweet Dispenser
Machine stitching
Product Analysis
Core technical principles through textiles
Textiles: Re-Usable Shopping Bag
Analysing existing products
1
YEAR 8
Writing a Design Brief
Making a sustainable product
Using a sewing machine
Sustainability
Creating a base using hand tools
Computer Aided Manufacture (CAM)
Graphics: Boardgame
CAD
Core technical principles using paper & board
Creating Boardgame
Inputs and oiutputs
3
2
Soldering
Computer Aided Design (CAD)
Manufacture Using a Laser Cutter
Design Techniques
Communicating Ideas
Creativity and Innovation
Testing Product
Electronic components
Electronics: Night Light
1
YEAR 7
Electronic circuits
Introduction to electronics
DESIGN TECHNOLOGY
Woldgate School
Of great merit, character and value

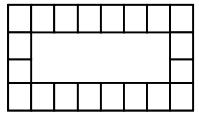
Knowledge Organiser – Year 7 Boardgame Project

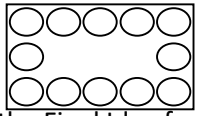
Key Words

Aesthetics: Concerned with beauty or the appreciation of beauty.
Analyse: To look at and discuss in depth.
Brand: A product manufactured by a company under a particular name.
CAD: Computer Aided Design – the use of computers to help create and design.
Flow Chart: A type of picture of the separate steps of a process in sequential order.
GANTT Chart: A type of bar chart that illustrates a project's schedule.
Logo: A word, symbol or picture used to promote and identify a product.
Perspective: A drawing method used to create a 3D effect on a 2D surface.

Knowledge

CAD - Drawing design ideas using publisher to produce a range of designs for the boardgame.





Also using CAD to produce the Final Idea for the boardgame and packaging.

Perspective – Using 1 and 2 point perspective to draw different views of our boardgames.
Nets – A 2D shape, that when scored, cut and folded,, creates a 3D shape.

Design Process

Task Analysis:
Brainstorm – a mind map of all the different areas of the Graphics Project.
Moodboard – A collection of inspiring images and words based on a chosen theme/s.
GANTT Chart – Planning of time to order the stages of making for the Project.

Research:
Existing Products – products that already exist can give us ideas for our own designs.
Brands – Understand what makes a brand and how to create our own.

Design:
Drawing techniques – perspective and CAD to draw views of final idea.
Logo – Your own Boardgame brand and logo.
Packaging – Design the packaging for your product, which must hold all of the cards, board, counters etc.

Practical Skills

Pencil Crayons: Used to apply subtle colour.
Felt Tips: Used to apply bold colour.
Safety Ruler: Used with a craft knife to protect fingertips.

Craft Knife: Used for cutting with precision and trimming.
Cutting Mat: Used to protect surfaces when cutting with a craft knife.

Material	Description
Thermosetting Plastics	Once heated and moulded, these plastics **cannot be reheated** and **cannot be remoulded**. The molecules of these plastics are cross linked in three dimensions, and this is why they cannot be reshaped or recycled. The bond between the molecules is very strong.
Thermoplastics	**Thermoplastics** once heated and formed to a shape, **can be reheated and reshaped**. Every time they are reshaped, the quality of the thermoplastic tends to be reduced. They are recyclable.
Natural Wood	**Hardwoods**, sometimes called **Broad-Leaved trees**, loose their leaves, in winter. They have a wider variety of woods and colour and tend to be harder than softwoods (with the exception of balsa). They are also more expensive than softwoods and take longer to grow. **Softwoods** are from trees that have needs/exposed seeds and not leaves. They grow quickly, compared to most hardwoods and tend to be light brown/pale in colour when sawn or planed. They are cheaper.
Man-Made Wood	Manmade boards are commonly used in the construction industry, for interior fittings and furniture. They are more stable than natural woods and are less likely to warp and twist out of shape. The three main types are; plywoods (laminated boards), particle boards and fibreboards. They are all manmade in factories / mills. They are usually composed of natural woods and resin, which binds them together.

Literacy

Capital Letters: Use immediately after a dull stop or at the start of a new sentence.

Full stops: Used at the end of every sentence.

Commas: Used to separate sentences or items in a list.

Slang: Not to be used in written classwork.

Tenses: Past, Present and Future. E.g. I drew, I draw & I am drawing.

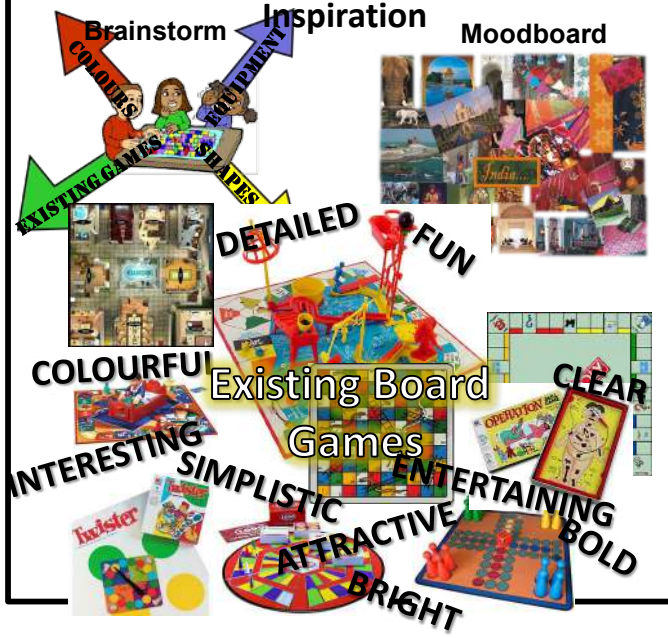
Numeracy

Mm = Millimeters
Cm = Centimeters
M = Meters
1cm = 10 mm
10cm = 100mm
100cm = 1000mm
1000mm = 1m

Tolerance = +/- 5mm

Area = Length x Width
Perimeter = all sides added together

$C = 2 \pi R$ $D = C / \pi$



Year 7 Night Light Knowledge Organiser

INPUT – USB and Switch	PROCESS Flow of Electrons	OUTPUT – LED Strip

The Soldering Process

Place the component onto the PCB.

Bend the legs to secure it to the PCB.

Clean the soldering iron tip with wire wool.

Tin the tip of the iron with solder

Apply heat to the PCB and component leg.

Apply a small amount of solder to the joint.

Remove the solder wire first.

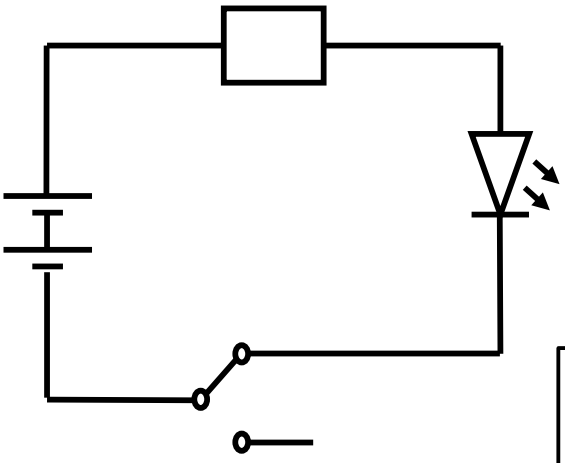
Then, remove the soldering iron.

Clean the soldering iron tip with wire wool.

Check for Dry Joints and resolder / repair if necessary.

Electronic Circuit

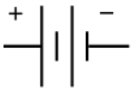
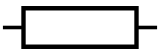
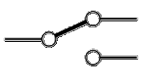
A closed loop of electronic components that allows electricity to flow through it.

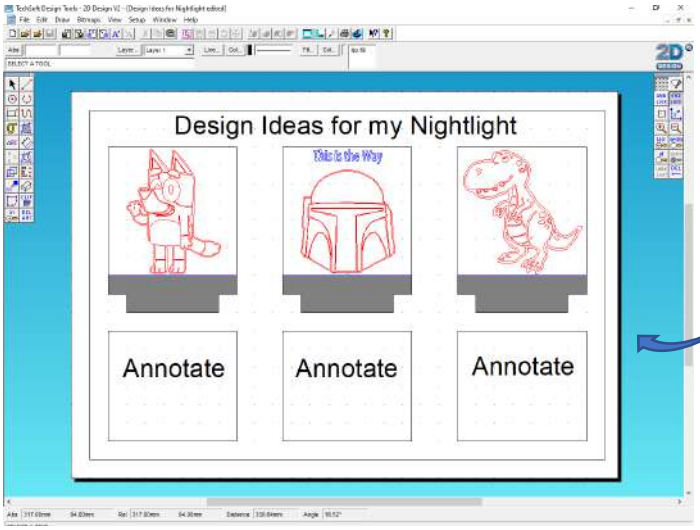


Scan the QR code above to watch a video on the soldering Process.

Soldering

Soldering is a semi-permanent joining process used to join electronic components to Printed Circuit Boards, PCB's, to create an electronic circuit. Heat from the soldering iron is used to melt the solder around the area to be joined.

Component	Symbol	Function in the Circuit
Input Power via the USB Power Cable		Once the USB cable is connected to a USB plug or laptop, this will power the night light.
The Resistor, (or in this project, a bridging wire)		A resistor 'slows down' or 'opposes' the flow of electricity to protect other components from damage. E.g., in my circuit, the LED strip.
LED (Light Emitting Diode)		The LED strip provides light output to the night light. It has a **Polarity**, which means it has a +(positive leg) and a – (negative leg) and must be soldered the correct way around.
Slide Switch		The Slide Switch turns the circuit on or off.



2d Design CAD Software

CAD Skills

2d Design allows users to create technical and graphical drawings with direct machine output.

Laser Cutter

Scan the QR code below to watch a video on the laser cutting.

CAD – Computer Aided Design

CAM – Computer Aided Manufacture

Advantages of CAD/CAM

- Faster to draw higher quality designs
- Easy to copy and paste.
- Easier to edit.
- Simple to share files via email.
- Usually, cheaper

Advantages of CAD/CAM

- Work can be lost due to computer error.
- Work is prone to computer viruses.
- Work could be hacked.
- Takes time to learn the software.
- Expensive to purchase the software.

The software I will use to design the lens for my Night Light is called "2d Design".

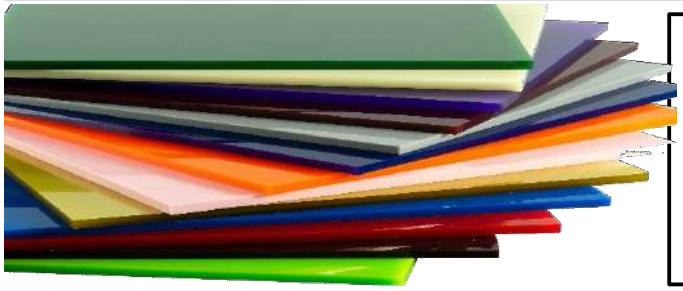
CAM Skills

Laser Cutter: Used to cut out the lens for the Night Light and for embellishing and adding decoration to the Night Light base.

Black Line – Cut

Red Line – Kiss Cut

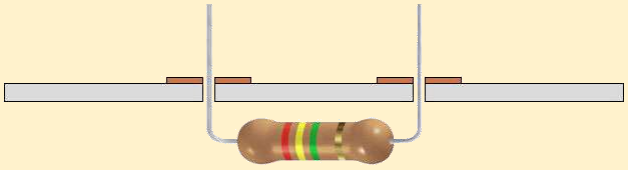
Plywood: Used for the base of your Night Light, this man-made board is made from veneers, (plies), of timber, with each grain layer being placed at right angles to each other and bonded together by resin and pressure.



Acrylic: Commonly used in a school workshop, it is usually purchased in the form of sheets and comes in a variety of colours. It can be translucent, transparent, or opaque. It is resistant to most acids and weather conditions.

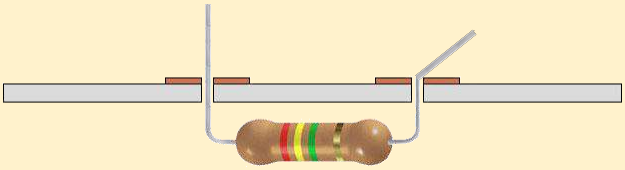
Knowledge Organiser – The Soldering Process

Step 1 - Component Placement



Add your component (example shown is a resistor) by pushing the wires through the pre-drilled holes, you have in your PCB.

Step 2 - Securing the Component



Bend over the wires you're going to solder to about a 45^0 angle to prevent the component falling away from the PCB.

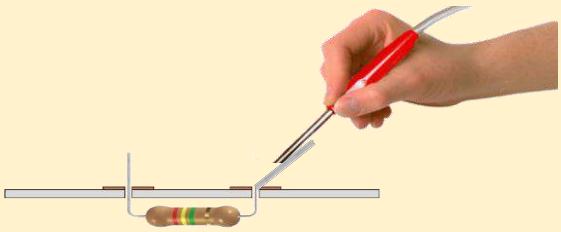
Step 3 - Cleaning the Soldering Iron

Clean the tip of the iron to take away any dirt on a damp sponge.

Step 4 - Tinning the Soldering Iron

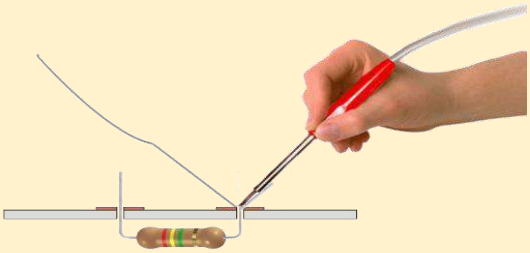
"Tin" the iron. Melt a tiny bit of solder onto the tip of the soldering iron.

Step 5 - Heating the Solder Pad



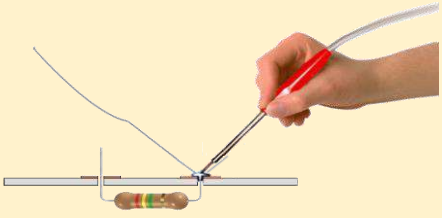
Heat your solder pad by holding the iron's tip onto it for about 3 seconds.

Step 6 - Applying the Solder



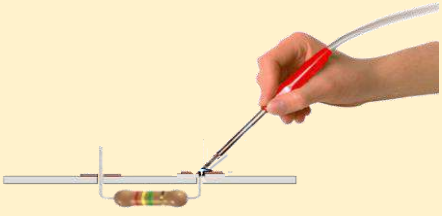
Touch the tip of the solder wire onto the track and continue to apply heat for about 2 seconds.

Step 7 - Melting the solder.



Melt just enough solder to make a good, soldered joint.

Step 8 - Removing the Solder First



Lift away the solder wire BEFORE you remove the soldering iron.

Working safely

To ensure safety in the Textiles room you must

Store bags & coats carefully
Keep chairs tucked under tables & benches when not in use
Only use machines under supervision
Sit to use a sewing machine, scissors & pins
Maintain focus when using the sewing machine
Keep your fingers away from the needle when the machine is switched on
Work at a speed appropriate to your skill level
Store tools & equipment safely when not in use.

Plastic facts

The raw material for plastic is crude oil, a finite resource.
A plastic bag is used on average for 12 minutes.
Plastic can take hundreds of years to break down & even then remains in the environment as microplastics.
Some scientists believe that plastic pollution is as serious an issue as global warming.
Plastic litter is harmful to wildlife. Birds, animals & sea life are all affected.
Every piece of plastic that has ever been

Numeracy

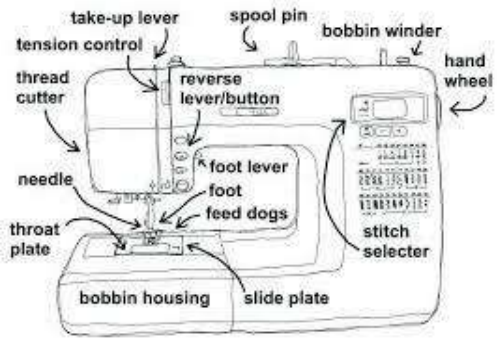
Accurate measurements are key to the success of your product

Always use a ruler or tape measure to check your measurements
Measure in cm & mm

Mm = Millimetres **Cm = Centimetres** **1cm = 10 mm**

Seam allowances are 1cm
Tolerance = +/- 5mm

Checking your measurements regularly ensures the accuracy of your final product



Literacy

Always title your work. <u>Make sure that your title is underlined</u>
Write in full sentences. These start with a capital letter & end with a full stop.
Check the spelling of key words.
Present your work with care & pride.

Machine threading –

Top thread

Place the reel of thread on the spool pin. Replace stopper to secure the reel.

With your left hand, draw the end of the thread to the left

Take the thread around the points marked 1, 2 3 & 4 on the machine

Secure the thread behind the metal bar above the needle

Thread the needle from front to back

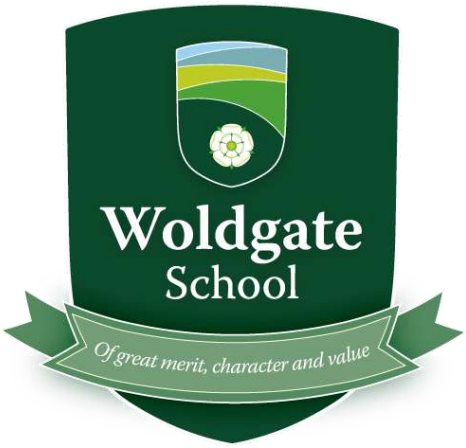
Tuck the end of the thread under then behind the foot. There should be 110-15cms of thread.

Key Words for this project

Aesthetics How something appeals visually
Accuracy Being exact or correct
Analyse To look at and discuss or write about in depth.
Annotate Add notes to a drawing to give explanation.
Cotton A plant-based fibre grown in hot climates.
Fabric The material used to make textiles products
Fibre thread-like parts from plant or artificial material that can be made into fabric
Client A person who uses your products or services.
Plastic A synthetic material made from polymers
Product Something that is made to be sold.
Seam A line of stitching which joins 2 pieces of fabric.
Seam allowance The distance from the edge of the fabric to the seam
Sewing Machine Specialist electrical equipment used to stitch fabrics
Stitch (verb) To sew 2 things together using thread.
Stitch (noun) A loop of thread which has passed through fabric
Sustainable Something that can keep going for a period of time without harming the environment.
Thread A twisted string of yarn, used for stitching

Cotton

Is a natural, staple plant fibre which comes from the seed boll of the cotton plant. It grows in hot, dry climates. Chemical fertilisers and insecticides are used in cotton farming to improve yields and increase profits.
Organic cotton is grown without chemical fertilisers or pesticides which makes it more expensive to produce, but not harmful to the environment.



English

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GCSE EXAMINATIONS

Two English Language Papers

Two English Literature Papers

ENGLISH

YEAR 11

AUTUMN

- Unseen Poetry
- Key themes
- Exploring writer's intentions
- Exploring writer's methods
- Historical significance
- Significance of context
- Significance of character
- A Christmas Carol

SPRING

- Writer's methods
- Effective answer structures
- Impact on the reader
- Departmental Revision Schedule begins

SUMMER

- Mock Exam Preparation
- Spoken Language Presentation
- Key themes
- Exploring writer's intentions
- Exploring writer's methods
- Historical significance
- Significance of context
- Significance of character
- Macbeth

YEAR 10

AUTUMN

- Explorations in Creative Reading – Language Paper 1
- Structural analysis
- Language analysis
- Evaluating texts
- Explorations in Creative Writing – Language Paper 1

SPRING

- Narrative writing structures
- Creative writing techniques
- Descriptive writing structures
- Power and Conflict Poetry Cluster – Literature Paper 2

SUMMER

- Writers' viewpoints and perspectives – Language Paper 2
- Exploring writer's intentions
- Significance of contexts
- Exploring writer's methods
- Comparison skills
- Comparison
- Summary Writing
- Writer's methods
- An Inspector Calls – Modern Text

YEAR 9

AUTUMN

- Dystopian Literature – The Literary Conflicts
- Individual Vs Nature
- Individual Vs Self
- Individual Vs Society
- Rhetorical devices
- Opinion Writing

SPRING

- 1984
- Animal Farm
- Individual Vs Technology
- The Road
- The Hunger Games
- Individual Vs Supernatural
- Tragedy – Love and Relationships
- Romeo and Juliet
- Origins and features of tragedy
- Producing effective essays
- An introduction to poetry – Love and Relationships
- Love and relationship poetry cluster
- Developing poetic terminology
- START OF GCSE

SUMMER

- Exploring writer's intentions
- Historical significance
- Significance of character
- Effective structures
- Model texts
- Key themes
- Exploring writer's methods
- Significance of context

YEAR 8

AUTUMN

- The Victorians
- Extracts from Victorian Literature
- Dealing with contextual information
- Non-fiction articles
- Representations of different classes

SPRING

- Women in Literature
- *Akala Natives*
- Black and British
- Representations of race
- Female gender tropes in fairy tales
- The Brontes
- Feminist perspectives
- Mary Shelley
- Jane Eyre
- *Creme De Cassis*
- Non-fiction texts
- The Bloody Chamber
- The Yellow Wallpaper

SUMMER

- Nature representing conflict
- The Pastoral
- Nature as Edenic
- The Romantics
- The Sublime
- Nature representing life
- The Natural Word

YEAR 7

AUTUMN

- Origins of English
- Old English
- Tower of Babel
- Early Communication
- Literary Heritage
- Beowulf
- Shakespeare
- Developing thesis statements

SPRING

- Middle English
- The Canterbury Tales
- Gulliver's Travels
- An introduction to narrative writing
- Character Archetypes
- Re-birth
- Over coming the Monster
- Voyage and Return
- Rags to Riches
- The Quest
- Structuring narratives
- Classical texts for character arcs

SUMMER

Woldgate School
Of great merit, character and value

The history of the English language

Old English (450AD-1066AD)

- Old English is a form of English with its roots very firmly in a Germanic language called Frisian. The language which developed into Old English came to our shores when the Angles, Jutes and Saxons settled here from Northern Europe
  - England was divided by the Danelaw, which is why place names have common affixes in different parts of the country

Middle English

- In 1066, William the Conqueror invaded Britain and became William I of England. William and his nobles spoke Norman French or Anglo-Norman which had some Germanic influences and were quite different to the form of French you would find in Paris at the time.
- King William ousted the Anglo-Saxon nobles and gave the land to his Norman lords. This meant that literature, the language of the court and government of the country was all Anglo-Norman. This language had the highest status in the country.
- The written language of the time was usually Latin. The everyday people of Britain still spoke English, but this became a second class language. England was a three language country!
- Over the years, as Anglo-Saxons married Normans, the two languages began to merge and the result was Middle English.

Early Modern English

- William Shakespeare create idioms such as 'green-eyed monster' and 'in a pickle'
- Dr Samuel Johnson's dictionary – first English dictionary. At first he thought he could 'secure' language from 'corruption and decay' by recording it in his dictionary, but he learned that language could not be controlled.
- Caxton invented the printing press which meant that texts could be published widely.

Literary heritage

As we study each text, add them to your timeline.

Old English (Anglo-Saxon Period) 450-1066 → **Middle English Period:** 1066-1500 → **The Renaissance:** 1500-1600 → **The Neoclassical Period:** 1600-1785 → **The Romantic Period:** 1785-1832 → **The Victorian Age:** 1832-1901 → **The Edwardian Period:** 1901-1914 → **The Modern Period:** Early 20th century → **The Postmodern Period:** Mid-20th century

Key vocabulary: the history of English	
Word	***Meaning***
Linguist	
Protolanguage	Forms of communication **before** languages were developed.
Language family	A goup of languages related through a common language known as the 'parental language'.
Tower of Babel	An origin myth from the Bible that is meant to explain why people speak different languages.
Endangered language	A language that is at risk of disappearing as its speakers die out or shift to speaking other languages.
Language isolate	A language that is not part of a language family.
Dead language	A language that has no native speakers, even if it is still in use (i.e. Latin).
Root word	Words that do not have an additional prefix or suffix added.
Affix / affixation	Affixation is the process of adding prefixes and / or suffixes to root words.
Danelaw	The part of England in which the laws of the Danes held sway and dominated those of the Anglo-Saxons.
Etymology	The study of the origin of words.
Old English	The form of English that was spoken between 450AD and 1066 AD.
Middle English	The form of English that was spoken and written from 1066AD to around 1450AD.

Key vocabulary: literary heritage	
Word	***Meaning***
Literary canon	Works of art that are highly valued and that have achieved the status of classics.
Epic poem	An long lengthy narrative poem where the central character has dealings with gods or other superhuman forces.
Chivalry	A code of honour that knights followed in the Middle Ages.
Courtly love	A Medieval idea about love that often presented love as a form of suffering.
Iambic pentameter	A rhythm structure that combines unstressed syllables and stressed syllables in groups of five.
Prose	Writing in sentences without a specific rhythm or form.
Form	The name of the text type that a writer uses.
Rhythm	The recurring pattern of stressed and unstressed syllables in a literary work.
Rhyme	The repetition of the same or similar sounds in two or more words, usually at the end of lines in poems.
Blank verse	Repeated lines of iambic pentameter.
Rhyming verse	Repeated lines of rhyming couplets.
Narrative poem	A form of poetry that tells a story.

Year 7:
The history of the English Language, and Literary Heritage.

What should I know by the end of this unit?			
I should be able to…	**Red**	**Amber**	**Green**
Understand how to identify topic words in a question.			
Write a thesis statement.			
Understand denotation and connotation.			
Understand how subject terminology functions as a shorthand.			

What is a topic sentence?

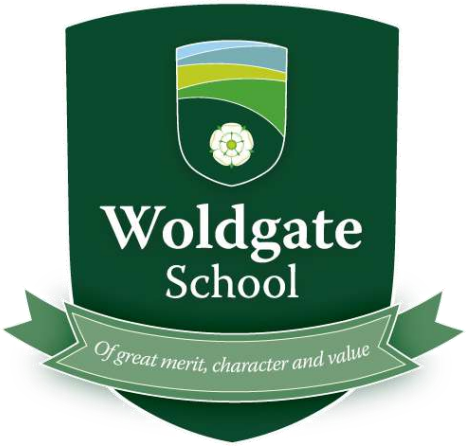
A topic sentence is expresses the main point of a paragraph. It is normally the most general sentence in the paragraph, followed by more specific ideas.
In essays, we use topic sentences to introduce the idea we plan to explore.

Year 7 analytical verbs

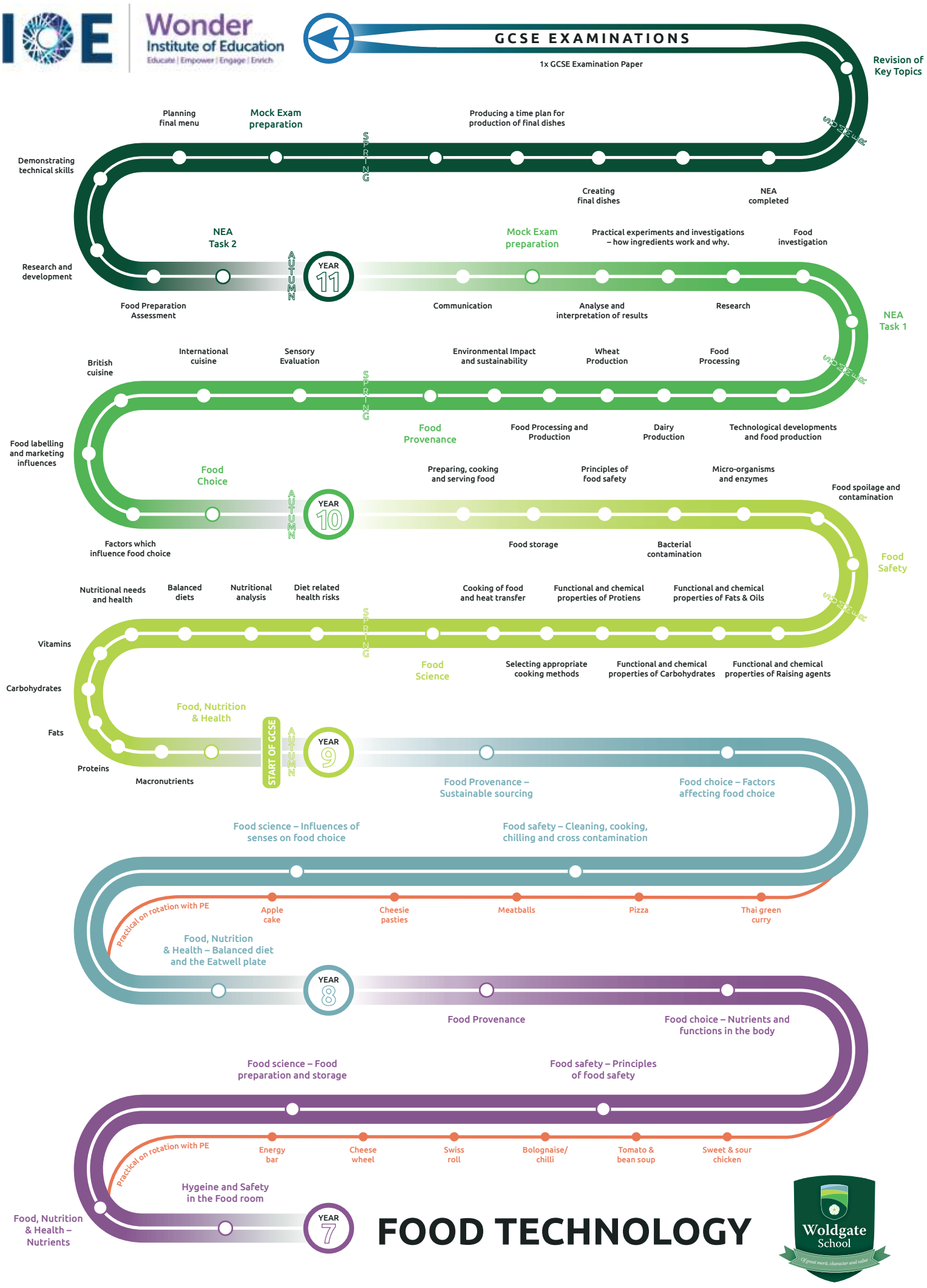
When should I use it?	
Connotes	To explore the **subtext** of a word.
Denotes	To explain the surface meaning of a word.
Emphasises	To draw attention to something.
Implies	To suggest something beyond the obvious.
Indicates	To explain what a word signposts or highlights.
Presents	To introduce an idea.
Symbolises	To explore the visual image of a word.

***Effect* phrases**

- which suggests / suggests that…
- putting the reader firmly in
- hurries the reader along by….
- gives the sense of…
- which is also suggested by…
- makes the reader feel…
- which implies that…
- This impression is added to…
- makes a connection for the reader because…
- the choice of verb / noun / adjective / adverb captures its…
- further implying that…
- This makes the reader realise…
- makes a reader think that…
- to emphasise to the reader how…
- The choice of verb / noun / adjective could make the reader feel…



Food and Nutrition


Wonder
Institute of Education
Educate | Empower | Engage | Enrich
GCSE EXAMINATIONS
1x GCSE Examination Paper
Revision of Key Topics
SUMMER
Planning final menu
Mock Exam preparation
Producing a time plan for production of final dishes
SPRING
Demonstrating technical skills
Creating final dishes
NEA completed
NEA Task 2
Mock Exam preparation
Practical experiments and investigations – how ingredients work and why.
Food investigation
Research and development
AUTUMN
YEAR 11
Food Preparation Assessment
Communication
Analyse and interpretation of results
Research
NEA Task 1
SUMMER
British cuisine
International cuisine
Sensory Evaluation
Environmental Impact and sustainability
Wheat Production
Food Processing
SPRING
Food Provenance
Food Processing and Production
Dairy Production
Technological developments and food production
Food labelling and marketing influences
Food Choice
Preparing, cooking and serving food
Principles of food safety
Micro-organisms and enzymes
Food spoilage and contamination
AUTUMN
YEAR 10
Factors which influence food choice
Food storage
Bacterial contamination
Food Safety
SUMMER
Nutritional needs and health
Balanced diets
Nutritional analysis
Diet related health risks
Cooking of food and heat transfer
Functional and chemical properties of Protiens
Functional and chemical properties of Fats & Oils
SPRING
Vitamins
Food Science
Selecting appropriate cooking methods
Functional and chemical properties of Carbohydrates
Functional and chemical properties of Raising agents
Carbohydrates
Food, Nutrition & Health
Fats
START OF GCSE
AUTUMN
YEAR 9
Proteins
Macronutrients
Food Provenance – Sustainable sourcing
Food choice – Factors affecting food choice
Food science – Influences of senses on food choice
Food safety – Cleaning, cooking, chilling and cross contamination
Practical on rotation with PE
Apple cake
Cheesie pasties
Meatballs
Pizza
Thai green curry
Food, Nutrition & Health – Balanced diet and the Eatwell plate
YEAR 8
Food Provenance
Food choice – Nutrients and functions in the body
Food science – Food preparation and storage
Food safety – Principles of food safety
Practical on rotation with PE
Energy bar
Cheese wheel
Swiss roll
Bolognaise/ chilli
Tomato & bean soup
Sweet & sour chicken
Hygeine and Safety in the Food room
Food, Nutrition & Health – Nutrients
YEAR 7
FOOD TECHNOLOGY
Woldgate School
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Knowledge Organiser – Year 7 Food and Nutrition

Key Words

Nutrition = The study of food

Healthy eating = Eating a diet consisting of foods from all nutrient groups

Balanced diet = Eating a diet consisting of foods from all nutrient groups

Carbohydrate= A nutrient that we get from food which provides the body with energy

Protein = needed by the body for growth and repair and keeping cells healthy

Fat = needed by the body to keep us warm, making cell membranes and nerve cells, protect vital organs and to provide backup stores of energy

Vitamins and minerals = essential nutrients because acting together, they perform hundreds of roles in the body. They help support bones, heal wounds, and bolster your immune system. They also convert food into energy, and repair cellular damage.

Raising agent = a substance added to a mixture to make it rise.

When preparing food remember HATTIE

H – Tie your hair back or wear a hairnet/hat. Wash your hands
A – Put an apron on
T – Clean your table with antibacterial spray
T – Collect a cutlery tray
I – Collect all the ingredients you need
E – Collect equipment you need; prepare any tins/baking sheets (e.g. grease or line tins)

Knowledge

hazard = The potential of risk from a substance, machine or operation
Risk = what a hazard may cause.

There are 5 main nutrients our body needs and these are Fats, Protein, Carbohydrates, Vitamins and Minerals.

Carbohydrates can be broken into 3 categories: Sugars, Starches and Dietary fibre

80g of fresh, canned or frozen fruit and vegetables, 30g of dried fruit, 150ml of fruit juice, vegetable juice or smoothie, 80g of beans and pulses counts as 1 portion of your 5 A Day

Rubbing in method

Whisking method

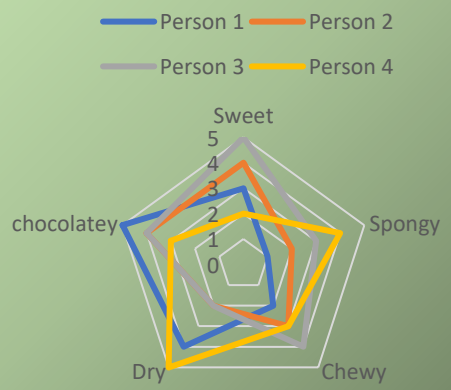
Creaming method

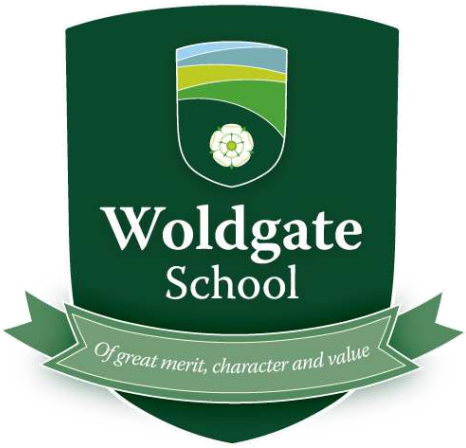
Numeracy

Accurate measurements are key to the success of your product
Always use a scales, a jug or a measuring spoon.

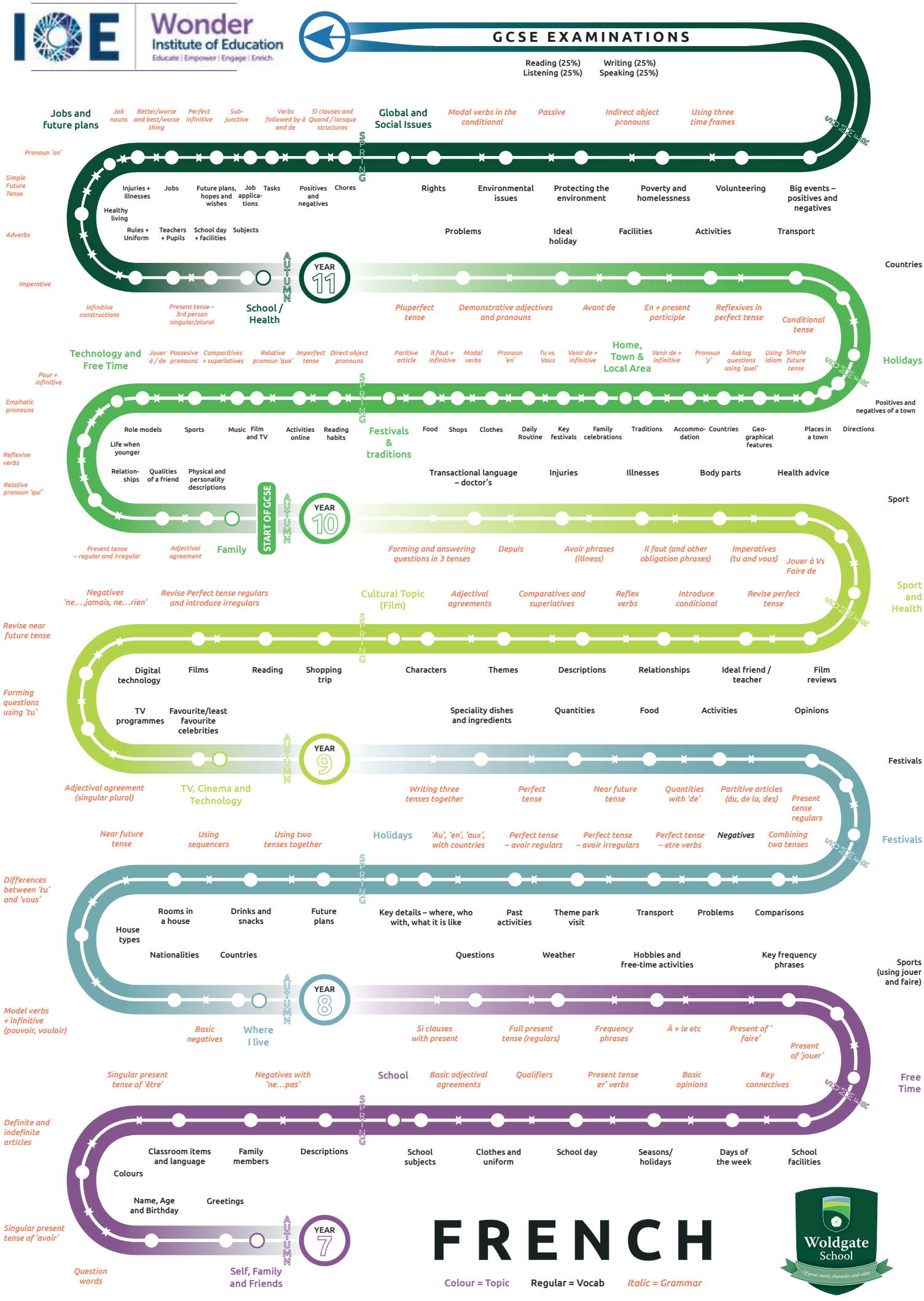
G = grams
KG = kilograms
Tsp = teaspoon
Tbsp = tablespoon
ml = millilitres

Example of a practical evaluation





French



FRENCH

Colour = Topic Regular = Vocab *Italic = Grammar*

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Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Sunday	

Ça va (très) bien, merci.	I'm (very) well, thank you.
Pas mal, merci.	Not bad, thank you.
Ça ne va pas!	I'm not doing well!

La famille - *Family*

J'ai …	un frère / demi-frère. une sœur / demi-sœur. deux frères / demi-frères. trois sœurs / demi-sœurs.
Je n'ai pas de frères et sœurs.	
Je suis …	fils unique. fille unique.

I have	A brother / half or stepbrother A sister / half or stepsister Two brothers / half or stepbrothers Three sisters / half or stepsister
I don't have any brothers or sisters	
I am…	An only child (male) An only child (female)

Dans ma famille (In my family)	il y a (there are) j'ai (I have)
	mon grand-père (my grandfather) mon père (my father) mon oncle (my uncle) mon frère (my brother) mon cousin (my cousin (m))
	ma grand-mère (my grandmother) ma mère (my mother) ma tante (my aunt) ma soeur (my sister) ma cousine (my cousin (f))

In French, all nouns are either masculine or feminine.

masculine	feminine	plural
un *poster*	***une*** *fenêtre*	***des*** *chaises*
a poster	**a** window	**some** chairs

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In French, there are three words for 'my'.

masculine	feminine	plural
mon *portable* my phone	***ma*** *vie* my life	***mes*** *amis* my friends

Note: If a feminine noun starts with a vowel, you use *mon*: ***mon*** *amie Samira.*

Y7 French Knowledge Organiser: Unit 1 *La Rentrée*

Key Phonics:

s on the end of most French words is silent:
e.g. *As-tu des frères et sœurs?*
But you do pronounce the ***s*** on *fils*.

Remember, ***qu*** is pronounced 'k'.
Qu'est-ce que sounds like 'keskuh'.
Qu'est-ce qu'il y a sounds like 'keskeel-ee-ya'.

–en (as in *serpent*) is a nasal sound. ***–an*** (as in *danse*) and ***–on*** (as in *poisson*) are also nasal sounds. In pairs, try saying this tongue-twister. Pay attention to the nasal sounds.

En *France,* ***Nathan*** *aime le poisson, mais pas les serpents!*

Comment tu t'appelles? Quel âge as-tu?
What is your name? How old are you?

Je m'appelle (I am called)	Adrien (Adrien) Christophe (Christophe) Luc (Luc) Marc (Marc) Pierre (Pierre) Yannick (Yannick)	et (and)	j'ai (I have)	un an (1 year)	
Tu t'appelles (You are called)			tu as (you have)	deux (2) trois (3) quatre (4) cinq (5) six (6) sept (7) huit (8) neuf (9) dix (10) onze (11)	douze (12) treize (13) quatorze (14) quinze (15) seize (16) dix-sept (17) dix-huit (18) dix-neuf (19) vingt (20)
Mon frère (My brother) Ma soeur (My sister)	Béatrice (Béatrice) Corinne (Corinne) Isabelle (Isabelle) Marie (Marie) Sophie (Sophie) Virginie (Virginie)		il a (he has) elle a (she has)		ans (years)

s'appelle (is called)

Quelle est la date de ton anniversaire? *When is your birthday?*

Mon anniversaire est (My birthday is)	le (the)	premier (1st)	douze (12th)	vingt-deux (22nd)
Ton anniversaire est (Your birthday is)		deux (2nd)	treize (13th)	vingt-trois (23rd)
L'anniversaire de Luc est (Luc's birthday is)		trois (3rd)	quatorze (14th)	vingt-quatre (24th)
L'anniversaire de mon ami est (My friend's (m) birthday is)		quatre (4th)	quinze (15th)	vingt-cinq (25th)
Son anniversaire est (His / Her birthday is)		cinq (5th)	seize (16th)	vingt-six (26th)
L'anniversaire d'Isabelle est (Isabelle's birthday is)		six (6th)	dix-sept (17th)	vingt-sept (27th)
L'anniversaire de mon amie est (My friend's (f) birthday is)		sept (7th)	dix-huit (18th)	vingt-huit (28th)
Aujourd'hui c'est (Today it is)		huit (8th)	dix-neuf (19th)	vingt-neuf (29th)
		neuf (9th)	vingt (20th)	trente (30th)
		dix (10th)	vingt et un (21st)	trente et un (31st)
		onze (11th)		

janvier ((of) January)
février ((of) February)
mars ((of) March)
avril ((of) April)
mai ((of) May)
juin ((of) June)
juillet ((of) July)
août ((of) August)
septembre ((of) September)
octobre ((of) October)
novembre ((of) November)
décembre ((of) December)

Tu es comment? *What are you like?*

Verb	Intensifier	Adjective
Je suis *I am* **Il est** *he is* **Elle est** *she is*	**trop** *too* **tellement** *really* **très** *very* **assez** *quite* **un peu** *a bit*	**content(e)** *happy* **triste** *sad* **sympa** *nice/kind* **méchant(e)** *unkind/nasty/mean* **grand(e)** *tall* **petit(e)** *short*
Je ne suis pas *I am not* **Il n'est pas** *he is not* **Elle n'est pas** *she is not*	**très** *very*	**joli(e)** *pretty/handsome* **laid(e)** *ugly* **bavard(e)** *chatty/talkative* **timide** *shy* **fort(e)** *strong* **barbant(e)** *boring*

assez	quite	***trop***	too
très	very	***un peu***	a bit

To make it negative, use ***ne … pas*** to make a 'sandwich' around the verb.

*Je **ne** suis **pas** très grand(e).*
I am not very tall.

ne shortens to ***n'*** in front of a vowel.

*Il **n'**est **pas** arrogant.*
He is not arrogant.

Page 29

G

Most adjectives change their ending to 'agree' with the noun.

masculine	feminine
amusant	*amusant**e***
arrogant	*arrogant**e***
bavard	*bavard**e***
fort	*fort**e***
grand	*grand**e***
intelligent	*intelligent**e***
méchant	*méchant**e***
patient	*patient**e***
petit	*petit**e***
*timide**	*timide*

In the masculine form, the final consonant is silent, but in the feminine form, we pronounce the consonant before the final 'e'. Have a go at saying both versions!

**timide* has the same ending for masculine and feminine nouns.

Page 28

Tu aimes…? *Do you like…?*

aimer (to like) is a regular ***–er*** verb.

*j'aim**e***	I like
*tu aim**es***	you like
*il/elle aim**e***	he/she likes

You must use a definite article with the noun after *aimer*.

*J'aime **la** musique.* I like music.

To make a sentence negative, use ***ne … pas*** or ***n'… pas*** to make a 'sandwich' around the verb.

*Elle **n'**aime **pas** le poisson.* She doesn't like fish.

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	indefinite article	definite article
masculine singular	***un*** (a / an)	***le*** / ***l'*** (the)
feminine singular	***une*** (a / an)	***la*** / ***l'*** (the)
plural	***des*** (some)	***les*** (the)

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Opinion	Noun
	le sport *sport* **le foot** *football* **le vélo** *cycling* **le collège** *school* **le poisson** *fish* **le cinéma** *the cinema*
J'adore *I love* **J'aime** *I like*	**la danse** *dance* **la musique** *music*
Je n'aime pas *I don't like* **Je déteste** *I hate* **Je préfère** *I prefer*	**les pizzas** *pizzas* **les serpents** *snakes* **les glaces** *ice-cream* **les jeux vidéo** *video-games* **les vacances** *holidays* **les BD** *comics* **les mangas** *manga* **les araignées** *spiders*

Use connectives to add interest to your speaking and writing.

et	and
mais	but
aussi	also

Note the word order with ***aussi***.

J'aime les glaces. J'aime aussi les pizzas.
I like ice cream. I also like pizza.

The **infinitive** is the form of the verb meaning 'to do something', e.g. 'to swim', 'to do', 'to sing'.

Many infinitives end in ***–er*** in French:
e.g. *chant**er*** (to sing), *nag**er*** (to swim).

You use the infinitive to form other parts of the verb:
e.g. 'I sing', 'we swim'.

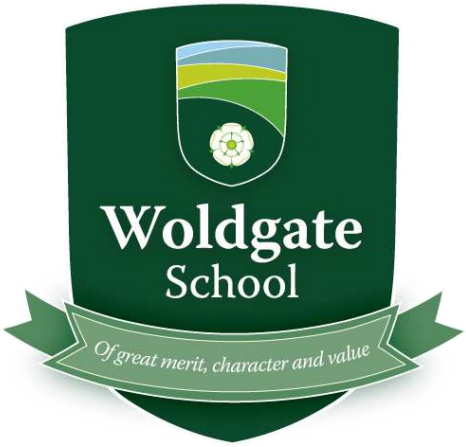
Page 29

Examples:

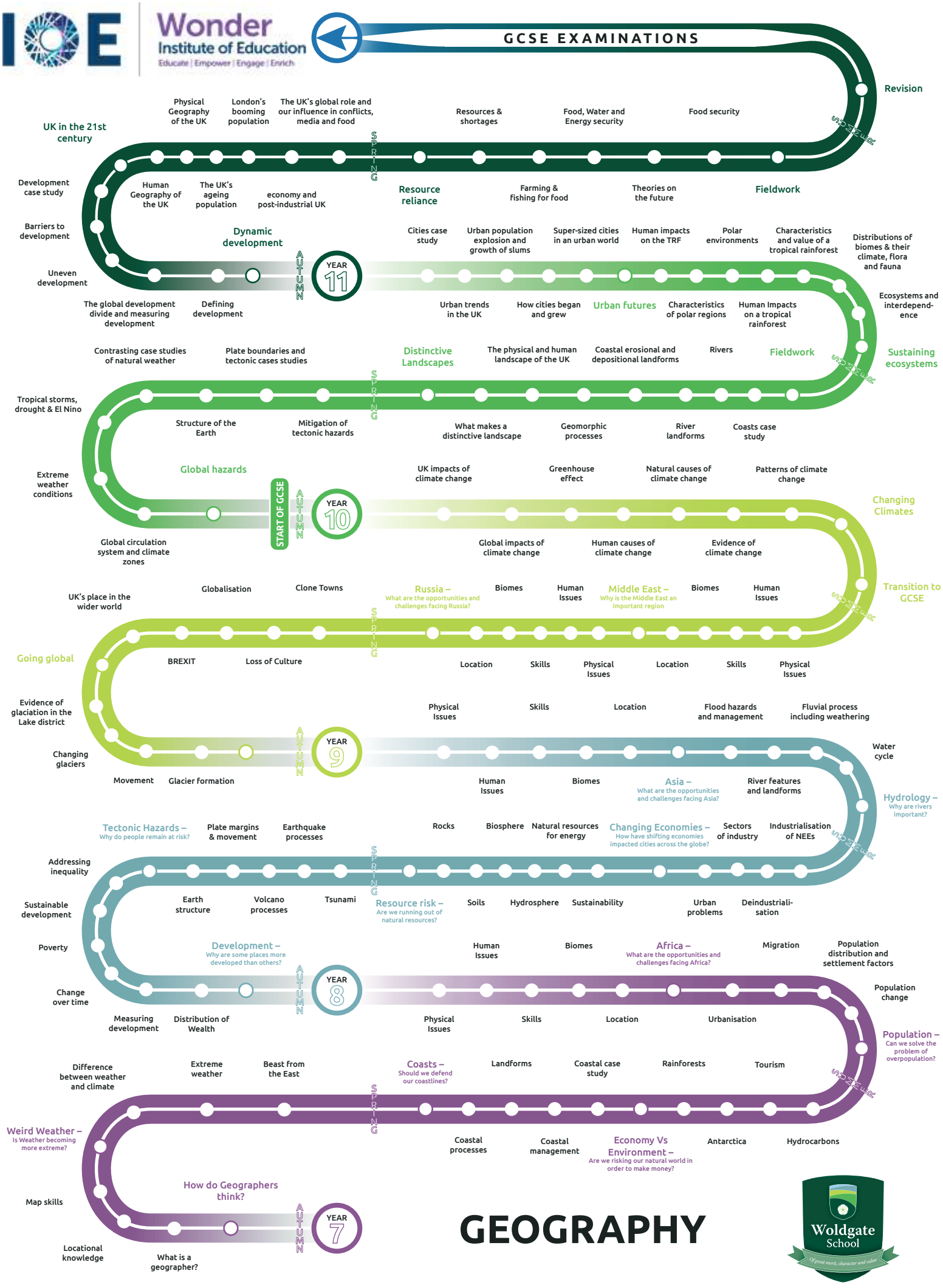
Key ER verbs:
chanter – to sing
nager – to swim

Key IR Verbs:
finir – to finish
sortir – to go out

Key RE Verbs:
lire – to read
prendre – to take



Geography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GCSE EXAMINATIONS
Revision
SUMMER
UK in the 21st century
Physical Geography of the UK
London's booming population
The UK's global role and our influence in conflicts, media and food
Resources & shortages
Food, Water and Energy security
Food security
SPRING
Development case study
Human Geography of the UK
The UK's ageing population
economy and post-industrial UK
Resource reliance
Farming & fishing for food
Theories on the future
Fieldwork
Barriers to development
Dynamic development
Cities case study
Urban population explosion and growth of slums
Super-sized cities in an urban world
Human impacts on the TRF
Polar environments
Characteristics and value of a tropical rainforest
Distributions of biomes & their climate, flora and fauna
AUTUMN
YEAR 11
Uneven development
The global development divide and measuring development
Defining development
Urban trends in the UK
How cities began and grew
Urban futures
Characteristics of polar regions
Human Impacts on a tropical rainforest
Ecosystems and interdependence
Contrasting case studies of natural weather
Plate boundaries and tectonic cases studies
Distinctive Landscapes
The physical and human landscape of the UK
Coastal erosional and depositional landforms
Rivers
Fieldwork
Sustaining ecosystems
Tropical storms, drought & El Nino
Structure of the Earth
Mitigation of tectonic hazards
What makes a distinctive landscape
Geomorphic processes
River landforms
Coasts case study
Extreme weather conditions
Global hazards
UK impacts of climate change
Greenhouse effect
Natural causes of climate change
Patterns of climate change
START OF GCSE
YEAR 10
Global circulation system and climate zones
Global impacts of climate change
Human causes of climate change
Evidence of climate change
Changing Climates
UK's place in the wider world
Globalisation
Clone Towns
Russia –
What are the opportunities and challenges facing Russia?
Biomes
Human Issues
Middle East –
Why is the Middle East an important region
Biomes
Human Issues
Transition to GCSE
Going global
BREXIT
Loss of Culture
Location
Skills
Physical Issues
Location
Skills
Physical Issues
Evidence of glaciation in the Lake district
Physical Issues
Skills
Location
Flood hazards and management
Fluvial process including weathering
YEAR 9
Changing glaciers
Movement
Glacier formation
Human Issues
Biomes
Asia –
What are the opportunities and challenges facing Asia?
River features and landforms
Water cycle
Hydrology –
Why are rivers important?
Tectonic Hazards –
Why do people remain at risk?
Plate margins & movement
Earthquake processes
Rocks
Biosphere
Natural resources for energy
Changing Economies –
How have shifting economies impacted cities across the globe?
Sectors of industry
Industrialisation of NEEs
Addressing inequality
Earth structure
Volcano processes
Tsunami
Resource risk –
Are we running out of natural resources?
Soils
Hydrosphere
Sustainability
Urban problems
Deindustrialisation
Sustainable development
Poverty
Development –
Why are some places more developed than others?
Human Issues
Biomes
Africa –
What are the opportunities and challenges facing Africa?
Migration
Population distribution and settlement factors
YEAR 8
Change over time
Measuring development
Distribution of Wealth
Physical Issues
Skills
Location
Urbanisation
Population change
Population –
Can we solve the problem of overpopulation?
Difference between weather and climate
Extreme weather
Beast from the East
Coasts –
Should we defend our coastlines?
Landforms
Coastal case study
Rainforests
Tourism
Weird Weather –
Is Weather becoming more extreme?
Coastal processes
Coastal management
Economy Vs Environment –
Are we risking our natural world in order to make money?
Antarctica
Hydrocarbons
How do Geographers think?
Map skills
YEAR 7
Locational knowledge
What is a geographer?
GEOGRAPHY
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HOW DO GEOGRAPHERS THINK?

KEY WORDS

Physical world	what our planet is like, the work of rivers, the sea and ice
Human world	how and where people live, develop and earn a living
Environmental world	habitats, such as mountains, forests, oceans, and how they develop and change
Northings	a figure or line representing northward distance on a map (expressed by convention as the second part of a grid reference, after easting)
Eastings	a figure or line representing eastward distance on a map (expressed by convention as the first part of a grid reference, before northing)
Scale	a measurement of enlargement or reduction from the original size, often shown as a ratio, e.g. 1:50,000
Urban	a built-up area used for housing and industry
Rural	an area in the countryside
Groyne	a wooden barrier built out into the sea to stop longshore drift of sand and shingle
Vertical photograph	what the land looks like from above

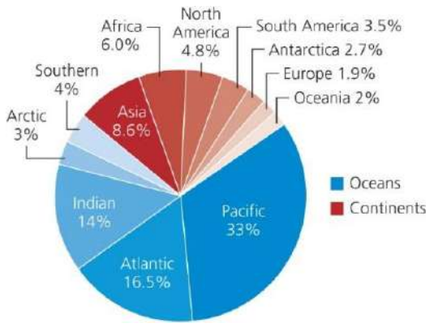
WHAT IS GEOGRAPHY?

Geography helps you make sense of:

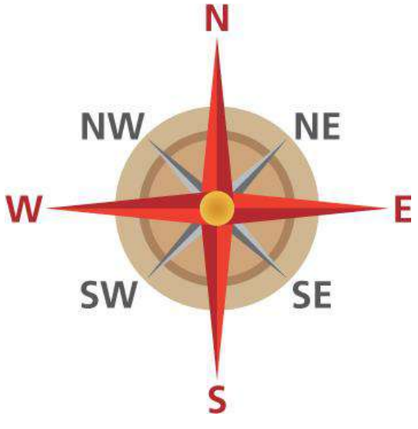
- The physical world – what our planet is like, the work of rivers, seas and ice
- The human world – how and where people live, develop and earn a living
- The environmental world – habitats, such as mountains, forests, oceans, and how they develop and change.

Continent	Area (millions of km2)
Asia	44.6
Africa	30.1
North America	24.5
South America	17.8
Antarctica	13.2
Europe	9.9
Oceania	8.1

Continent	Millions of people
Asia	4300
Africa	1111
Europe	743
North America	565
South America	407
Oceania	38
Antarctica	0



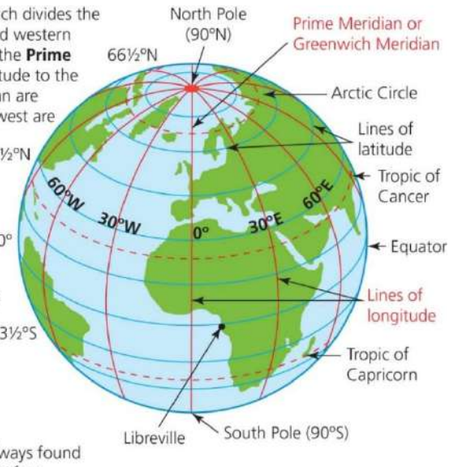
COMPASS DIRECTIONS



LATITUDE AND LONGITUDE

The line of longitude which divides the Earth into the eastern and western hemisphere is known as the **Prime Meridian**. Lines of longitude to the east of the Prime Meridian are labelled **E**. Those to the west are labelled **W**.

The line of latitude which divides the Earth into the northern and southern hemisphere is known as the **Equator**. Lines of latitude above or to the north of the Equator are labelled **N**. Those below or to the south are labelled **S**.



Latitude is always found and written before longitude – e.g. Libreville, Gabon is 0° 23'N 9° 27'E

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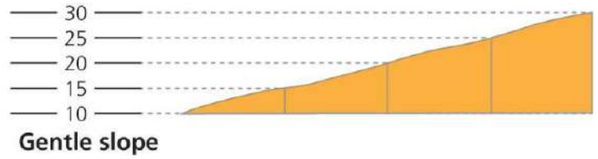
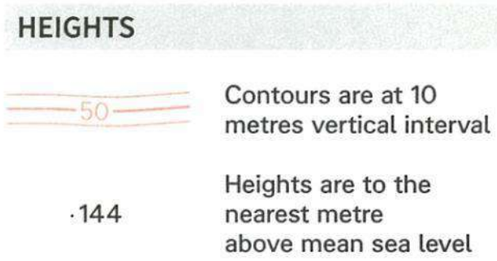
GRID REFERENCES

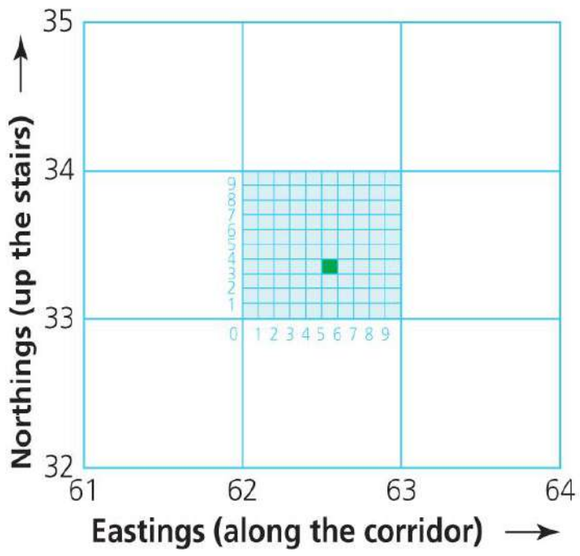
Six-figure grid references

To locate a feature more precisely within a square, such as the small green shaded square shown, we can use a six-figure grid reference:

- First, imagine that each grid square is divided into tenths (as shown on the grid).
- Read along from square 62 to count the tenths. There are 5. Read off the number 625.
- Now read up from square 33 to count the tenths. There are 3. Read off the number 333.
- These numbers combined provide the six-figure grid reference 625333.







HEIGHT, DIRECTION AND SLOPES

Height on OS maps is always shown in metres above sea level. There are three ways height is shown:

1. **Spot height:** marked by a black dot with the height in metres alongside it.
2. **Triangulation pillars:** often found on hill tops, shown by a blue triangle with a dot in the middle and the height marked next to it. These pillars were used by OS surveyors to measure the land, but they are not used any more
3. **Contour lines:** thin brown lines that join together places at the same height. The height is printed along the line. It is possible to use them to see the shape of the land.

If contour lines are close together the slope is steep; if they are far apart the slope is gentle.

SCALE

Scale is shown on a map in three ways:

- As a line called a linear scale.
- As a statement of scale.
- As a ratio – a scale of 1: 50 000 means that one unit on the map represents 50,000 of the same unit on the ground.

CONTINENTS AND OCEANS

Continents:

- North America
- Europe
- Asia
- Africa
- South America
- Oceania/Australasia
- Antarctica

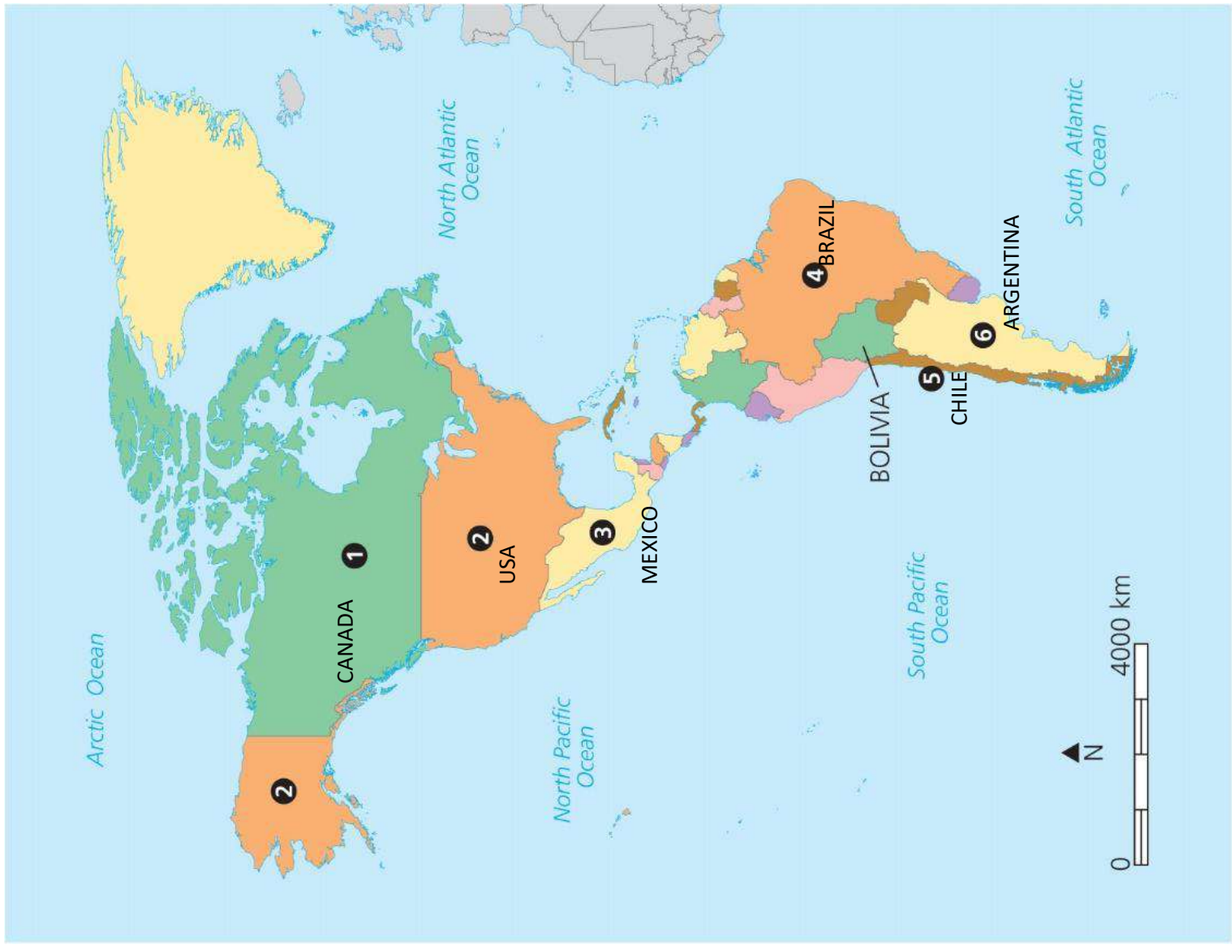
Oceans:

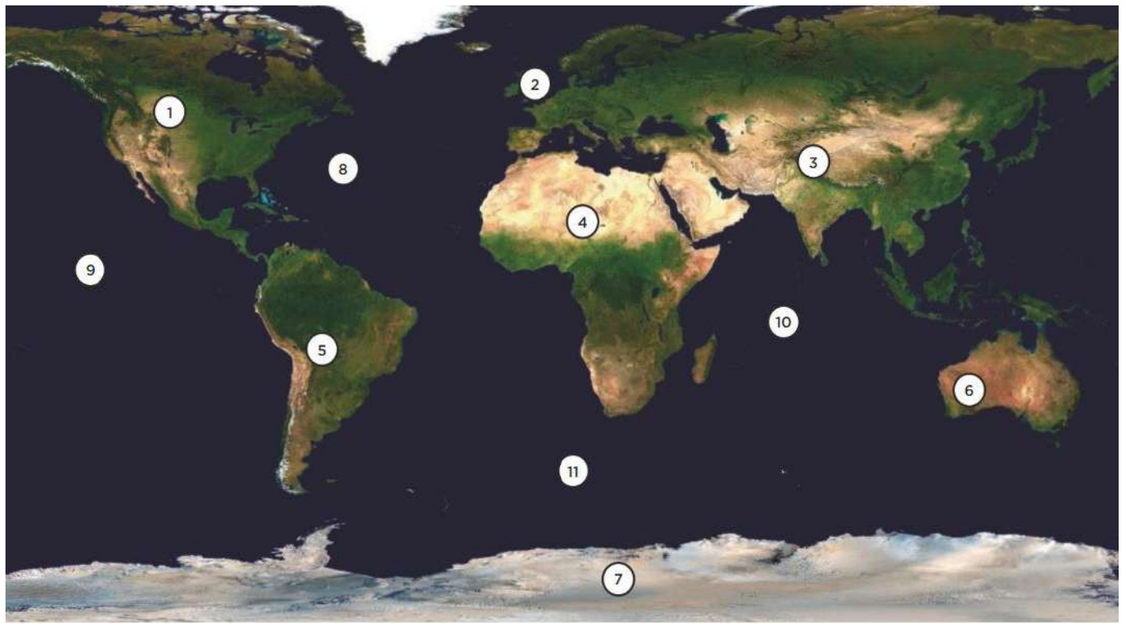
- Atlantic Ocean
- Pacific Ocean
- Indian Ocean
- Southern Ocean

UNIT 1 – KEY MAPS

EUROPE

NORTH AND SOUTH AMERICA





WEIRD WEATHER

KEY WORDS

Air pressure	the weight of air pushing down on the earth
Advanced Countries (AC)	ACs are the wealthiest countries in the world
Anticyclones	high pressure systems in the atmosphere associated with dry, settled periods of weather
Climate graph	a graph showing the average temperature and rainfall for each month of the year for a specific location
Cold front	the boundary of an advancing mass of cold air, in particular the trailing edge of the warm sector of a low-pressure system
Condensation	water vapour is cooled and turns back to water droplets
Dew	water droplets condensed from the atmosphere on to cool surfaces near the ground
Dew point temperature	temperature at which water in the air condenses to form dew
Drought	a long period of low rainfall
Emerging and Developing Countries (EDC)	EDCs are generally getting richer
Fog	a thick cloud of water vapour in the air near the Earth's surface, which restricts visibility
Frost	thin coat of ice covering objects when the dew point temperature is below freezing
Humidity	amount of water vapour in the air
Isobars	lines on a weather map connecting areas of equal atmospheric pressure
Isotherms	lines on a weather map connecting areas of equal temperature
Low-Income Developing Countries (LIDC)	LIDCs are the poorest countries in the world
Meteorology	the scientific study of the atmosphere
Occluded front	weather pattern in which a cold front overtakes a warm front; associated with formation of cyclones
Precipitation	water droplets in clouds become too heavy and fall as rain, snow, hail, etc.
Sunshine	when the sun shines
Temperature	measurement of heat or cold
Warm front	the boundary of an advancing mass of warm air, in particular the leading edge of the warm sector of a low-pressure system
Warm sector	the wedge of air between the warm and cold fronts of a depression
Weather stations	areas with tools and equipment for measuring changes in the atmosphere
Wind	the movement of air on a large scale over the Earth's surface

WHAT IS WEATHER?

The weather is the state of the atmosphere at a particular place and time. The key elements of the weather are: temperature, precipitation, air pressure, wind, humidity, sunshine and drought. The weather affects us all every day.

WHAT IS CLIMATE?

The difference between weather and climate is a measure of time.

- Weather is the condition of the atmosphere over a place for a short period of time, day to day.
- Climate is the state of the atmosphere over longer periods of time. Climate is the average conditions, calculated over many years.

Climate is what you expect, like a very hot summer, and weather is what you get, like a hot day with a sudden thunderstorm.

CLOUDS AND RAIN

- All air contains water vapour.
- Warm air rises. As this air rises, it expands and cools. As the warm air cools, it can hold less water vapour.
- When the temperature falls to a critical level, known as the dew point temperature, condensation occurs. This is where the water vapour in the air begins to condense from a gas into water droplets, often around dust particles. We see collections of water droplets in the atmosphere, as clouds.
- The droplets are suspended in the air by the updraughts of warm air rising. The water droplets will eventually grow bigger and heavier by joining together, as the air continues to rise and cool.
- The clouds become darker as more water droplets form. Eventually the updraughts of air can no longer support the heavy droplets so they fall to earth as one of the forms of precipitation.
- There are three types of rainfall – relief rainfall, convectional rainfall, frontal rainfall

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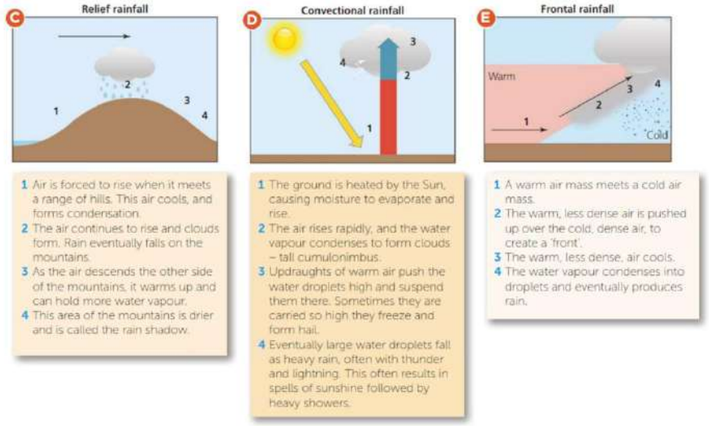
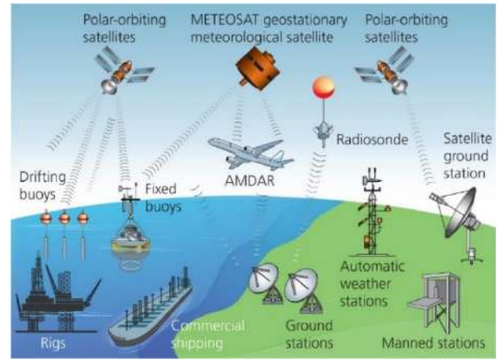
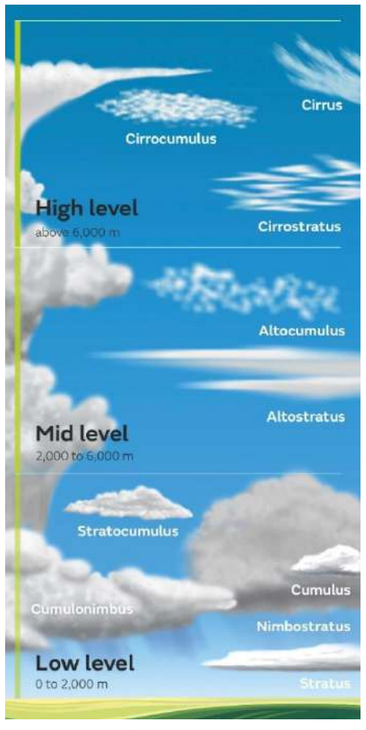
TYPES OF RAIN



MEASURING WEATHER



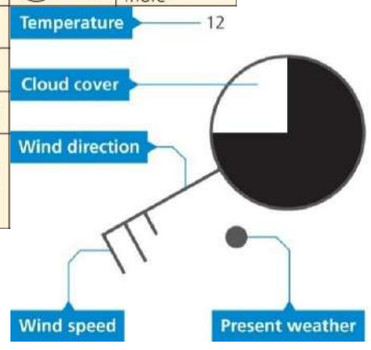
CLOUDS



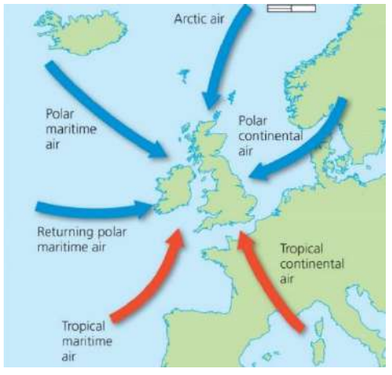
SYNOPTIC CODE

Symbol	Precipitation	Symbol	Cloud cover	Symbol	Wind speed
,	Drizzle	○	Clear sky	◎	Calm
▽	Shower	⊖	One oktas	○—	1-2 knots
●	Rain	◔	Two oktas	○┐	5 knots
✱	Snow	◕	Three oktas	○┐	10 knots
△	Hail	◑	Four oktas	○┐	15 knots
K	Thunderstorm	◒	Five oktas	○┐	20 knots
⁂	Heavy rain	◕	Six oktas	○▼	50 knots or more
✱	Sleet	◑	Seven oktas		
✱▽	Snow shower	●	Eight oktas		
=	Mist	⊗	Sky obscured		
≡	Fog	The sky is divided into eighths or oktas to record how much cloud cover there is.			

Synoptic code is a code which used to describe current weather conditions.



WEATHER IN THE UNITED KINGDOM



- The UK's weather is very variable because a number of air masses move over the country at different times of the year.
- An air mass is a body or 'mass' of air with uniform weather conditions, such as similar clouds, temperature and humidity.
- The UK is influenced by a number of air masses because it is almost halfway between the cold North Pole and hot Equator.
- It lies in a zone where different air masses meet and take control at different times of the year.
- The tropical continental air mass originates over the Sahara desert so it is hot and dry.
- The arctic maritime air mass is cold and wet, bringing snow in winter.

WEIRD WEATHER

AIR PRESSURE AND ANTICYCLONES

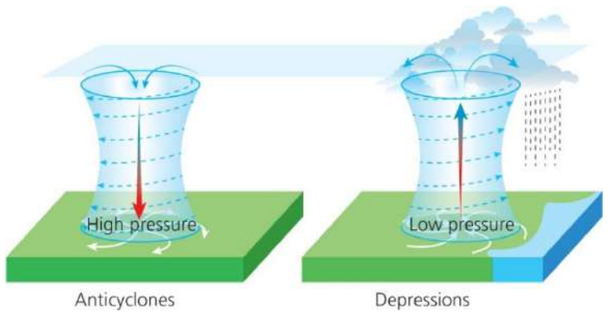
- The air around you has weight, and it pushes down on the earth. This pressure is called **air pressure**.
- When air pressure is low this is because warm air near the ground is rising. When air pressure is high it is because colder air, high up in the atmosphere, is sinking towards the ground.
- The arrival of anti-cyclones over the UK is influenced by air masses. In the **summer**, tropical continental air moves northwards. In the **winter**, polar continental air moves southwards

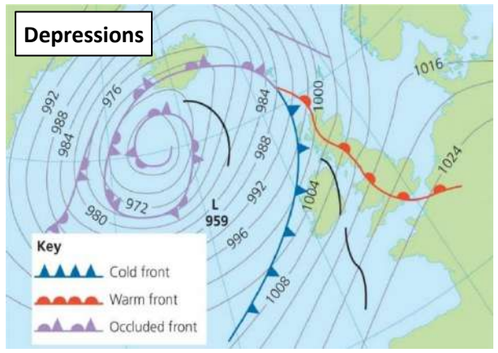
Winter Anticyclones

- Cold, dry days with light winds.
- Temperatures can decrease very quickly at night.
- Water vapour can condense and freeze on ground surfaces forming frost.
- Light winds along with falling temperatures can encourage fog to form.
- Sometimes stratocumulus cloud can become established leading to several days of no sun

Summer Anticyclones

- Long, sunny cloudless days and warm temperatures. Dry, occasionally very hot temperatures can trigger convectional rainfall and thunderstorms.
- Often heatwaves can occur with prolonged hot weather





DEPRESSIONS

- A **depression** is an area of **low** pressure which moves from west to east in the northern hemisphere.
- A **depression** forms as a result of the warm air mixing and rising above surrounding cold air as shown. This mixing of air often leads to unsettled weather
- A **depression** has three elements: a **warm front**; a **warm sector**; and a **cold front**.
- A front is the boundary between two air masses, one warm the other cold. If very cold air comes into contact with warm tropical air, the front can be strong, with rapid changes in temperature and pressure, strong winds and plenty of rainfall. Eventually the cold front catches up with the warm front lifting the warm sector above the surface of the Earth. This is an occluded front.

FACTORS AFFECTING CLIMATE

- **Latitude –** Places nearer the Equator are much warmer than places nearer the Poles.
- **Altitude –** Temperatures decrease by about 1°C for every 100 m increase in height above sea level.
- **Prevailing winds** – The prevailing wind is the direction from which the wind usually blows. The prevailing wind is affected by the area it blows over. The North Atlantic Drift is a warm ocean current that flows across the Atlantic Ocean from the Gulf of Mexico. It warms the prevailing winds or air masses, making western areas of the UK and Europe warmer than areas inland.
- **Distance from the sea –** In the winter, the sea keeps coastal areas warm and in summer, it cools them down. The further away from the sea a place is, the wider the range of temperatures found there, as only the surface of land is heated, so it heats quickly, but also loses the heat quickly in winter.

THE BEAST FROM THE EAST

February and March 2018. The weather included snowfall and sub-zero temperatures as result of freezing air from Siberia. This led to temperatures of around -5°C but felt as cold as 15°C.

Impacts:

- Up to 50cm of snow fell on areas of high ground, 10 people died
- Hundreds of schools were forced to close, trains and flights were cancelled
- People were stuck in their cars for long periods of time. Food and gas shortages in some areas

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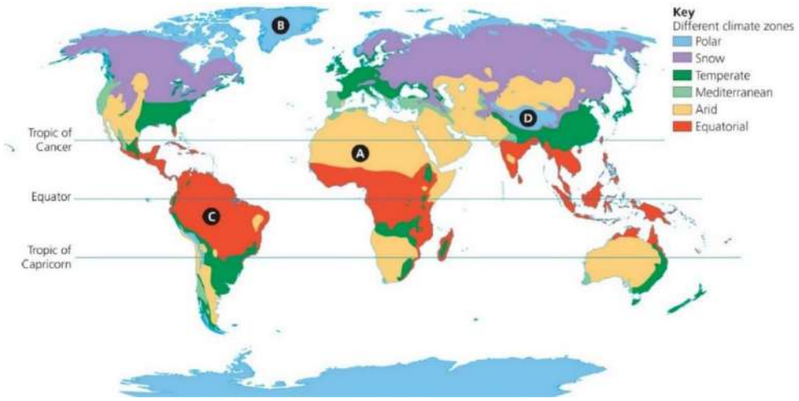
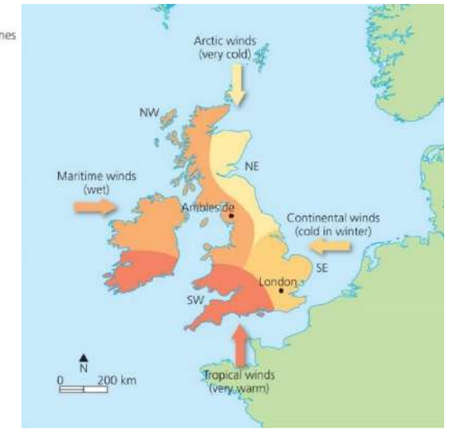
GLOBAL CLIMATE



UK CLIMATE



▲ The climate of the UK is variable – it changes a lot, day to day. The UK has cool summers, mild winters and rainfall spread evenly throughout the year. The climate type is classified as temperate, which means we rarely experience extremes.

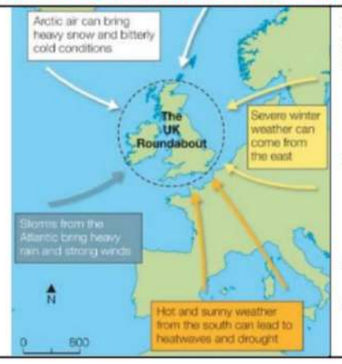
EXTREME WEATHER

Extreme weather is a weather event that is significantly different from the normal.

The UK experiences varied weather and occasional extreme weather events as the UK is located at the meeting point of a number of air masses, which bring different weather from different directions.

Hazards include:

- ❑ Droughts
- ❑ Thunderstorms
- ❑ Intense rainfall
- ❑ Snow
- ❑ Extreme cold
- ❑ Strong winds



Evidence that weather is becoming more extreme:

- **International Disaster Database** – records show the number of **floods have increased since 1960s**. Climate models show an **increase in the frequency and length** of extreme events.
- **2003 Heatwave** affected the whole of Europe. It lasted from June till August. Tourism increased in parts of the UK due to hot weather, however 2045 people died in the UK due to heat.
- **2014 Somerset Floods** (wettest January on record)
- **2018 Beast From the East;** temperatures in some areas dipped to -11°C, the lowest since 1986.

TROPICAL STORMS

A tropical storm is a storm that is formed over warm water, near the tropics. It has wind speeds of over 74mph and torrential rain.
Hurricanes (USA and Caribbean), **Typhoons** (Japan and the Philippines) **Cyclones** (SE Asia and Australia).

Tropical storms conditions:

- **Warm water (>27°C)**. As a result they are often found in tropical areas and occur in the summer/autumn when seas are at their hottest.
- **Latitudes between 5 -20°** north and south of the equator. A tropical storm is a spinning mass of clouds. The earth's spin between 5-20 is enough to spin the clouds = tropical storm.

Tropical storms are measured using the **Saffir-Simpson scale**. There are 5 categories.

TROPICAL STORM FORMATION:

HEAVY	HEAT	The sun HEATS the sea/ocean.
ELEPHANTS	EVAPORATE	Warm, moist air EVAPORATES and rises.
REALLY	REPLACE/ REPEAT	More air rushes in to REPLACE the air that has just evaporated. It is also evaporated.
CAN	CONDENSATION/ CLOUDS	As the air rises it CONDENSES to form thick CLOUDS.
SQUASH	SPIN/SPIRAL	The clouds SPIN because of the rotation of the earth forming a SPIRAL.
SUMOS	SINKING AIR = EYE	Cold air SINKS in the centre of the storm forming the EYE of the storm.
MASSAGING	MOVE	It MOVES in the prevailing wind direction.
LIONS	LAND/LOSE ENERGY	It reaches LAND and LOSES energy as no warm water is being evaporated.

Climate change and tropical storms:

Intensity: With sea surface temperatures rising, larger bodies of water are warming and remaining warm. This fuels the tropical storms for longer increasing its intensity.
Frequency: Data does not show a change in frequency
Distribution: As sea surface temperatures rise by 0.25C-0.5C over the last decade or so, the areas where tropical storms can form is becoming larger.

HURRICANE IRMA

Causes: 30th August 2017-14th September 2017. Atlantic Ocean = warm ocean water. Rapid evaporation and condensation (LP)
Primary Effects: Hit Antigua and Barbuda, Saint Martin, Anguilla, Turks and Caicos, the Bahamas, Cuba and USA. 132 people died. $62.9 billion in damage
Secondary Effects: Flooding led to blocked roads, cutting off aid to remote communities. Power supplies were cut off in some areas (1 month). Hospitals, schools and shops destroyed or damaged, affecting people's livelihoods and education.
Immediate Responses: International government and aid agencies responded with food, water and shelter. US aircraft carriers and helicopters assisted with search and rescue and aid delivery. UK government sent shelter kits

History

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2 Papers – Understanding the Modern World & Shaping the Nation

GCSE EXAMINATIONS

Understanding the Modern World
- Germany 1890-1945. Democracy and dictatorship
- Conflict and tension between East and West: 1945-1972

Shaping the Nation
- Health and the people c1000-present day
- Elizabethan England 1568-1603

HISTORY

YEAR 11

AUTUMN
- Conflict and tension between East and West, 1945–1972
- Part two: The development of the Cold War

SPRING
- Elizabethan England, c1568–1603
- Part one: Elizabeth's court and Parliament
- Part three: Transformation of the Cold War

SUMMER
- Part two: Life in Elizabethan times
- Part four: The historic environment of Elizabethan England
- Part three: Troubles at home and abroad

YEAR 10

START OF GCSE

AUTUMN
- Germany, 1890–1945: Democracy and dictatorship
- Part one: Germany and the growth of democracy
- Conflict and tension between East and West, 1945–1972
- Part one: The origins of the Cold War

SPRING
- Britain: Health and the people: c1000 to the present day
- Part two: Germany and the Depression
- Part three: The experiences of Germans under the Nazis

SUMMER
- Part two: The beginnings of change
- Part four: Modern medicine
- Part three: A revolution in medicine
- Part one: Medicine stands still

YEAR 9

AUTUMN
- Britain: Health and the people: c1000 to the present day
- The land of the free: to what extent has life really improved for Black Americans? Change and Continuity
- What were the key turning points of WWII? Change and Continuity
- Looking through a Bristol shaped window: What can the Bristol Bus Boycott tell us about the lives of Black people in the UK? Significance
- Was the Holocaust inevitable? Interpretations

SPRING
- To what extent was the British Army lions led by donkeys? Interpretations
- Did the USA win WWI? Causation
- Why did people at the time think the Treaty of Versailles was unfair? Significance
- Why did the World go to war in 1939? Causation
- Does General Haig deserve to be remembered as the Butcher of the Somme? Evidence
- How did the Empire help the war effort? Similarity and Difference
- How similar were Hitler and Stalin? Similarity and Difference
- Why did the World go to war in 1914? Causation
- Why did women win the vote? Causation
- Why do historians disagree about the end of the slave trade? Interpretations
- Why did the British Empire start in India? Causation

SUMMER
- How did women fight back in the 19th Century? Change and Continuity
- What was it like to fight on the Western Front? Evidence
- What were children taught to think about Empire? Evidence
- What made Thomas Clarkson so angry? Evidence

YEAR 8

AUTUMN
- When was it most dangerous to speak your mind under the Tudors? Change and Continuity
- How well did Elizabeth solve the problems of her reign? Causation
- Why did the King and Parliament go to war in 1642? Causation
- Why do people's opinions on Cromwell keep changing? Interpretations
- Was the 'Glorious Revolution' really 'glorious'? Significance
- Who cared about industrialisation? Evidence
- Why has Guy Fawkes caused so many arguments? Interpretations
- Was there a typical experience during the Civil War? Similarity and Difference
- Why does the Great Fire of London matter? Significance
- Why did Britain become the workshop of the world? Causation

SPRING
- Why did Henry VIII stop following the Pope in the 16th century? Causation
- How did ordinary life change between 1500 and 1800? Change and Continuity
- How certain can we be that Richard III murdered the Princes in the Tower? Evidence
- How can we know what Muslims thought of Crusaders and invaders? Evidence
- Why did Islam spread so far and so fast? Causation
- What really happened on the 14th June 1381? Evidence
- What sort of changes did England experience during the Wars of the Roses? Change and Continuity
- What was so special about Baghdad? Significance
- How much power did medieval kings have? Change and Continuity

SUMMER
- Why was the Black Death so terrifying Significance

YEAR 7

AUTUMN
- How did life in Britain change 43AD – 1066? Change and Continuity
- How did William take control of England? Causation
- How far did the Normans change England? Change and Continuity
- Why did Henry and Becket's quarrel turn bitter and fatal? Causation
- Was King John truly the "worst king of England"? Interpretations
- Why did William win the battle of Hastings? Causation
- Why could no one ignore the power of the Church? Significance
- Did towns make people free? Similarity and Difference

SPRING
- What is history? Evidence
- What made the Roman Empire collapse? Causation
- Why was the Roman Army unstoppable? Causation

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THE ROMANS KNOWLEDGE ORGANISER

KEY WORDS

Empire	A group of countries ruled by one person or government
Emperor	Ruler of an empire
Britannia	Roman name for Britain
Barbarians	Tribes not part of the Roman Empire
Republic	Citizens elect people to represent them. Elected leaders.
Senate	Governing body of the Republic
Plebeians	Ordinary citizens, farmers and craftsmen
Magistrates	Men elected to be judges, looked after money
Tribunes	Men elected to protect ordinary people against unfair laws
Patricians	Noblemen and women who owned lots of land
Consuls	Two elected officials who ruled the Roman Republic

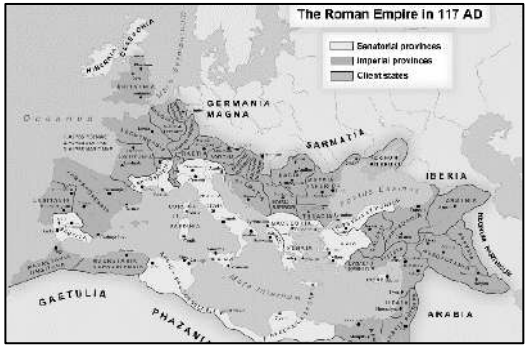
THE ROMAN REPUBLIC

Tarquin became the King of Rome in 535 BC. He became unpopular because of his high taxes and trials of rich Romans. In 509 BC, his son Sextus murdered the wife of one of Rome's leading citizens. The citizens, led by Brutus forced Tarquin to leave Rome. Brutus set up the Roman Republic, in which people elected two Consuls every year. The Roman Republic lasted until 31 BC, when Augustus made himself Emperor.

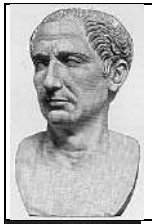
COLLAPSE

Reasons the empire collapsed:

- Empire grew too big
- Food shortages meant people were poor
- Weak and untrustworthy emperors
- Roman army no longer invincible
- Other tribes began to invade from both sides



ROMAN EMPERORS

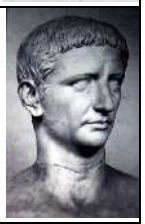


Julius Caesar
Caesar passed laws which reduced debts, and brought some peace. Made himself ruler for life. In 44BC, he was murdered in an attempt to restore the republic.

Augustus (27 BC-14 AD)
Augustus was the first Emperor of Rome. He conquered land to expand and ran the empire well. He helped ordinary people. He created the Praetorian Guard.

Caligula (37 AD-41 AD)
Caligula became mad. He married his sister then had her murdered. He declared war on the sea. The Pretorian Guard murdered him in 41AD.

Claudius (41 AD-51AD)
Claudius was weak but clever. He made ordinary people more involved in the running of Rome. He conquered Britain. Claudius was eventually killed by his wife.



Nero (54AD-68AD)
Nero was violent. After a fire, he sheltered the homeless and gave free food. He was declared a public enemy and he fled to Rome, where he killed himself.

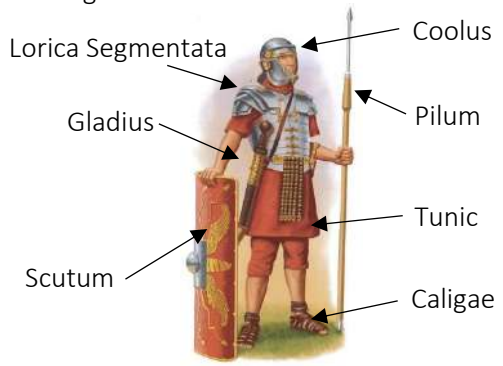
Commodus (180AD-192AD)
Commodus was more interested in being a gladiator than an emperor. Tired of him and his high taxes, he was eventually murdered by his bodyguard.

WAY OF LIFE

Women	Fathers chose husbands for their daughters. Women often worked in the home and depended on their husband for money/status
Slaves	Slaves performed the hard work and construction. Most were captured during war, but some were born as slaves
The Rich	The rich lived in grand villas and had lavish lives. Who your family were determined your status in life

SOLDIERS

The Roman Army was strong because they were well equipped, had good discipline and were courageous.



TIMELINE OF THE ROMAN EMPIRE

- **753 BC** Rome is founded by Romulus and Remus
- **27 BC** The Emperor Augustus establishes the Roman Empire
- **43 AD** Roman Emperor Claudius invades Britian. Britain is claimed as part of the Roman Empire
- **60 AD** Boudica, Queen of the Iceni, leads a rebellion against the Romans
- **79 AD** Pompeii is destroyed when Mount Vesuvius erupts. It is not discovered again until 1748
- **312 AD** Roman Britian is converted to Christianity by the Emperor Constantine
- **410 AD** Roman soldiers are sent back to the continent to defend it from invasion. Roman rule in Britain ends

THE NORMANS

KNOWLEDGE ORGANISER

KEY WORDS

Medieval	Period between 1066 and 1500
Heir	Someone who is next-in-line to be King
Feudal System	Social structure of people used to control citizens
Domesday Book	A record of the wealth in England
Anglo Saxons	People who lived in England before the Normans
Normans	People who came from the Normandy region of France
Vikings	People who came from Scandinavia
Tax	Compulsory money paid to a government or king
Earls	Representatives of the king who controlled an area
Peasants	Poor people who paid taxes and worked the land
Witan	Name of the council which advised the King
Shield Wall	Defence tactic used by the Anglo-Saxons
Housecarls	Anglo-Saxon warriors who fought with double-headed axes

WHO SHOULD HAVE BEEN KING?

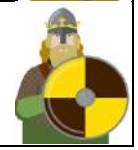
<u>Harold Godwinson, Earl of Wessex</u>

- Edward's brother-in-law
- Earl of Wessex, he had already been running some of the country
- Claimed Edward promised him

<u>William, Duke of Normandy:</u>

- Claimed both Edward and Harold promised him the throne
- Ambitious and powerful leader
- Cousin of Edward

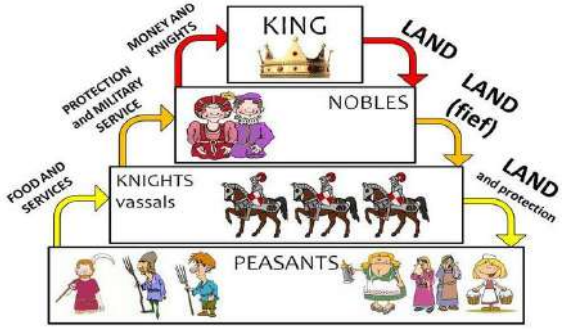
<u>Harald Hardrada, King of Norway:</u>



- No direct blood ties to the English Royal Family
- Claim rooted in the earlier Anglo-Danish kingdom
- Famous and skilled Viking warrior

FEUDAL SYSTEM

- Used by William to control England.
- William gave land to Lords and Barons
- In return, they provided the King with nights for his army.
- The Knights shared the land out to peasants.
- Peasants worked the land and did the hard labour.



WHY DID WILLIAM WIN?

Reason	Examples
William's Luck	✸ Some of Harold's best soldiers had been killed at Stamford Bridge ✸ The wind changed at just the right time for William
William's Skill	✸ William was very brave – he took his helmet off in Battle to show he was not dead ✸ William used a large force of Knights on horses
Harold's Mistakes	✸ Harold did not rest his troops at Hastings before the Battle began ✸ Harold's men were exhausted when they reached Hastings. They had marched south in 9 days

DOMESDAY BOOK

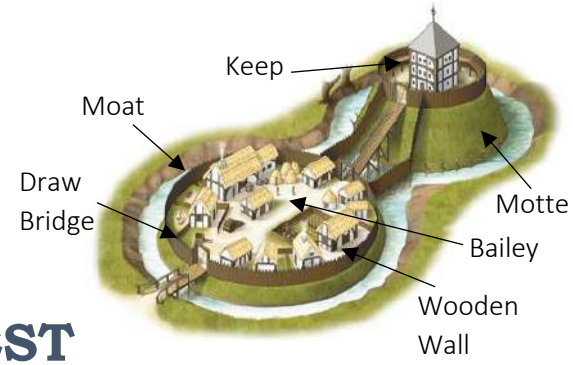
- Lists all of the wealth throughout England.
- Used to figure out how much he could raise in taxes and how many people he had to fight in his army.

TIME PERIODS

Iron Age	Up to 43AD
Romans	43AD-410AD
Anglo-Saxons	450AD-1066AD
Normans	From 1066AD

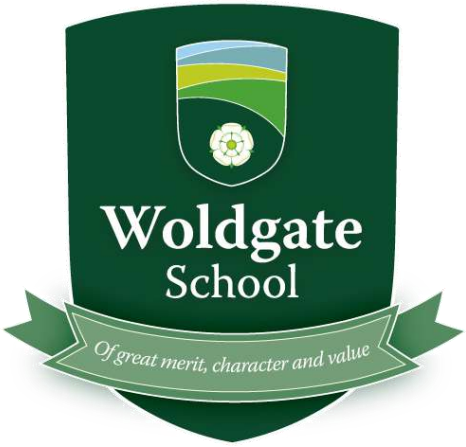
CASTLES

William built castles in strategic positions, such as London, Exeter, York and Norwich. Motte and Bailey castles were built from wood to begin with, but were later made from stone as they were harder to attack.

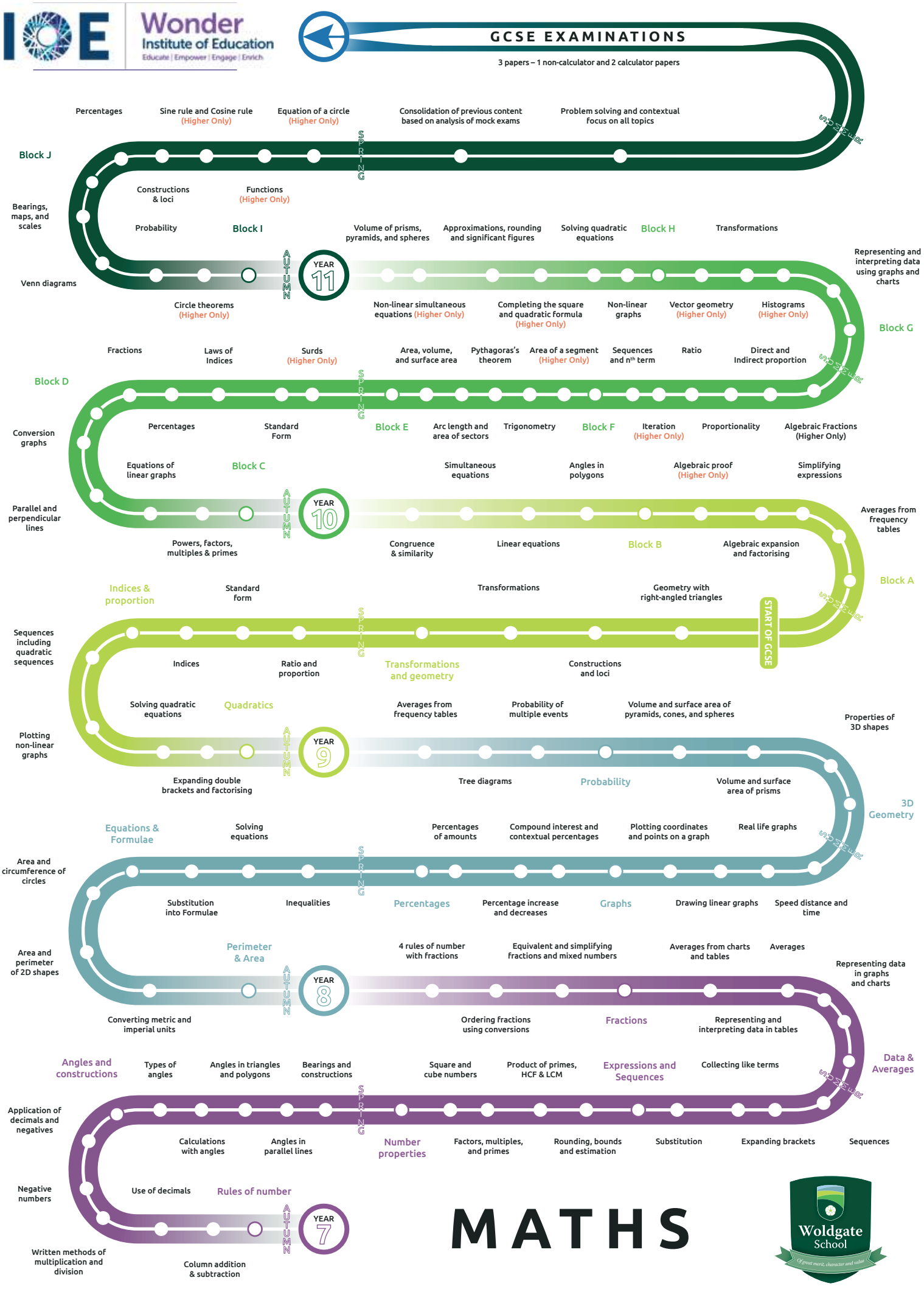


TIMELINE OF THE NORMAN CONQUEST

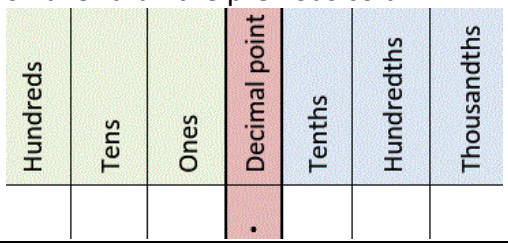
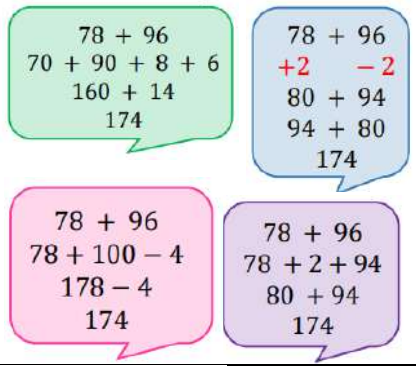
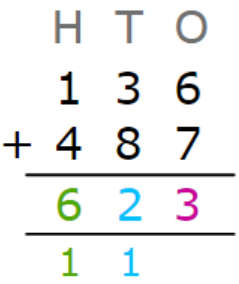
- 5th January 1066 – Edward the Confessor dies
- 6th January 1066 – Harold Godwinson is crowned King of England
- 20th September 1066 – Harald Hardrada invades Yorkshire. Defeats Earls at Battle of Fuford
- 25th September – Harold Godwinson defeats Harald Hardrada at the Battle of Stamford Bridge
- 27th September 1066 – William, Duke of Normandy sets sail and lands in Pevensy
- 14th October 1066 – Battle of Hastings begin. Harold Godwinson is killed
- 25th December 1066 – William is crowned King of England on Christmas Day



Maths


Wonder
Institute of Education
Educate | Empower | Engage | Enrich
GCSE EXAMINATIONS
3 papers – 1 non-calculator and 2 calculator papers
Percentages
Sine rule and Cosine rule (Higher Only)
Equation of a circle (Higher Only)
Consolidation of previous content based on analysis of mock exams
Problem solving and contextual focus on all topics
SUMMER
SPRING
Block J
Constructions & loci
Functions (Higher Only)
Bearings, maps, and scales
Probability
Block I
Volume of prisms, pyramids, and spheres
Approximations, rounding and significant figures
Solving quadratic equations
Block H
Transformations
AUTUMN
YEAR 11
Representing and interpreting data using graphs and charts
Venn diagrams
Circle theorems (Higher Only)
Non-linear simultaneous equations (Higher Only)
Completing the square and quadratic formula (Higher Only)
Non-linear graphs
Vector geometry (Higher Only)
Histograms (Higher Only)
Block G
Fractions
Laws of Indices
Surds (Higher Only)
Area, volume, and surface area
Pythagoras's theorem
Area of a segment (Higher Only)
Sequences and nth term
Ratio
Direct and Indirect proportion
SUMMER
SPRING
Block D
Conversion graphs
Percentages
Standard Form
Block E
Arc length and area of sectors
Trigonometry
Block F
Iteration (Higher Only)
Proportionality
Algebraic Fractions (Higher Only)
Equations of linear graphs
Block C
Simultaneous equations
Angles in polygons
Algebraic proof (Higher Only)
Simplifying expressions
AUTUMN
YEAR 10
Parallel and perpendicular lines
Powers, factors, multiples & primes
Congruence & similarity
Linear equations
Block B
Algebraic expansion and factorising
Averages from frequency tables
Block A
Indices & proportion
Standard form
Transformations
Geometry with right-angled triangles
SUMMER
START OF GCSE
SPRING
Sequences including quadratic sequences
Indices
Ratio and proportion
Transformations and geometry
Constructions and loci
Solving quadratic equations
Quadratics
Averages from frequency tables
Probability of multiple events
Volume and surface area of pyramids, cones, and spheres
Properties of 3D shapes
AUTUMN
YEAR 9
Plotting non-linear graphs
Expanding double brackets and factorising
Tree diagrams
Probability
Volume and surface area of prisms
3D Geometry
Equations & Formulae
Solving equations
Percentages of amounts
Compound interest and contextual percentages
Plotting coordinates and points on a graph
Real life graphs
SUMMER
SPRING
Area and circumference of circles
Substitution into Formulae
Inequalities
Percentages
Percentage increase and decreases
Graphs
Drawing linear graphs
Speed distance and time
Perimeter & Area
4 rules of number with fractions
Equivalent and simplifying fractions and mixed numbers
Averages from charts and tables
Averages
Representing data in graphs and charts
Area and perimeter of 2D shapes
AUTUMN
YEAR 8
Converting metric and imperial units
Ordering fractions using conversions
Fractions
Representing and interpreting data in tables
Angles and constructions
Types of angles
Angles in triangles and polygons
Bearings and constructions
Square and cube numbers
Product of primes, HCF & LCM
Expressions and Sequences
Collecting like terms
Data & Averages
SUMMER
SPRING
Application of decimals and negatives
Calculations with angles
Angles in parallel lines
Number properties
Factors, multiples, and primes
Rounding, bounds and estimation
Substitution
Expanding brackets
Sequences
Negative numbers
Use of decimals
Rules of number
AUTUMN
YEAR 7
Written methods of multiplication and division
Column addition & subtraction
MATHS
Woldgate School
Of great merit, character and value

Year 7 – Autumn 1, Rules of Number

Topic/Skill	Definition/Tips	Example
Integer	A **whole number** that can be positive, negative or zero.	$-3, 0, 92$
Decimal	A number with a **decimal point** in it. Can be positive or negative.	$3.7, 0.94, -24.07$
Decimal Place value	Each column to the right is 10 times smaller than the previous column. 	13.502 has • 1 ten • 3 ones • 5 tenths • 0 hundredths • 2 thousandths
Addition	To find the **total**, or **sum**, of two or more numbers. 'add', 'plus', 'sum'	$3 + 2 + 7 = 12$
Addition is commutative and associative	You can do an addition in any order you want.	32 + 17 + 68 + 3 = 68 + 32 + 17 + 3 = 100 + 20 = 120
Mental strategies for addition	• Partitioning • Picture a number line • Using number bonds	
Column method addition	Use the column method for additions you cannot do mentally or for checking mental additions. Start with the column furthest to the right.	 Start with the one's: 6 + 7 is 13, so the 1 carries across to the ten's column. 3 + 8 + 1 = 12, so the 1 carries across to the 100's column.
Subtraction	To find the **difference** between two numbers. To find out how many are left when some are taken away. 'minus', 'take away', 'subtract'	$10 - 3 = 7$ The difference between 2.5 and 8 is 8 – 2.5 = 5.5

Year 7 – Autumn 1, Rules of Number

Mental strategies for subtraction	• Partitioning • Picture a number line – counting on • Using number bonds	72 – 45 = 72 – 40 – 2 – 3 = 32 – 2 – 3 = 30 – 3 = 27 45 **+ 5** = 50, 50 **+ 20** = 70, 70 **+ 2** = 72 5 + 20 + 2 = 27
Column method subtraction	Use the column method for subtractions you cannot do mentally or for checking mental subtractions. Start with the column furthest to the right.	5 1 6 ~~3~~ 2 − 1 8 4 4 We don't have enough ones to subtract 8 from 2, therefore we exchange a 10 from the ten's column to give us 10 more one's. Now we can do 12 – 8 = 4.
Adding and subtracting decimals	Use the column method or counting on method. When using the column method make sure the **decimal points line up**. **Fill in zeros in any gaps**.	7.1 – 4.86 O · 1/10 1/100 7 · 1 4 · 8 6 O · 1/10 1/100 6 ~~7~~ · 1 ~~1~~ 0 4 · 8 6 2 · 2 4
Negative Number	A number that is **less than zero**. Can be decimals. Thinking of negative numbers as temperatures can help.	−8, −2.5 Negative Numbers -5 -4 -3 -2 -1 0 1 2 3
Representing negative numbers (zero pairs)	= −1 = 1 Double sided counters can be used to represent numbers. A (-1) and a (+1) join together to make 0.	What values do these numbers represent? 1 -1 0
Adding a negative number	When you add a negative number, the total will be less than what you started with.	2 + -4 = -2
Subtracting a negative number	When you subtract a negative number, the total will be more than what you started with.	2 - -4 = 6
Multiplication	Can be thought of as **repeated addition**. 'multiply', 'times', 'product'	$3 \times 6 = 6 + 6 + 6 = 18$ The product of 8 and 3 is 24 (because 8 x 3 = 24)

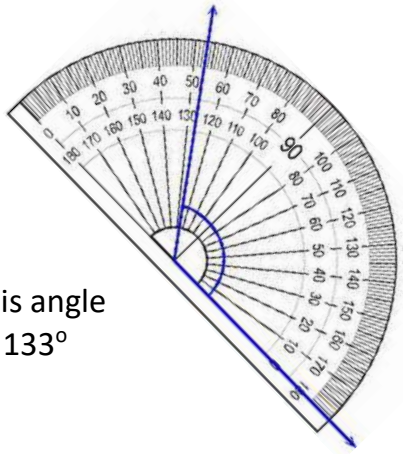
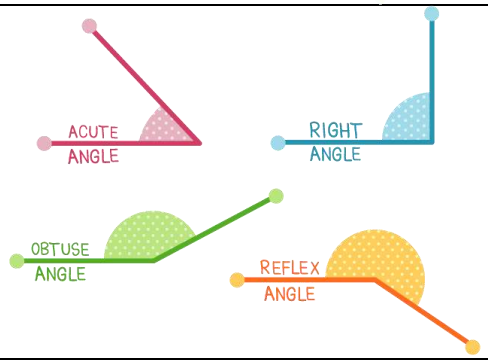
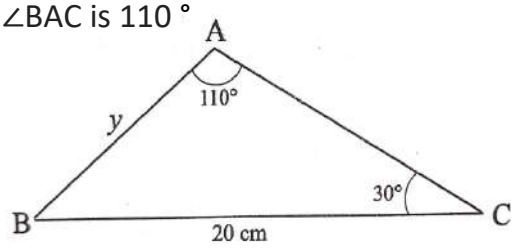
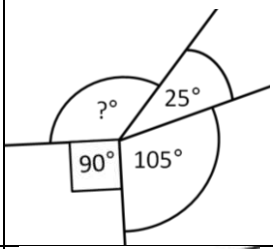
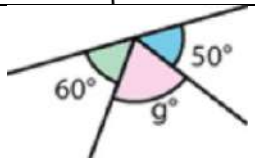
Year 7 – Autumn 1, Rules of Number

Written methods for multiplication of integers	• Long multiplication – remember to fill a zero in the ones column when multiplying by the 10's value • Grid method – remember to carefully add up each of your products at the end.	3 2̸ 7 4 × 9 6 4 4 4 ← 74 x 6 + 6 6 6 0 ← 74 x 90 7 1 0 4 1 1 | | 80 | 9 | | 50 | 4000 | 450 | | 7 | 560 | 63 | 4000 450 560 + 63 **5073**
Multiplying decimals together	1. Multiply the numbers in your multiplication by 10, 100 or 1000 in order to get integer values. 2. Multiply these integers together using grid method or long multiplication 3. Undo your multiplication of 10, 100 or 1000 from step 1 by dividing by 10, 100 or 1000 4. Check your answer makes sense using approximations.	4.5×7.1 x 10 x 10 $45 \times 71 = 3195$ ÷ 10 ÷ 10 $= 31.95$ $4.5 \times 7.1 \approx 5 \times 7 \approx 35$
Division	Splitting into equal parts or groups. The process of calculating the **number of times one number is contained within another one**. 'divide', 'share'	$20 \div 4 = 5$ $\frac{20}{4} = 5$
Divisibility rules	A number is divisible by something if it divides into it with no remainder. Numbers… • divisible by 10 always end in a 0 • divisible by 5 always end in a 0 or 5 • divisible by 2 always end in a 0, 2, 4, 6 or 8 • divisible by 3 have digits which sum to a multiple of 3 • divisible by 9 have digits which sum to a multiple of 9	285 is divisible by • 5 because it ends in a 5 • 3 because 2 + 8 + 5 = 15 which is a multiple of 3.
Bus-stop method	A written method used to divide by integers. Start with the first column on the left Carry any remainders onto the next column	H T O 6 7 8)5 ⁵3 ⁵6 How many 8's go into 5? None, remainder 5, so the 5 carries across into the tens. How many 8's go into 53? 6, with remainder 5, so carry the 5 across.

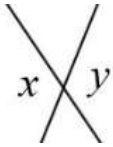
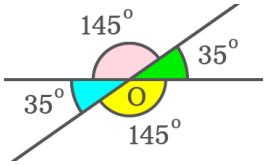
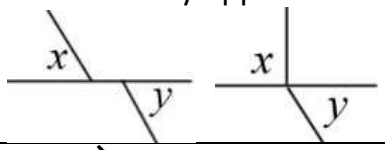
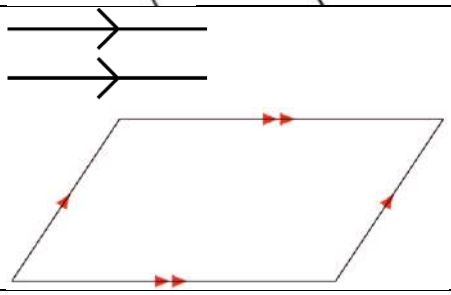
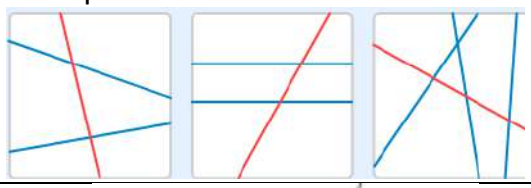
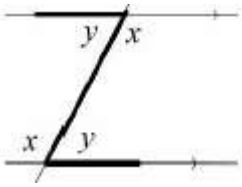
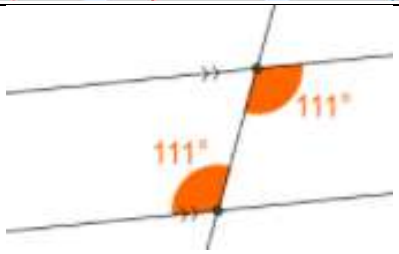
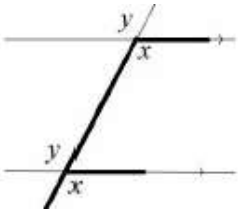
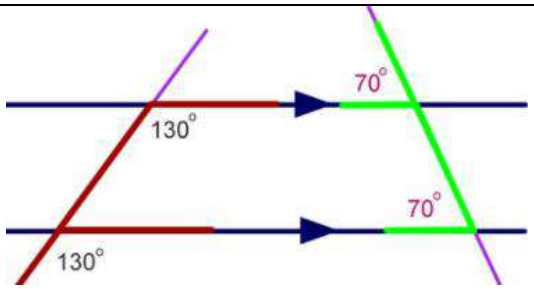
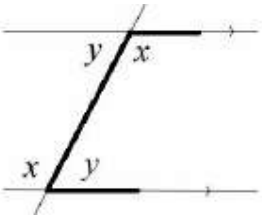
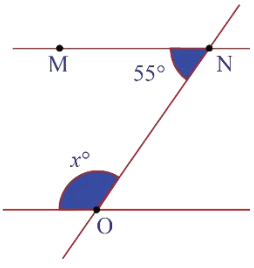
Year 7 – Autumn 1, Rules of Number

Break up divisions of larger numbers	Dividing by 18 is the same as dividing by 3 and then dividing by 6 because 18=3x6. This strategy can be used for dividing by larger numbers.	7704 ÷ 24 = 7704 ÷ 6 ÷ 4 = 1284 ÷ 4 = 321
Dividing a decimal by an integer	Use the bus stop method. Make sure to line up the decimal point inside the bus stop with the decimal point in the answer. If you run out of places to put a remainder, add a 0 to the end of the decimal.	5.44 ÷ 4 $4\overline{)5^{1}.4^{2}4}$ → 1.36 34 ÷ 8 $8\overline{)3^{3}4.^{2}0^{4}0}$ → 04.25
Dividing a decimal by a decimal	You can only use the bus stop method when dividing by an integer. However, you can convert divisions by decimals into equivalent divisions by integers by multiplying the whole calculation by 10, 100, 1000, etc.	$42 \div 0.8 = \frac{42}{0.8} = \frac{420}{8} = 52.5$ $8\overline{)4^{4}2^{2}0.^{4}0}$ → 052.5
Multiplying and dividing by negative numbers	When you multiply or divide by a negative number it switches the sign of the starting number. • positive x negative = negative • negative x negative = positive	-5 x -2 = 10 5 x -2 = -10 24 ÷ -4 = -6 -24 ÷ -4 = 6

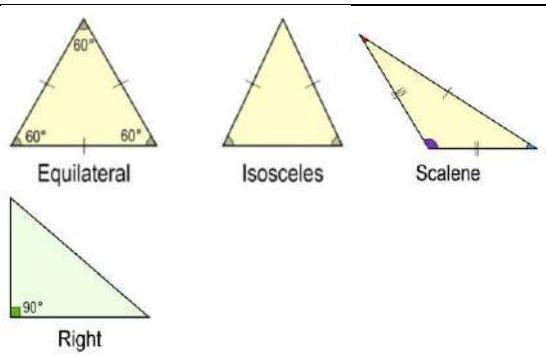
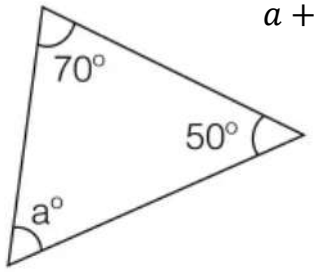
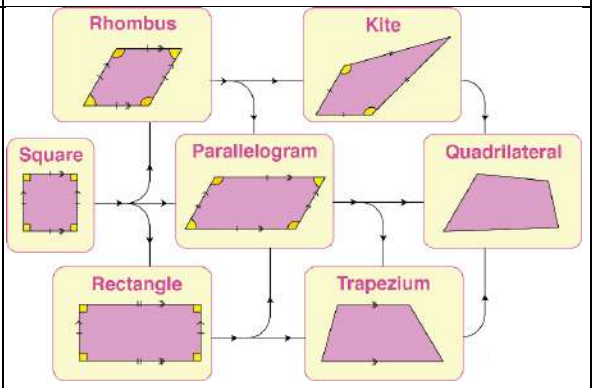
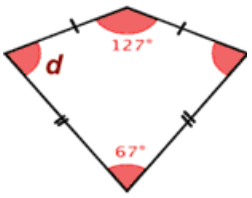
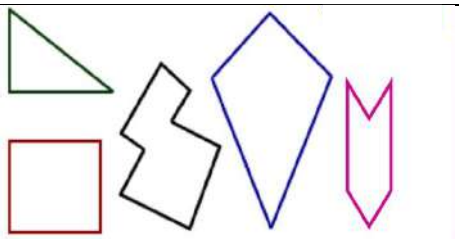
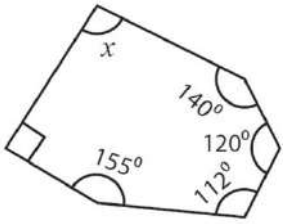
Year 7 – Autumn 2, Angles Knowledge Organiser

Topic/Skill	Definition/Tips	Example
Measuring Angles	Use a **protractor**. Line up the line for 0° with one edge of your angle and the cross with the vertex of the angle. Then follow the scale around from 0 to where the other edge of the angle crosses the protractor. To measure a reflex angle, measure the acute or obtuse angle on the other side of the lines first, then subtract this from 360.	This angle is 133° 
Types of Angles	**Acute angles** are less than 90°. **Right angles** are exactly 90°. **Obtuse angles** are greater than 90° but less than 180°. **Reflex angles** are greater than 180° but less than 360°.	
Angle Notation	You can use one lower-case letter, eg. x. We can use the symbol ∠ as a shorthand for angle You can use three upper-case letters, eg. BAC – where the middle letter is the corner of the angle.	∠BAC is 110 ° 
Angles at a Point	**Angles around a point add up to 360°.** • Add up all the other angles around the point. • Subtract this from 360	 90 + 25 + 105 = 220 ? = 360 – 220 ? = 140
Angles on a Straight Line	**Angles that join up on a straight line add up to 180°.** • Add up all the other angles that join to make the straight line. • Subtract this from 180	 60 + 50 + g = 180 g – 70 These **do not** add up to 180 as the angles are not touching 

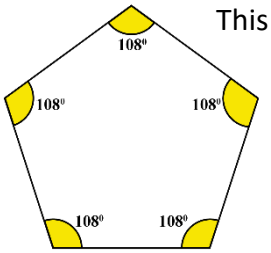
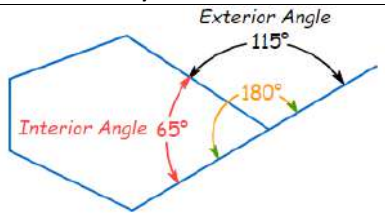
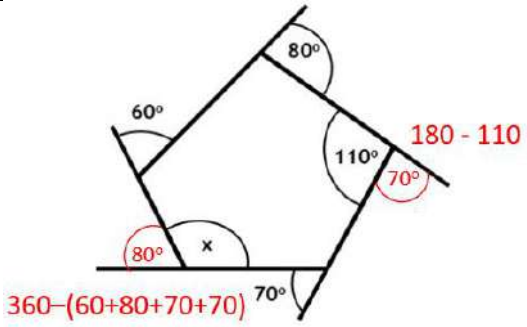
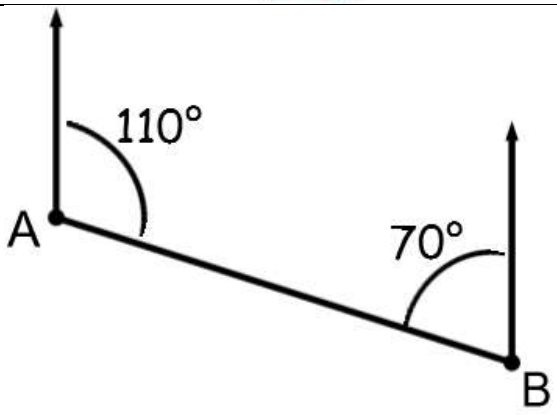
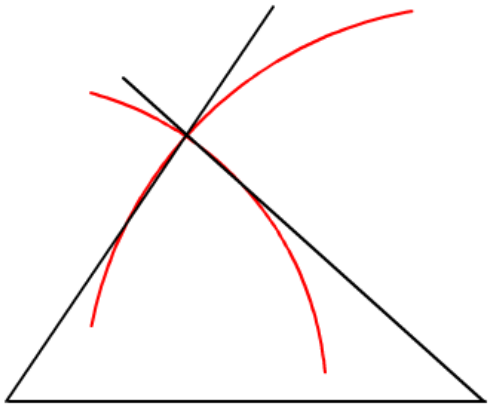
Year 7 – Autumn 2, Angles Knowledge Organiser

Opposite Angles	**Vertically opposite angles are equal**. Two angles are only vertically opposite if they are the opposite angles where two straight lines intersect.	**Vertically opposite** angles, so x = y   **Not** vertically opposite 
Parallel Lines	Lines are **parallel** if they are always the same distance apart and will never meet. They are often identified in diagrams by arrows.	
Transversal line	A **transversal** is a line that crosses at least two other lines.	The red line is the transversal in each example 
Alternate Angles	**Alternate angles are equal**. Drawing over the lines that create alternate angles, makes a Z shape  	
Corresponding Angles	**Corresponding angles are equal**. Drawing over the lines that create corresponding angles, makes a F shape  	
Co-Interior Angles	**Co-Interior angles add up to 180°.** Drawing over the lines that create co-interior angles, makes a C shape  	 $55 + x = 180$ $x = 180 - 55$ $x = 125$

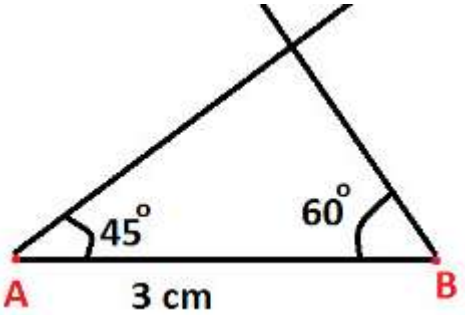
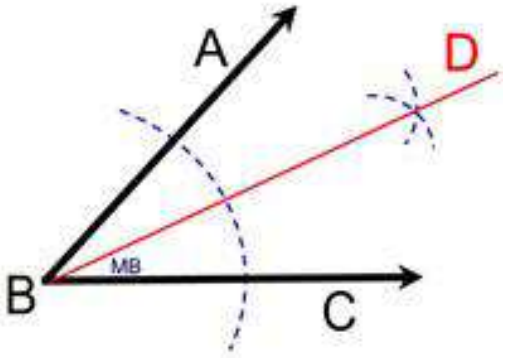
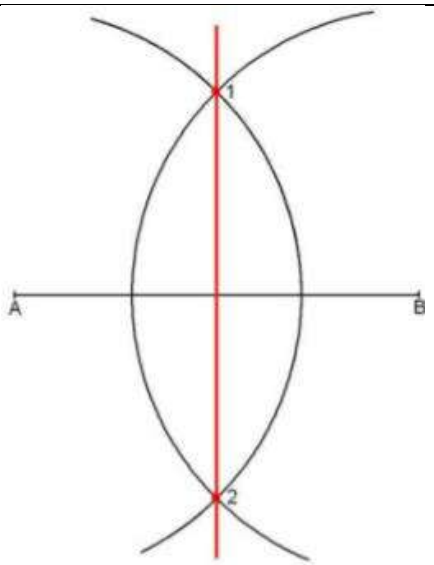
Year 7 – Autumn 2, Angles Knowledge Organiser

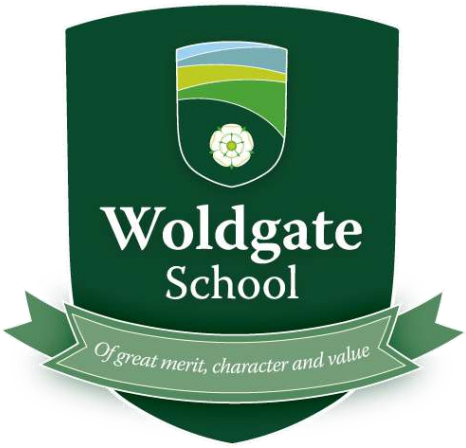
Types of Triangles	**Right Angle** Triangles have a 90° angle in. **Isosceles** Triangles have 2 equal sides and 2 equal base angles. **Equilateral** Triangles have 3 equal sides and 3 equal angles (60°). **Scalene** Triangles have different sides and different angles.	
Angles in a Triangle	**Angles in a triangle add up to 180°.** • Add up the two interior angles you know. • Subtract this from 180. Or you can set up an equation to solve.	 $a + 70 + 50 = 180$ $a + 120 = 180$ $a = 60$
Quadrilateral properties	Quadrilaterals have 4 sides. Types of quadrilateral include square, rectangle, parallelogram, rhombus, kite and trapezium. A dash on a pair of lines represents same length line. Arrows on a pair of lines represent parallel lines.	
Angles in a Quadrilateral	Angles in a quadrilateral add up to 360°.	 $127 + 67 = 194$ $360 - 194 = 166$ $166 \div 2 = 83$ Or, solve $2d + 127 + 67 = 360$
Polygon	A **2D** shape with **only straight edges**	
Interior angles of polygons	These are the angles **inside** a polygon. $Sum\ of\ interior\ angles = 180(n - 2)$ where *n* is the number of sides of the polygon.	 Sum of the interior angles is 180 x 4 = 720 The 5 known angles add up to 617. $x = 720 - 617 = 103$

Year 7 – Autumn 2, Angles Knowledge Organiser

Regular Polygons	Regular polygons are polygons with all sides the same lengths and all interior angles the same size. If you know the sum of the interior angles, you can work out an individual interior angle by dividing the sum by the number of angles.	This pentagon has 5 sides.  $Sum\ of\ interior\ angles = 3 \times 180 = 540$ $Each\ interior\ angle = \frac{540}{5} = 108$
Exterior angles of polygons	 • Exterior angles and interior angles sum to 180 because they join to make a straight line. • The sum of the exterior angles of any polygon is always 360.	 $x + 80 = 180$ $x = 100$
Bearings	Measure from **North** (draw a North line if it's not there) 2. Measure **clockwise** 3. Your answer must have **3 digits** (eg. 047°) Look out for where the bearing is measured <u>from</u>. Remember your **angle facts**. Remember that two lines - both pointing north- are **parallel!**	 Bearing of B **from A**: 110° Bearing of A **from B**: 360-70 = 290°
Constructing Triangles (given 3 sides)	1. Draw the base of the triangle using a ruler. 2. Open a pair of compasses to the width of one side of the triangle. 3. Place the point on one end of the line and draw an arc. 4. Repeat for the other side of the triangle at the other end of the line. 5. Using a ruler, draw lines connecting the ends of the base of the triangle to the point where the arcs intersect.	

Year 7 – Autumn 2, Angles Knowledge Organiser

Constructing Triangles (given 1 side and two angles)	1. Draw the base of the triangle using a ruler. 2. Measure one of the angles required using a protractor and mark this angle. 3. Draw a straight line through this point from the same point on the base of the triangle. 4. Repeat this for the other angle on the other end of the base of the triangle.	
Angle bisector	**Angle Bisector: Cuts the angle in half**. 1. Place the sharp end of a pair of compasses on the vertex. 2. Draw an arc, marking a point on each line. 3. Without changing the compass put the compass on each point and mark a centre point where two arcs cross over. 4. Use a ruler to draw a line through the vertex and centre point.	
Perpendicular line bisector	**Perpendicular Bisector: Cuts a line in half and at right angles**. 1. Put the sharp point of a pair of compasses on A. 2. Open the compass over half way on the line. 3. Draw an arc above and below the line. 4. Without changing the compass, repeat from point B. 5. Draw a straight line through the two intersecting arcs.	



Music

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MUSIC

GCSE EXAMINATIONS

1 Paper

YEAR 11

SUMMER: Revision
SPRING: Performing Solo; Final Composing portfolio; Recap and Revision
AUTUMN: NEA Composing from a brief; NEA Composing; NEA Performing; Solo; NEA Performing; Ensemble; Free Choice composition; Mock Examination; Set Work 'Release'; Set Work, 'Samba Em Preludio'; Fusions

YEAR 10

SUMMER: Composing; Film project
SPRING: Music for stage and screen; Performing; Music for stage and screen; Solo Performance; Set work, 'Defying Gravity'; Ensemble Performance; Set Work, 'Star Wars'
AUTUMN: Composing; Vocal music; Composing; Composing; Set Work, 'Music for a while'; Vocal music; Set Work 'Killer Queen'; Ensemble Performance; Set Work 'Pathetique Sonata'

YEAR 9

SUMMER: Composing a 12 bar blues
SPRING: Song writing & Rap; Theory and listening, Harmony and tonality; Reggae; Solo Performance; Composing with Chords; Periods of Classical Music; Theory and listening, Harmony and tonality II; Periods of Classical Music; Set Work 'Brandenburg Concerto No. 5'; Theory and listening, Elements of Music
AUTUMN: START OF GCSE; Club Dance Remix; Samba; Composing a blues melody; Blues; Improvising using the blues scale; 12-bar blues progression

YEAR 8

SUMMER: Editing using virtual studio workstation
SPRING: Minimalism; Using Music technology to create a multi-layered composition; Culture of Indian Music; Improvising around notes of an Indian Raga; Harmony in song composition; Appraising music that uses Chromaticism; Appraising music from the genre of minimalism; Indian Music; Key timbres and structure of Indian music; Composing in Layers; Composing chord progressions, bass lines and melodies
AUTUMN: Chromaticism; Rock 'n' Roll; Composing and recording a 4/8 bar melody; Sharps and Flats; Sequenced performance of a rock 'n' roll song; Editing Music using music technology; Melody Writing

YEAR 7

SUMMER: Playing the Djembe
SPRING: Rhythm Composition; Elements of Music; Understanding Melody; Music notation; World of Rhythm; Recognising Pitch and Rhythm; Rhythm Performance; Notes on a keyboard; C Major Scale; Music of Africa; Polyrhythmic performance; Basic symbols
AUTUMN: Bridging Unit; Pitch and duration; Music notation

Musical Futures: Ukeleles/Guitars

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MUSIC KNOWLEDGE ORGANISER

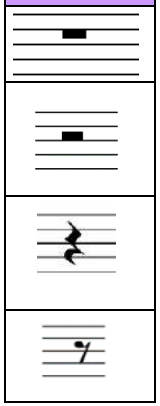
KS3 – YEAR 7

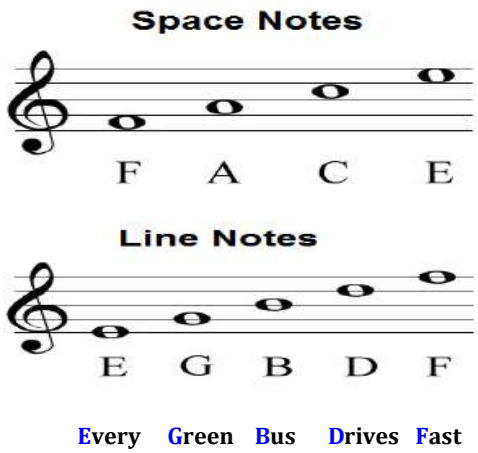
Bridging Unit

NOTE DURATIONS

Symbol	American (British) Note Names	Beats
𝅝	Whole note (Semibreve)	4 beats
𝅗𝅥	Half note (minim)	2 beats
♩	Quarter note (crotchet)	1 beat
♪	Eighth note (quaver)	1/2 beat

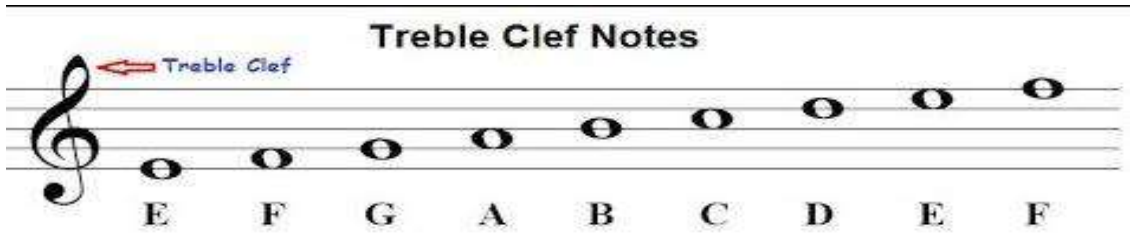
NOTE RESTS





Quavers are usually grouped together like this:

This is two quavers (1/2 + 1/2) filling the space of one crotchet beat.



Duration- The name for the element of music that describes how long a sound is.

Pulse-The underlying beat of the music. You don't do this out loud but you have to be able to hear it in your head!

Tempo-The name for the musical element that describes the speed of the pulse in music:

We use Italian in music to describe the tempo so **Allegro**=Fast; **Adagio**=Slow

Rhythm-When we have different duration notes one after the other to create a rhythm pattern.

Spelling Alert! Remember this to be able to remember how to spell the word rhythm.

Rhythm **H**elps **Y**ou **T**o **H**ear **M**usic

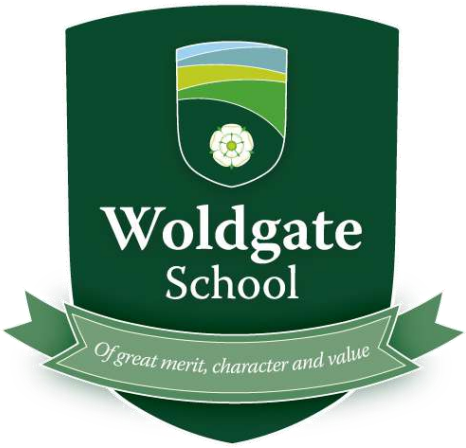
Pitch-This is the name for the musical element relating to how high or low sounds are.

Octave – The distance between a note and the next one that has the same letter name E.g. C3-C4. Remember 'Oct'=8 (Octagon-8 sides; Octave-8notes)

This is a **Treble Clef** and is placed at the start of each stave to indicate the notes that are of medium to high pitch

Stave – This is the name of the horizontal lines and spaces that notes are placed on to show their pitch.

Steps-The next note up or down on the stave. So, for instance you move from a note on a line to the next notes up which will be in a space etc.



Religious Studies

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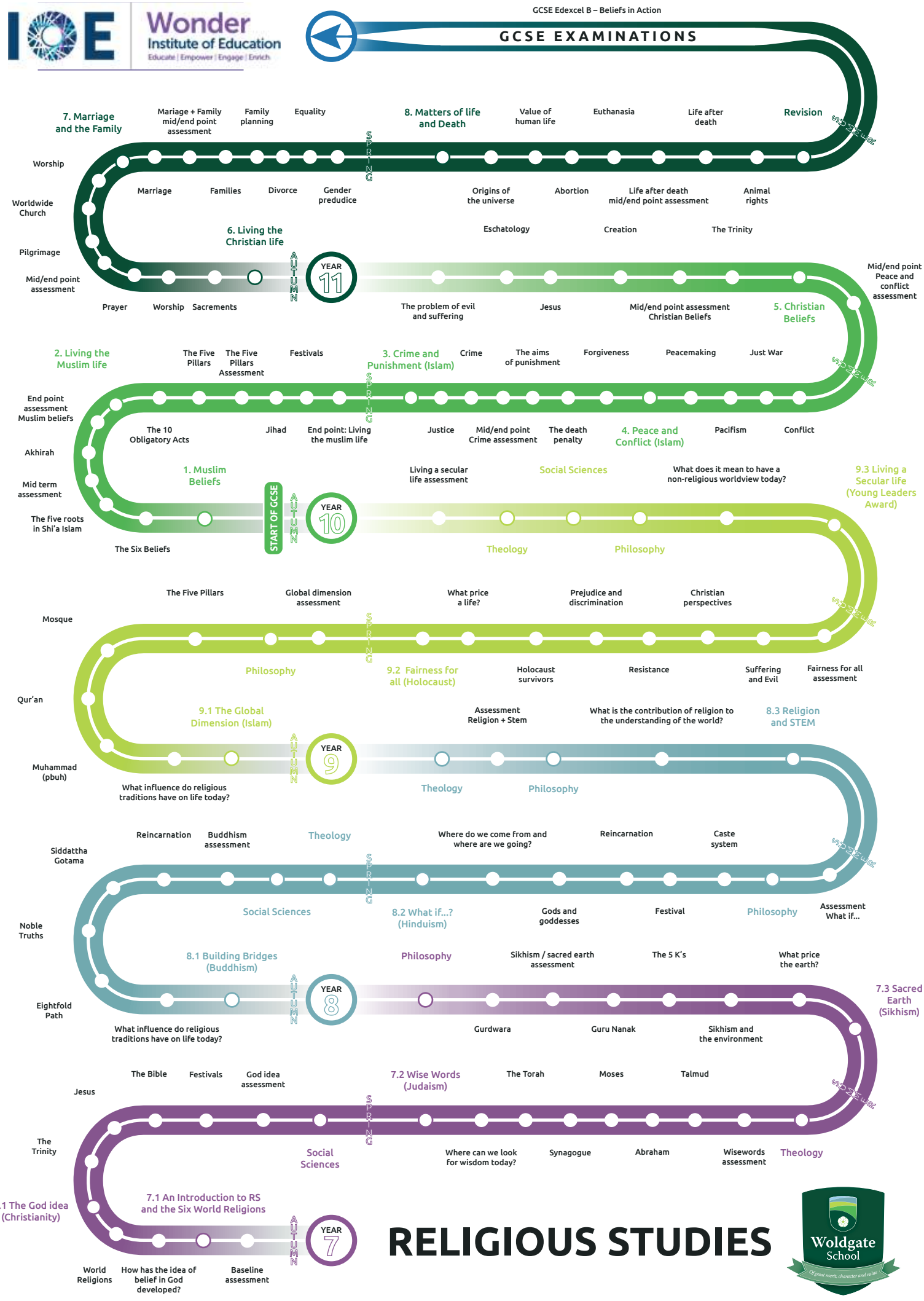
GCSE Edexcel B – Beliefs in Action



RELIGIOUS STUDIES

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Year 7 Unit 7.1 The God idea: How has the idea of belief in God developed ?

KNOWLEDGE ORGANISER

KEY WORDS :

Theism/Theist	A belief that there is a God.
Atheism/Atheist	Belief that there is no God.
Polytheism	"Poly" means many, so this is a belief in many Gods.
Monotheism	"Mono" means one so this is a belief in one God.
Animism	The belief based on the spiritual idea that the universe, and all natural objects within the universe, have souls of spirits.
Ritual	A dance, song or act that is done in a religion.
Temple	A holy place where many rituals might happen.
Worship	Expressing love and loyalty to a God. This is a type of ritual.
Native American	The indigenous peoples of North, Central, and South America, especially those indigenous to what is now the continental US.
Star Carr	A stone age settlement in North Yorkshire.
Humanist	People who believe human experience and rational thinking provide a way for us to live.
Abrahamic Faiths	Monotheistic faiths: Judaism, Christianity and Islam.
G-d	How some Jews write the name God to show respect.
Shahadah	A saying for Muslims "There is only one God but God, Muhammad is his messenger" (Five Pillars of Belief)
Holy Trinity	Three parts of God: father, son and holy spirit.
Sacrament	A religious ceremony/ritual – e.e Baptism/Eucharist
Nicene Creed	A formal summary of Christian beliefs
Christian denominations	Anglican, Roman Catholic, Protestant
Benevolent	God is all kind, good
Omnipotent	God is all- powerful
Sanatana Dharma	Hinduism. Eternal truth and teachings of Hinduism
Agape	Brotherly love
Soul	The spiritual essence of a human, identity,personality

How did religion develop?

How did religion develop?

No one knows when religion started but it's likely to be 30-70 thousand years ago when language first developed. "Religion" comes from the Latin, "religare" meaning to bind together.

What is Animism ?

People became curious about the seasons, the sky and what happened after death. Some believed that spirits could live in all elements of the environment such as rivers, rocks and trees. This is known as animism.

What is Polytheism ?

Some people began to worship many different gods. The first humans were polytheists.

What is hemotheism ?

The belief that there are many gods while worshipping only one.

What is Monotheism ?

Some groups formed tribes and nations, this lead to some believing their ideas of God were correct or that their God was the most powerful. The belief in many gods is called polytheism. The belief in one God is called theism.

What is Atheism ?

An Atheist is someone that does not believe in a God or gods.

What is Humanism?

Humanists do not believe in God. Humanists believe we should use our human nature to work out how to live, and that we should use reason and empathy when making decisions.

Different ways of thinking

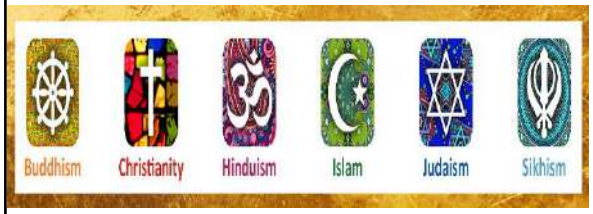
Theology : The study of the nature of God and religious Belief.

Philosophy : The study of knowledge, reality and existence.

Social sciences: Sociology and Psychology view points.

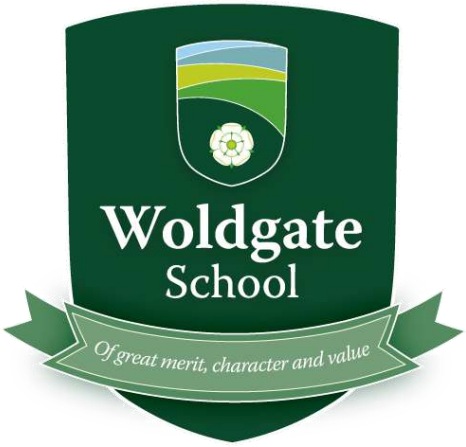
Ethics: Decision making on what is right/wrong, just/unjust.

World religions

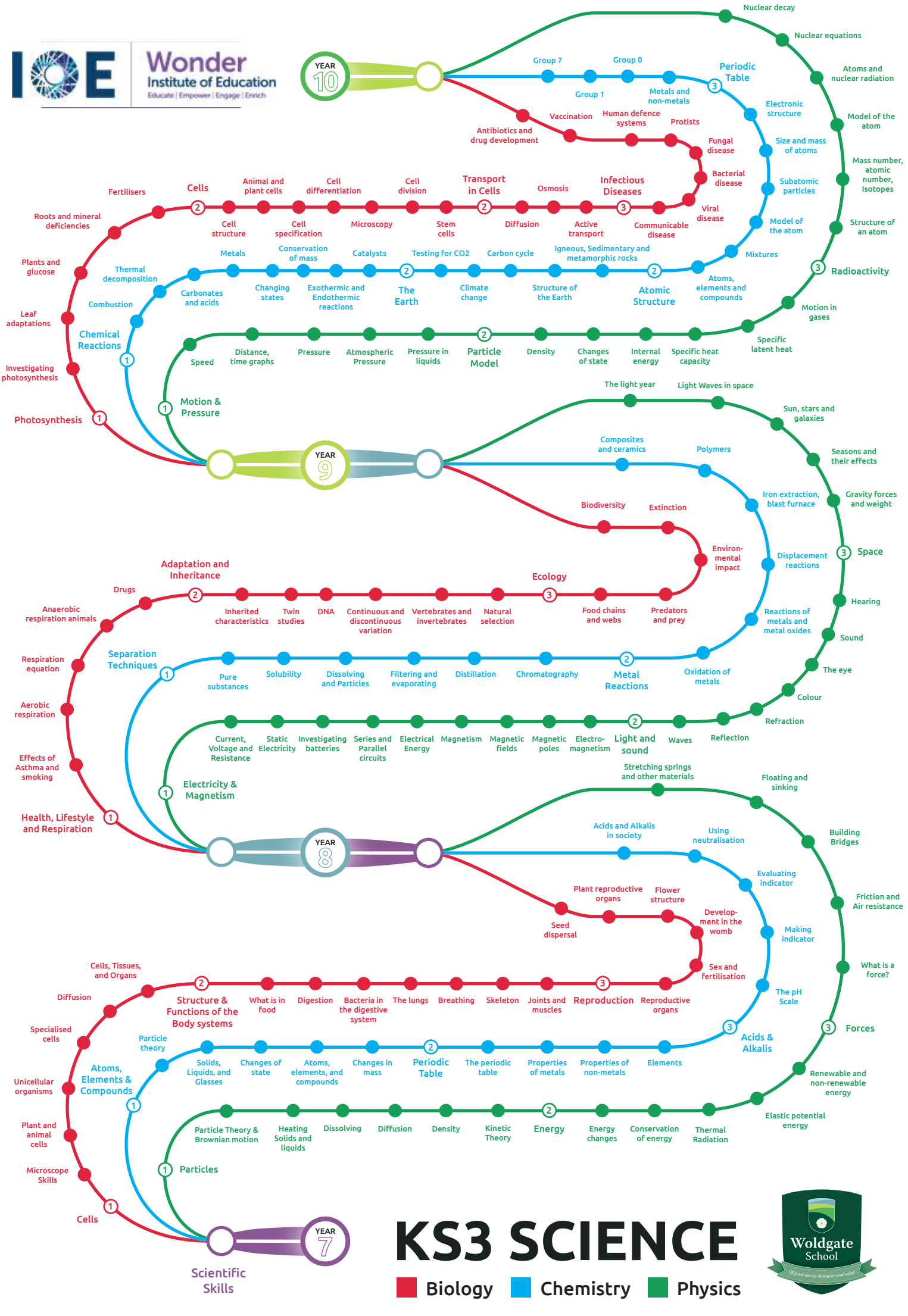


World Religions: Timeline

- Animism – Prehistoric
- 2300 BCE -1500 BCE – Hindu Dharma - Pakistan
- 600 BCE- 500 BCE – Judaism- Middle East
- 600 BCE- 400 BCE – Buddhism - India
- First century CE - 33 CE – Christianity
- 7th Century 610 CE - Islam - Saudi Arabia
- 16th century 1500 CE – Sikhi – Punjab, South Asia



Science


Wonder
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YEAR 10
Nuclear decay
Nuclear equations
Atoms and nuclear radiation
Model of the atom
Mass number, atomic number, Isotopes
Structure of an atom
Radioactivity
Motion in gases
Specific latent heat
Mixtures
Model of the atom
Electronic structure
Size and mass of atoms
Subatomic particles
Periodic Table
Group 7
Group 0
Group 1
Metals and non-metals
Vaccination
Human defence systems
Protists
Antibiotics and drug development
Fungal disease
Bacterial disease
Viral disease
Infectious Diseases
Communicable disease
Cells
Fertilisers
Roots and mineral deficiencies
Plants and glucose
Leaf adaptations
Investigating photosynthesis
Photosynthesis
Cell structure
Animal and plant cells
Cell specification
Cell differentiation
Microscopy
Cell division
Stem cells
Transport in Cells
Diffusion
Osmosis
Active transport
Thermal decomposition
Combustion
Chemical Reactions
Carbonates and acids
Metals
Changing states
Conservation of mass
Exothermic and Endothermic reactions
Catalysts
The Earth
Testing for CO2
Climate change
Carbon cycle
Structure of the Earth
Igneous, Sedimentary and metamorphic rocks
Atomic Structure
Atoms, elements and compounds
Speed
Distance, time graphs
Motion & Pressure
Pressure
Atmospheric Pressure
Pressure in liquids
Particle Model
Density
Changes of state
Internal energy
Specific heat capacity
YEAR 9
The light year
Light Waves in space
Sun, stars and galaxies
Seasons and their effects
Gravity forces and weight
Space
Hearing
Sound
The eye
Colour
Refraction
Reflection
Displacement reactions
Iron extraction, blast furnace
Polymers
Composites and ceramics
Biodiversity
Extinction
Environ-mental impact
Adaptation and Inheritance
Drugs
Anaerobic respiration animals
Respiration equation
Aerobic respiration
Effects of Asthma and smoking
Health, Lifestyle and Respiration
Inherited characteristics
Twin studies
DNA
Continuous and discontinuous variation
Vertebrates and invertebrates
Natural selection
Ecology
Food chains and webs
Predators and prey
Separation Techniques
Pure substances
Solubility
Dissolving and Particles
Filtering and evaporating
Distillation
Chromatography
Metal Reactions
Oxidation of metals
Reactions of metals and metal oxides
Current, Voltage and Resistance
Static Electricity
Investigating batteries
Series and Parallel circuits
Electrical Energy
Magnetism
Magnetic fields
Magnetic poles
Electro-magnetism
Light and sound
Waves
Electricity & Magnetism
YEAR 8
Stretching springs and other materials
Floating and sinking
Building Bridges
Friction and Air resistance
Forces
Renewable and non-renewable energy
Elastic potential energy
Thermal Radiation
Energy changes
Conservation of energy
Energy
Kinetic Theory
Density
Dissolving
Diffusion
Heating Solids and liquids
Particle Theory & Brownian motion
Particles
Acids and Alkalis in society
Using neutralisation
Evaluating indicator
Making indicator
What is a force?
The pH Scale
Acids & Alkalis
Elements
Properties of non-metals
Properties of metals
The periodic table
Periodic Table
Changes in mass
Atoms, elements, and compounds
Changes of state
Solids, Liquids, and Glasses
Particle theory
Atoms, Elements & Compounds
Unicellular organisms
Plant and animal cells
Microscope Skills
Cells
Plant reproductive organs
Flower structure
Develop-ment in the womb
Sex and fertilisation
Seed dispersal
Reproductive organs
Reproduction
Joints and muscles
Skeleton
Breathing
The lungs
Bacteria in the digestive system
Digestion
What is in food
Structure & Functions of the Body systems
Cells, Tissues, and Organs
Diffusion
Specialised cells
Scientific Skills
YEAR 7
KS3 SCIENCE
Biology
Chemistry
Physics
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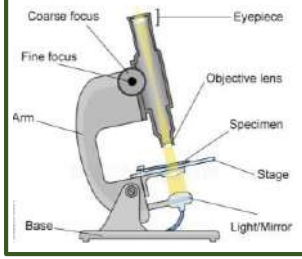
Cells

Keyword	Definition
Cell	Basic unit of life. Unicellular organisms only have one cell. Multicellular organisms have many cells.
Cell Membrane	Controls the movement of substances in and out of the cell.
Cytoplasm	Jelly-like substance where chemical reactions take place.
Nucleus	Carries genetic information and controls the cell.
Mitochondria	Where respirations takes place.
Cell Wall	Made of cellulose, provides support to the cell.
Vacuole	Contains cell sap.
Chloroplasts	Contains the green pigment chlorophyll, the site of photosynthesis.
Tissue	Something made from just one type of specialised cell.
Organ	Something made from different groups of specialised cells all working together.
Organ System	When a number of organs work together.
Synovial Joint	A freely moveable joint. Examples include the hip, shoulder, elbow and knee joints.

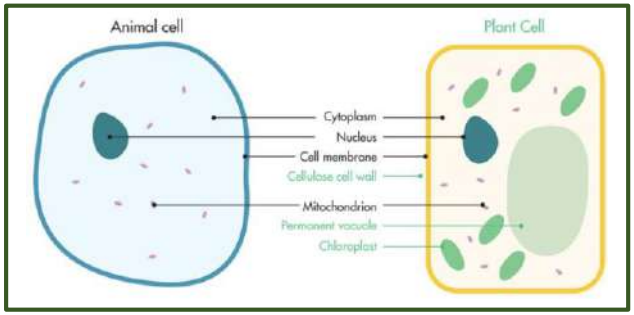
Further Reading:
https://www.bbc.com/bitesize/guides/z9hyvcw/revision/2

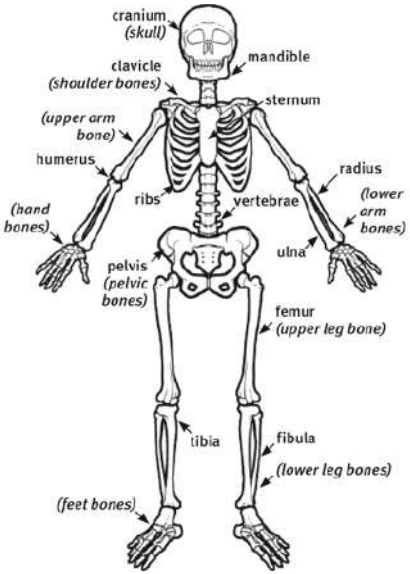


Light Microscope: A device which uses light and a series of lenses to produce a magnified image of an object.

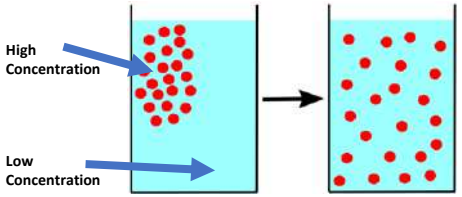
Magnification = How much bigger a sample/object appears under the microscope than it is in real life.

Total magnification = Eyepiece lens x Objective lens

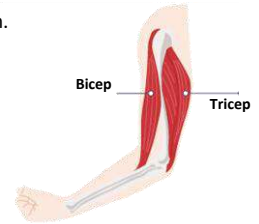


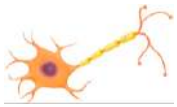


Diffusion: The movement of particles from an area of high concentration to an area of low concentration.
Substances diffuse into and out of cells.



Antagonistic Muscles:
- Muscles work by getting shorter.
- Muscles can only pull and can't push.
- Muscles work in pairs.
- When you raise your forearm, the biceps contract and the triceps relax.
- When you lower your forearm, the biceps relax and the triceps contract.



Red Blood Cell	Sperm Cell	Root Hair Cell	Palisade Cell	Nerve Cell	Egg Cell
					
Carries blood around the body. **Adaptations**: No nucleus, large surface area and biconcave shape.	Carries the male genes. **Adaptations**: Tail for swimming, mitochondria for energy, acrosome to break down the egg cell.	Take in water from the soil. **Adaptations**: Long & thin; large surface area for maximum water absorption. Thin cell walls.	Production of food for the plant. **Adaptations**: Tall and thin. Lots of chloroplasts to absorb sunlight for photosynthesis.	Carry signals around the body. **Adaptations**: Long axon. Myelin sheath.	Carries the female genes. **Adaptations**: Lots of mitochondria. Outer layer hardens once fertilised.

Forces

Keyword	Definition
Velocity	Speed in a particular direction
Acceleration	Speeding up, rate of change of velocity
Terminal Velocity	Steady speed reached when weight and drag balance. Resultant force = 0N
Balanced	Two forces are equal and opposite so resultant force = 0N.
Resultant Force	The sum of all the forces acting on an object
Friction	A force that opposes the motion of a moving object.
Work Done (Mechanical)	Energy transferred when a force moves an object through a distance.
Drag	A force that resits motion through the air.
Lift	A force that uses motion to make objects rise up.
Upthrust	An upwards force pushing on an object in fluids.
Reaction or Normal Force	A force that stops you falling through the floor.

Speed

The speed of an object tells you how fast or slow it is moving. You can find the average speed of an object if you know the distance it has travelled and the time taken to travel that distance.

The equation is:

Speed(m/s) = Distance(m) ÷ Time(s)

$$V = \frac{S}{t}$$

E.g. A car travels 100m in 20s. Calculate the speed of the car.

Speed = Distance ÷ Time

Speed = 100m ÷ 20s

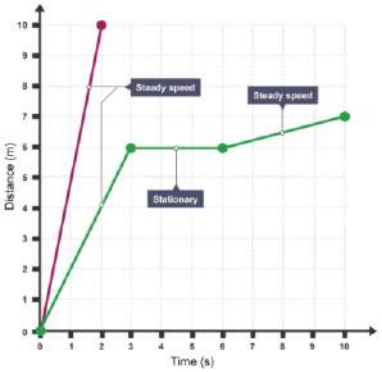
Speed = 5m/s

Further Reading:

https://www.bbc.co.uk/bitesize/guides/zttfyrd/revision/9

Distance Time Graphs

A distance time graph is a useful way to represent the motion of an object. It shows ho the distance move from a starting point changes over time.



If the line is horizontal, the object is stationary (because the distance stays the same).
If the line is a straight diagonal, the object is moving at a constant speed.

The steeper the line, the greater the gradient and the greater the speed.

E.g. Calculate the speed of the green line for the first 3s.

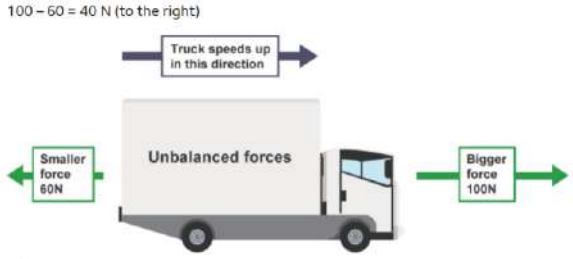
Speed = Distance ÷ Time

Speed = 6m ÷ 3s

Speed = 2m/s

Unbalanced Forces

If more than one force act along a straight line, the resultant force can be found by adding (acting in the same direction) or subtracting (acting in opposite direction) them.



Contact & Non-Contact Forces

All forces between objects are either:
Contact Forces – The objects are physically touching
Non-Contact Forces – The objects are physically separated.

Contact: Friction, Air Resistance, Tension, Normal Contact

Non-Contact: Gravitational, Electrostatic, Magnetic

Acceleration:

Acceleration is the rate of change of velocity. It is the amount that velocity changes per unit time.

Metres per second (m/s)

$$\text{Acceleration} = \frac{\text{Change in Velocity}}{\text{Time Taken}}$$

Metres per second squared (m/s^2)

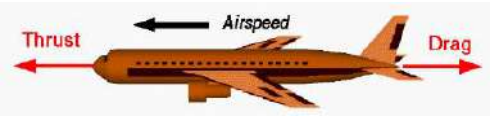
Seconds (s)

$$a = \frac{v - u}{t}$$

Change in velocity = final speed – initial speed

Newton's First Law

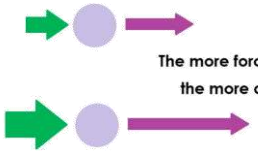
An object has a constant velocity unless acted on by a resultant force



Thrust = Drag. Zero resultant force and the plane moves at a constant velocity.

Newton's Second Law

The acceleration of an object is proportional to the resultant force acting on the object, and inversely proportional to the mass of the object.



F = ma

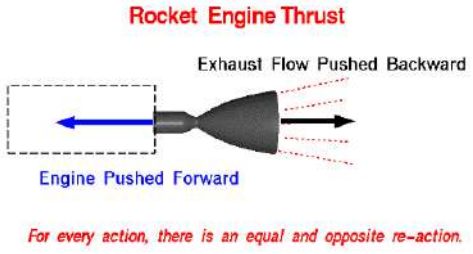
F is Force in N

m is mass in Kg

a is acceleration in m/s^2.

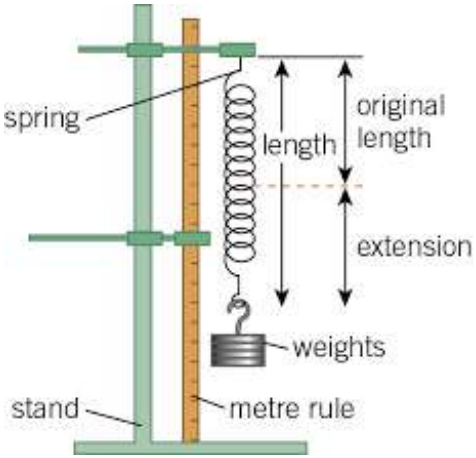
Newton's Third Law

Wherever two objects interact, the forces they exert on each other are equal and opposite.



Forces

Hooke's Law Practical



Aim: To investigate how adding mass to a spring affects the springs extension.

Method:

1. Set up the equipment as shown in the diagram.
2. Add 10g mass to the holder and record the spring length.
3. Add another 10g and record the new spring length.
4. Take away the previous spring length from the new length to calculate extension.
5. Repeat by adding 100g masses until 100g is reached.

Independent Variable: Mass added (g)
Dependent Variable: Extension (mm/cm)
Controlled Variable: Spring and Slotted Mass

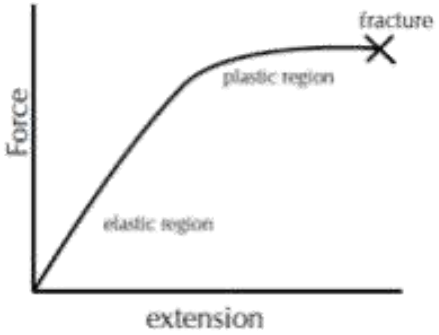
Results

Mass used	Force	Spring length	Extension
0 g	0 N	20 mm	20 mm
10 g	0.1 N	25 mm	5 mm (25 - 20 = 5)
20 g	0.2 N	30 mm	5 mm
30 g	0.3 N	35 mm	5 mm
40 g	0.4 N	40 mm	5 mm
50 g	0.5 N	46 mm	5 mm

The extension of an elastic object, such as a spring, is directly proportional to the force applied, provided that the limit of proportionality is not exceeded.

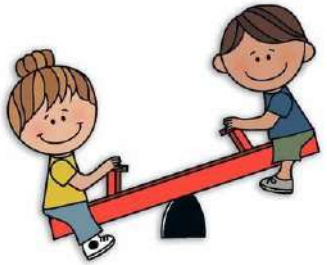
F = k e

- force, *F*, in newton's, N
- spring constant, *k*, in newton's per metre, N/m
- extension, *e*, in metres, m



Moments:

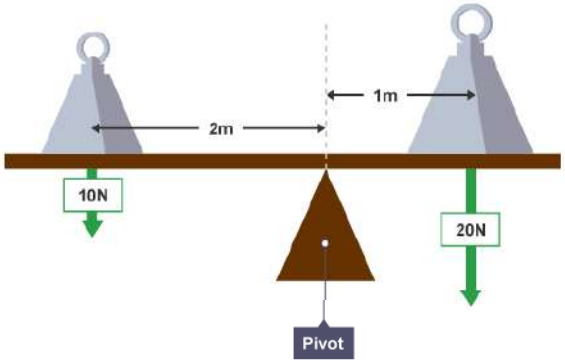
A moment is a turning effect of a force. Forces can make objects turn if there is a pivot.



Think of a see-saw in a playground. The pivot is the part in the middle. The see-saw is level when no-one is on it, but tips if someone gets on one of the ends. It is possible to balance the see-saw again if someone else gets on to the other end and sits in the correct place. This is because the turning forces are balanced.

To calculate moments, you need two things:
The distance from the pivot that the force is applied and the size of the force applied.

moment (Nm) = force (N) x distance (m)



Moment on the left:
moment = force (N) x distance (m)
moment = 10N x 2
Moment = 20Nm

Moment on the right:
moment = force (N) x distance (m)
moment = 20N x 1
Moment = 20Nm

Notice that the two moments in the example above are equal and opposite. They are both 20Nm but the left are acting in an anti-clockwise direction, whilst the right side is acting in a clockwise direction. This is why the beam is balanced.

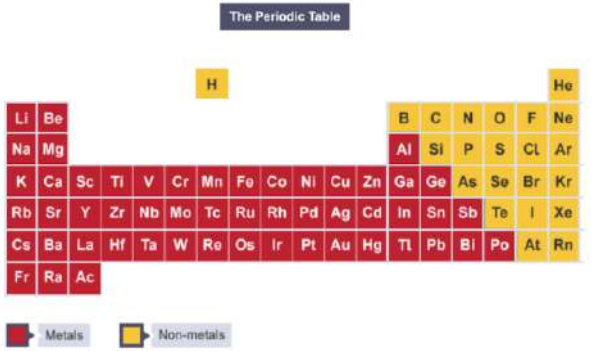
Elements, Compounds, Mixtures

Keyword	Definition
Periodic Table	A table of all the known elements in order of their atomic number.
Group	Vertical columns on the periodic table
Period	Horizontal rows on the periodic table
Atom	The smallest piece of an element.
Element	A substance containing only one type of atom.
Compound	Two or more different elements which are chemically joined together.
Mixture	Two or more different elements or compounds which are not chemically joined together.
Chemical Reaction	A process in which one or more substances are changed into others, by their atoms being rearranged. Also known as irreversible reactions.
Physical Reaction	A process in which the physical properties are changed, but no new substances are made. Also known as reversible reactions.
Reactant	A substance that reacts together with another substance to form products during a chemical reaction.
Product	A substance formed in a chemical reaction.
Conservation of Mass	The total mass of the products in a chemical reaction will be the same as the total mass of the reactant.

Further Reading:

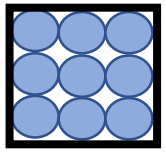
https://www.bbc.co.uk/bitesize/guides/zt2hpv4/revision/1

https://www.bbc.co.uk/bitesize/guides/z84wjxs/revision/1

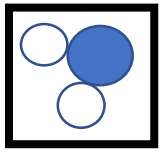


Metals	Non-Metals
Shiny in colour, solids at room temperature (except mercury), high density, strong, malleable, good conductor of heat and electricity.	Dull in colour, can be solids, liquids or gases at room temperature, low density, brittle, poor conductors of heat and electricity.

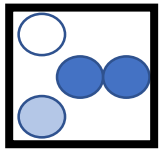
Atoms, Elements, Compounds & Mixtures



This models an element.
There is only one type of atom.



This models a compound.
There are two different elements chemically combined together.



This models a mixture.
There are two or more different elements which are not chemically combined.

Chemical & Physical Reaction

Chemical changes happen when chemical reactions occur. They involve the formation of new chemical elements or compounds.
E.g. Iron will react with oxygen to form Iron Oxide (rust).

Physical changes do not lead to new chemical substances forming. In a physical change, a substance simply changes physical state. E.g. A solid to a liquid.

Chemical Reactions & Equations

The changes in a chemical reaction can be modelled using equations. In general we write:

Reactants → Product

The reactants are shown the left of the arrow, and the products are shown on the right of the arrow. The arrow tells us a chemical reaction has taken place.

E.g.
Iron + Oxygen → Iron Oxide

The Iron and oxygen react together (reactants) to produce Iron Oxide (product).

Naming Compounds

Metal + Non-Metal (which contain two elements)
1. The metal always goes first.
2. The ending of the non-metal changes to 'ide'.

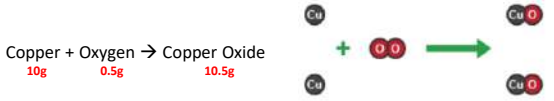
E.g.
Copper + Oxygen → Copper Oxide
Lithium + Fluorine → Lithium Fluoride

To name compounds which have a metal, non-metal and oxygen (three or more elements)
1. The metal always goes first.
2. The ending of the non-metal changes to 'ate'.

E.g.
Copper, Sulfur, Oxygen
Copper Sulfate

Conservation of Mass

No atoms are created or destroyed in a chemical reaction. Instead, they just joint together in a different way than they were before the reaction, and form products. This means that the total mass of the products in a chemical reaction will be the same as the total mass of the reactants.



Copper + Oxygen → Copper Oxide
10g 0.5g 10.5g

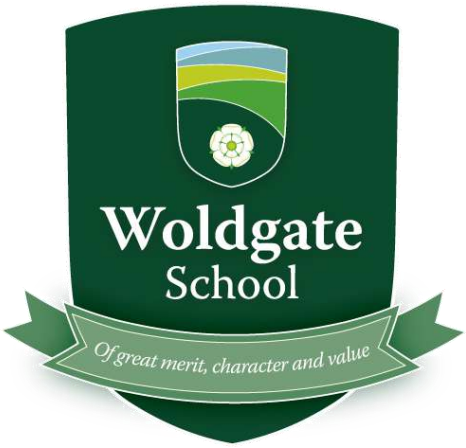
Balancing Equations

A balanced equation gives more information about a chemical reaction because it gives the symbols and formulae of the substances involved.

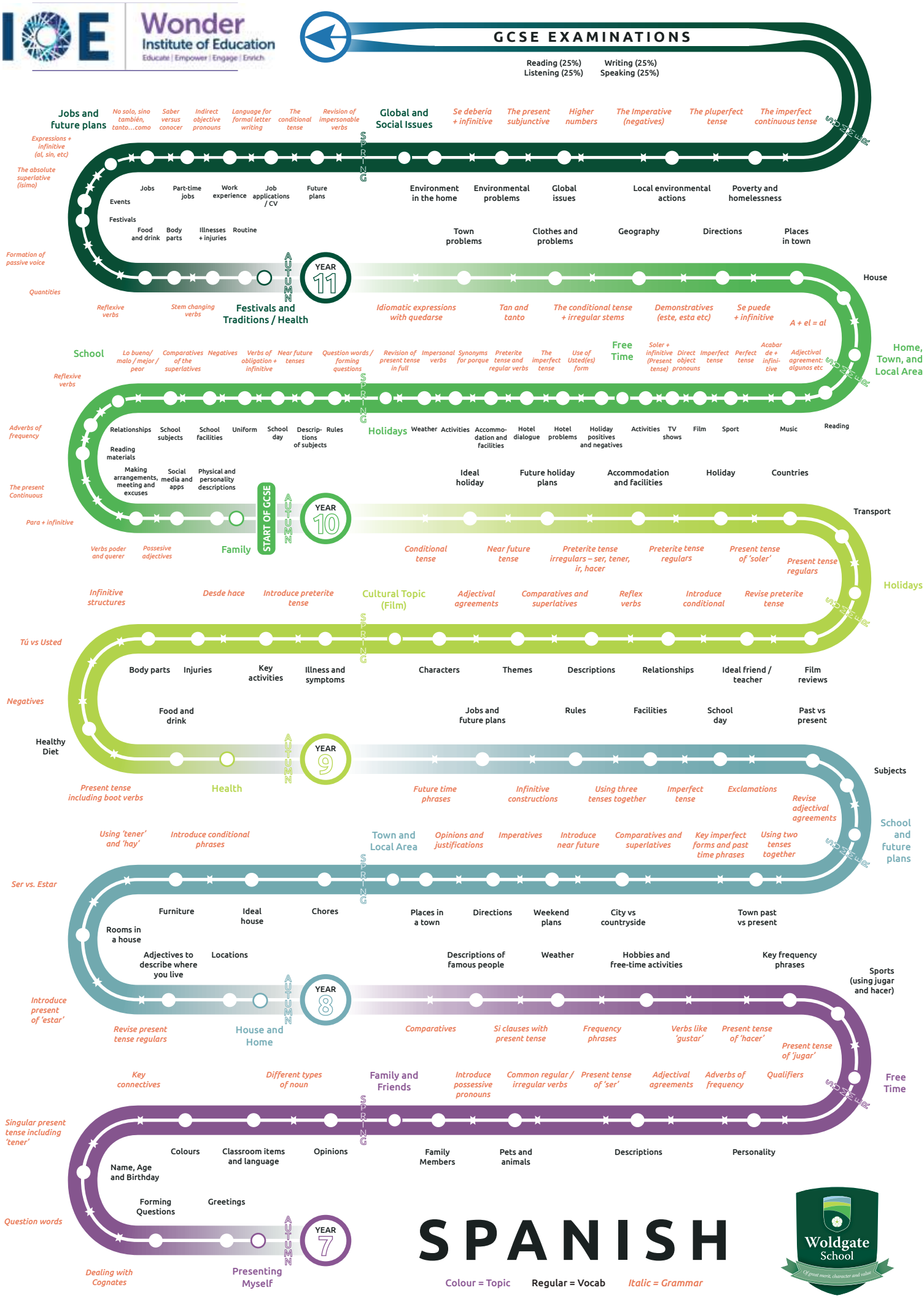
$Cu + O_2 \rightarrow CuO$

The above equation is not balanced because there is one copper atom on both sides of the arrow, but two oxygen atoms on the left hand side, and only one on the right.
You need to adjust the number of units of some substances until you have equal numbers of atoms on both sides of the arrow. You cannot change the formulae of a substance (you can't change the small number).

$2Cu + O_2 \rightarrow 2CuO$



Spanish


Wonder
Institute of Education
Educate | Empower | Engage | Enrich
GCSE EXAMINATIONS
Reading (25%)
Listening (25%)
Writing (25%)
Speaking (25%)
YEAR 11
AUTUMN
SPRING
SUMMER
Jobs and future plans
No solo, sino también, tanto...como
Saber versus conocer
Indirect objective pronouns
Language for formal letter writing
The conditional tense
Revision of impersonable verbs
Global and Social Issues
Se debería + infinitive
The present subjunctive
Higher numbers
The Imperative (negatives)
The pluperfect tense
The imperfect continuous tense
Expressions + infinitive (al, sin, etc)
The absolute superlative (ísimo)
Jobs
Part-time jobs
Work experience
Job applications / CV
Future plans
Events
Festivals
Food and drink
Body parts
Illnesses + injuries
Routine
Environment in the home
Environmental problems
Global issues
Local environmental actions
Poverty and homelessness
Town problems
Clothes and problems
Geography
Directions
Places in town
Formation of passive voice
Quantities
Reflexive verbs
Stem changing verbs
Festivals and Traditions / Health
Idiomatic expressions with quedarse
Tan and tanto
The conditional tense + irregular stems
Demonstratives (este, esta etc)
Se puede + infinitive
A + el = al
House
YEAR 10
School
Lo bueno/ malo / mejor / peor
Comparatives of the superlatives
Negatives
Verbs of obligation + infinitive
Near future tenses
Question words / forming questions
Revision of present tense in full
Impersonal verbs
Synonyms for porque
Preterite tense and regular verbs
The imperfect tense
Use of Usted(es) form
Free Time
Soler + infinitive (Present tense)
Direct object pronouns
Imperfect tense
Perfect tense
Acabar de + infinitive
Adjectival agreement: algunos etc
Home, Town, and Local Area
Reflexive verbs
Adverbs of frequency
Relationships
School subjects
School facilities
Uniform
School day
Descrip-tions of subjects
Rules
Holidays
Weather
Activities
Accommo-dation and facilities
Hotel dialogue
Hotel problems
Holiday positives and negatives
Activities
TV shows
Film
Sport
Music
Reading
Reading materials
Making arrangements, meeting and excuses
Social media and apps
Physical and personality descriptions
Ideal holiday
Future holiday plans
Accommodation and facilities
Holiday
Countries
The present Continuous
Para + infinitive
Verbs poder and querer
Possessive adjectives
Family
START OF GCSE
Conditional tense
Near future tense
Preterite tense irregulars – ser, tener, ir, hacer
Preterite tense regulars
Present tense of 'soler'
Present tense regulars
Transport
YEAR 9
Infinitive structures
Desde hace
Introduce preterite tense
Cultural Topic (Film)
Adjectival agreements
Comparatives and superlatives
Reflex verbs
Introduce conditional
Revise preterite tense
Holidays
Tú vs Usted
Body parts
Injuries
Key activities
Illness and symptoms
Characters
Themes
Descriptions
Relationships
Ideal friend / teacher
Film reviews
Negatives
Food and drink
Jobs and future plans
Rules
Facilities
School day
Past vs present
Healthy Diet
Health
Present tense including boot verbs
Future time phrases
Infinitive constructions
Using three tenses together
Imperfect tense
Exclamations
Revise adjectival agreements
Subjects
YEAR 8
Using 'tener' and 'hay'
Introduce conditional phrases
Town and Local Area
Opinions and justifications
Imperatives
Introduce near future
Comparatives and superlatives
Key imperfect forms and past time phrases
Using two tenses together
School and future plans
Ser vs. Estar
Furniture
Ideal house
Chores
Places in a town
Directions
Weekend plans
City vs countryside
Town past vs present
Rooms in a house
Adjectives to describe where you live
Locations
Descriptions of famous people
Weather
Hobbies and free-time activities
Key frequency phrases
Sports (using jugar and hacer)
YEAR 7
Introduce present of 'estar'
Revise present tense regulars
House and Home
Comparatives
Si clauses with present tense
Frequency phrases
Verbs like 'gustar'
Present tense of 'hacer'
Present tense of 'jugar'
Free Time
Key connectives
Different types of noun
Family and Friends
Introduce possessive pronouns
Common regular / irregular verbs
Present tense of 'ser'
Adjectival agreements
Adverbs of frequency
Qualifiers
Singular present tense including 'tener'
Colours
Classroom items and language
Opinions
Family Members
Pets and animals
Descriptions
Personality
Name, Age and Birthday
Forming Questions
Greetings
Question words
Dealing with Cognates
Presenting Myself
SPANISH
Colour = Topic
Regular = Vocab
Italic = Grammar
Woldgate School
Of great merit, character and value

Y7 Spanish Knowledge Organiser: Unit 1 *Me Presento*

¿Cómo se escribe? – *How is it spelt?*

Aa	Bb	Cc	Dd	Ee	Ff	Gg	Hh	Ii	Jj	Kk	Ll	Mm	Nn
ah	beh	theh	deh	eh	efeh	heh	acheh	ee	hota	kah	eleh	emeh	eneh

Ññ	Oo	Pp	Qq	Rr	Ss	Tt	Uu	Vv	Ww	Xx	Yy	Zz
enyeh	oh	peh	koo	ereh	eseh	teh	oo	ooveh	ooveh dobleh	ekis	ee griehga	theta

¿Cómo te llamas? – *What is your name?*

me llamo (I am called)

te llamas (You are called)

Mi hermano (My brother)

Mi hermana (My sister)

se llama (is called)

Alejandro (Alejandro)
Antonio (Antonio)
Carlos (Carlos)
Diego (Diego)
Felipe (Felipe)
José (José)
Paco (Paco)
Roberto (Roberto)

Alejandra (Alejandra)
Ana (Ana)
Arantxa (Arantxa)
Belén (Belén)
Emilia (Emilia)
Isabel (Isabel)
María (María)
Sofía (Sofía)

p.22; WB p.10

Aa Gramática

Verb endings

*me llam**o***	I am called
*te llam**as***	you are called
*se llam**a***	he/she/it is called

In Spanish, the verb ending changes to show us who is the subject of the sentence.

¿Qué tal? – *How are you?*

Estoy fenomenal	I am great
Estoy muy bien	I am very good
Estoy bien	I am good
Estoy regular	I am OK
Estoy mal	I am not good
Estoy fatal	I am awful

¿Cuántos años tienes? – *How old are you?*

tengo (I have)	un año (1 year)		
tienes (you have)	dos (2)	doce (12)	años (years)
tiene (he has)	tres (3)	trece (13)	
tiene (she has)	cuatro (4)	catorce (14)	
	cinco (5)	quince (15)	
	seis (6)	dieciséis (16)	
	siete (7)	diecisiete (17)	
	ocho (8)	dieciocho (18)	
	nueve (9)	diecinueve (19)	
	diez (10)	veinte (20)	
	once (11)		

21	Veintiuno
22	Veintidos
23	Veintitres
24	Veinticuatro
25	Veinticinco
26	Veintiseis
27	Veintisiete
28	Veintiocho
29	Veintinueve
30	Treinta
31	Treinta y uno

¿Cuándo es tu cumpleaños? – *When is your birthday?*

Mi cumpleaños es (My birthday is)	el (the)	primero (1st)	doce (12th)	veintidós (22nd)	de (of)	enero (January)
Tu cumpleaños es (Your birthday is)		dos (2nd)	trece (13th)	veintitrés (23rd)		febrero (February)
El cumpleaños de Antonio es (Antonio's birthday is)		tres (3rd)	catorce (14th)	veinticuatro (24th)		marzo (March)
El cumpleaños de mi amigo es (My friend's (m) birthday is)		cuatro (4th)	quince (15th)	veinticinco (25th)		abril (April)
Su cumpleaños es (His / Her birthday is)		cinco (5th)	dieciséis (16th)	veintiséis (26th)		mayo (May)
El cumpleaños de Ana es (Ana's birthday is)		seis (6th)	diecisiete (17th)	veintisiete (27th)		junio (June)
El cumpleaños de mi amiga es (My friend's (f) birthday is)		siete (7th)	dieciocho (18th)	veintiocho (28th)		julio (July)
Hoy es (Today it is)		ocho (8th)	diecinueve (19th)	veintinueve (29th)		agosto (August)
		nueve (9th)	veinte (20th)	treinta (30th)		septiembre (September)
		diez (10th)	veintiuno (21st)	treinta y uno (31st)		octubre (October)
		once (11th)				noviembre (November)
						diciembre (December)

Las preguntas - *Questions*

Gramática

Question words

Some of the most common question words in Spanish are:

¿qué?	what?
¿cuándo?	when?
¿cómo?	how?
¿cuánto(s)?	how many?

¿De dónde eres? – *Where are you from?*

Soy de… *I am from…* ***Es de…*** *He/She is from*	**el Reino Unido**	*the United Kingdom*	**México**	*Mexico*
	Gran Bretaña	*Great Britain*	**Bolivia**	*Bolivia*
	Inglaterra	*England*	**Paraguay**	*Paraguay*
	Escocia	*Scotland*	**Ecuador**	*Ecuador*
	Gales	*Wales*	**Chile**	*Chile*
	Irlanda (del Norte)	*(Northern) Ireland*	**Honduras**	*Honduras*
	España	*Spain*	**Nicaragua**	*Nicaragua*
	Argentina	*Argentina*	**Costa Rica**	*Costa Rica*
	Brasil	*Brazil*	**Guatemala**	*Guatemala*
	Cuba	*Cuba*	**El Salvador**	*El Salvador*
	Venezuela	*Venezuela*	**Panamá**	*Panama*
	Colombia	*Columbia*	**Cuba**	*Cuba*
	la Républica Dominicana	*The Dominican Republic*	**Perú**	*Peru*
	los Estados Unidos – *The USA*		**Uruguay**	*Uruguay*

Los animales y las mascotas – *Animals and pets*

Verb	Noun	Adjective
Tengo *I have* **No tengo** *I don't have* **Me gustaría tener** *I would like to have* **Tenía** *I used to have*	***un gato*** *a cat* ***un perro*** *a dog* ***un caballo*** *a horse* ***un ratón*** *a mouse* ***un pez*** *a fish* ***un conejo*** *a rabbit* ***un pájaro*** *a bird* ***una cobaya*** *a guinea-pig* ***una serpiente*** *a snake* ***una tortuga*** *a tortoise*	**negro** *black* **blanco** *white* **amarillo** *yellow* **rojo** *red* **musculoso** *muscular* **rápido** *fast* **agresivo** *aggressive* **tímido** *shy/timid* **marrón** *brown* **verde** *green* **enorme** *enormous* **inteligente** *intelligent* **azul** *blue* **gris** *grey* **naranja** *orange* **feroz** *ferocious* **negra** **blanca** **amarilla** **roja** **musculosa** **rápida** **agresiva** **tímida**

Masculine, feminine, and plural nouns

To say 'a' in Spanish, put ***un*** before the noun if it is masculine, or ***una*** before the noun if it is feminine. You can often work out if a noun is masculine or feminine by its ending. If it ends in *–o* it is likely to be masculine, if it ends in *–a* it is likely to be feminine.

un libro	a book
una goma	an eraser

Note that not all nouns in Spanish end in *–o* or *–a*.

un estuche	a pencil case
una capital	a capital city

For plural nouns, replace ***un*** or ***una*** with the number required and add *–s* to the noun if it ends in a vowel, or *–es* if it ends in a consonant.

Adjective endings

Adjectives can be masculine or feminine, singular or plural. If an adjective ends in ***–o***, it changes to an ***–a*** to describe a feminine noun:

un perro negro
una tortuga amarilla

If the adjective ends in ***–e*** or a consonant, it stays the same.

una serpiente verde
una cobaya marrón

If the adjective is describing a plural noun, it adds an ***–s*** if it ends in a vowel and ***–es*** if it ends in a consonant.

dos gatos blancos
cinco ratones grises

Las opiniones - *Opinions*

Me gusta	I like	**el fútbol**	*football*
Me encanta	I love	**el cine**	*cinema*
No me gusta	I don't like	**el helado**	*ice cream*
No me gusta nada	I really don't like	**la televisión**	*TV*
		la música	*music*
		la fruta	fruit
Me gustan	I like	**los caramelos**	*sweets*
Me encantan	I love	**los animales**	*animals*
No me gustan	I don't like	**los deportes**	*sports*
No me gustan nada	I really don't like	**las vacaciones**	*holidays*
		las tortugas	*turtles*
		las fiestas	*festivals / parties*

Extra: *mi color favorito es...* my favourite colour is...

Note that you can make any sentence negative in Spanish by placing the word *'no'* before the verb.

- *No odio* I don't hate

Verbs like *me gusta*

Me gusta ('I like') literally translates as 'it is pleasing to me'. This means that an *–n* must be added to the end of the verb when what you or someone else likes is plural, i.e. 'they are pleasing to me'.

Me gusta mi perro. ➜ *Me gustan mis perros.*

Other verbs you have come across that work in this way include *me mola, me chifla, me fascina* and *me interesa*.

singular
Me gusta el inglés.
Me fascina el fútbol.
Me interesa bailar.
plural
Me gustan el inglés y el francés.
Me fascinan los deportes.
Me interesan las actividades extraescolares.

The definite article

In Spanish, the definite article, 'the', has four different forms relating to gender and number.

	masculine	feminine
singular	el	la
plural	los	las

el piso – the flat

la familia – the family

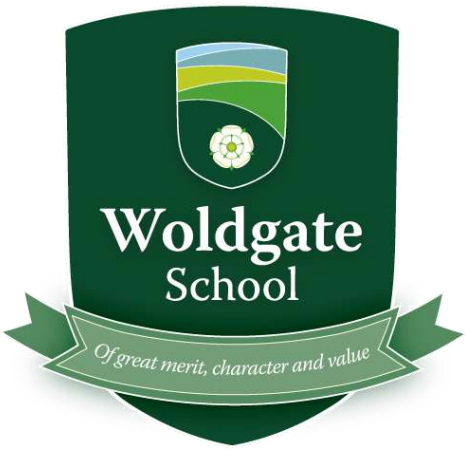
los dormitorios – the bedrooms

las cobayas – the guinea pigs

When talking about things in a more general sense, the definite article is still used in Spanish, even though it is not used in English.

El fútbol es muy emocionante. – Football is very exciting.

Me gustan las casas modernas. – I like modern houses.



Everything you do should be of great merit, character, and value