HERMITAGE
ACADEMY

YEAR 7

KNOWLEDGE ORGANISER

Year 7 Topic 10 Shapes and angles Student Knowledge Organiser

Key words and definitions

Triangle – a three sided shape

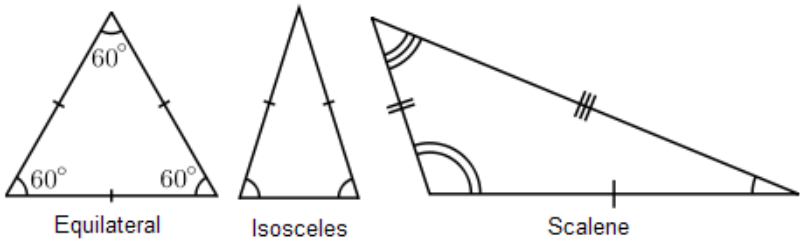
Quadrilateral – a general name for a four sided shape

Parallel lines – lines which never meet, they stay the same distance apart

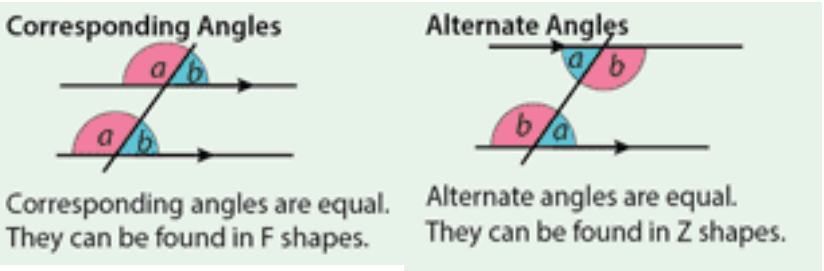
Plan view – looking down on an object from above

Elevation – view from the front or side of an object

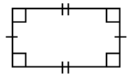
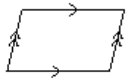
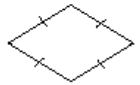
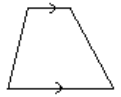
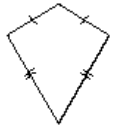
Types of triangles



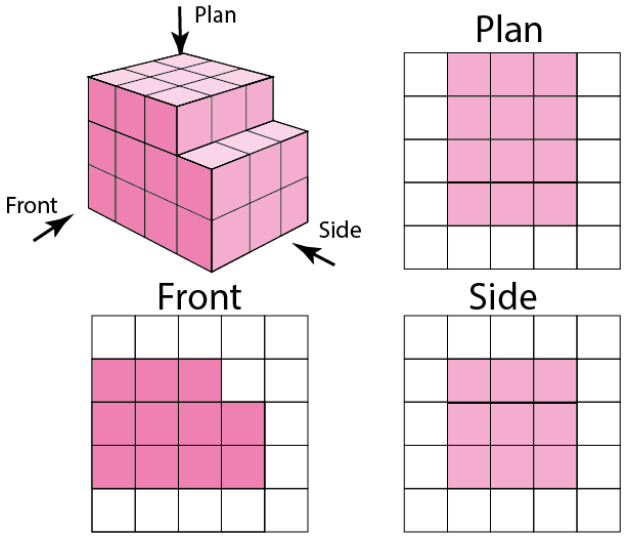
Angles in parallel lines



Types of special quadrilaterals

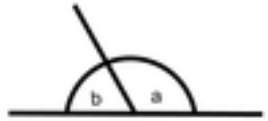
Quadrilateral	*Properties*	
Rectangle	4 right angles and opposite sides equal	
Square	4 right angles and 4 equal sides	
Parallelogram	Two pairs of parallel sides and opposite sides equal	
Rhombus	Parallelogram with 4 equal sides	
Trapezium	Two sides are parallel	
Kite	Two pairs of adjacent sides of the same length	

Plans and elevations



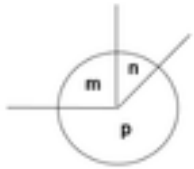
Angle facts

The angles on a straight line add up to 180°.
a + b = 180°



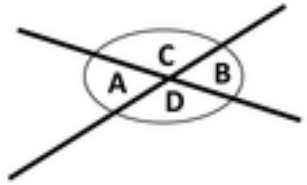
The angles in a triangle add up to 180°.
a + b + c = 180°

The angles at a point add up to 360°.
m + n + p = 360°



The angles in a quadrilateral up to 360°.
w + x + y + z = 360°

Vertically opposite angles are equal.
A = B
D = C



Hegarty Maths Links

Triangle – 823

Quadrilateral – 824, 825, 826

Parallel lines – 481, 482, 483

Plans and elevations – 837, 838, 839, 840, 841, 842, 843, 844

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Year 7 Topic 11 Sequences Student Knowledge Organiser

Key words and definitions

Sequence – a list of numbers or patterns in a special order

Pattern – things arranged following a rule

nth term – a formula to help you find any term in a sequence

Position-to-term – this is another way of saying the nth term

Term-to-term – find the next number in a sequence if you know the previous one

Linear – a sequence which increase/decrease by the same amount each time

Using a term-to-term rule

Find the next term in the sequence 28, 37, 46, 55, 64, ___.

① ② ③ ④ ⑤ ⑥

28, 37, 46, 55, 64, 73, ...

+9 +9 +9 +9 +9

ARITHMETIC SEQUENCE

Answer 73

nth term of a linear sequence

3 8 13 18 23

+5 +5 +5

1. Find the *difference* between each term:
   5
2. Always put 'n' next to it (n = term number)
   5n
3. Add or subtract to get the first term in the sequence?
   5-2 = 3

The nth term is **5n -2**

Geometric sequence

A geometric sequence is one where to get from one term to the next you multiply by the same number each time. This number is called the *common ratio, r.*

Eg 1 2 3 4

2, 10, 50, 250 ...

x5 x5 x5

r=5

Sequences from patterns

Shape number	1	2	3	4	5	6	7	8	9	10	50
Number of matchsticks	3	5	7	9	11	13	15	17	19	21	101
Function rule	Number of matchsticks = Shape number x 2 + 1										

Finding missing terms

Find the missing terms and rule for: 48, ___, 70 , ___, 92

48 → 70 (2 jumps!) gives us: Add 22

So our rule for one jump is half this → Add 11 (common diff = +11)

Number after 48 → 48 + 11= 59

[CHECK: 59 → 59 + 11 = 70!]

Number after 70 → 70 + 11 = 81

Hegarty Maths Links

Pattern – 196

Term-to-term – 197

nth-term – 198

Geometric sequences – 264

North East Learning Trust

Year 7 Topic 12 Graphs Student Knowledge Organiser

Key words and definitions

Co-ordinate – values that show an exact position. First number tells you how far along, second number how far up or down

Mid points – a point that divides a line segment in two equal parts

Straight line graphs – plotting a constant rate of change between two variables

Distance-time graphs – describes a journey where the gradient will give the speed.

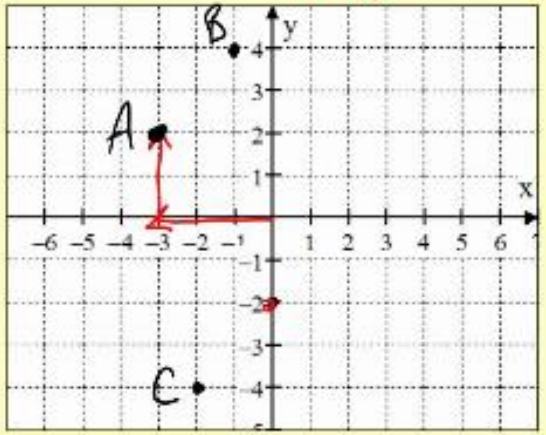
Plotting co-ordinates

Plot the following points.

(x, y)

(x, y)

1. A(-3, 2)
2. B(-1,4)
3. C(-2,-4)
4. D(0,-2)
5. E(3,0)



Drawing a straight line graph

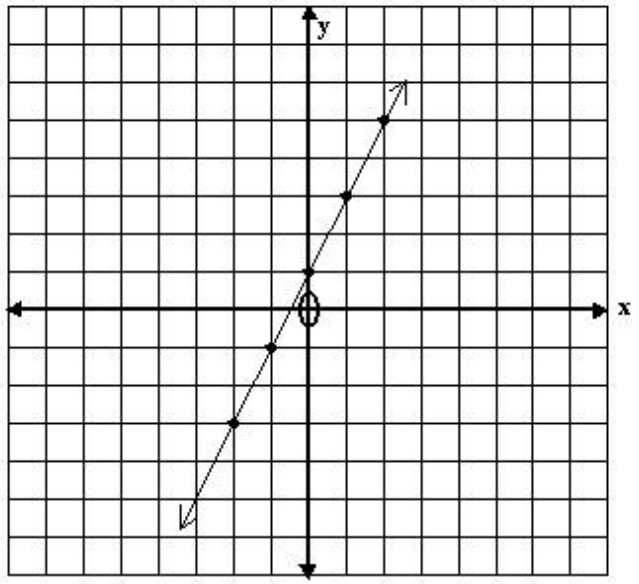
e.g. $y = 2x + 1$

x	2x + 1	y
-2	2(-2) + 1	-3
-1	2(-1) + 1	-1
0	2(0) + 1	1
1	2(1) + 1	3
2	2(2) + 1	5

Choose values for x.

Calculated y values

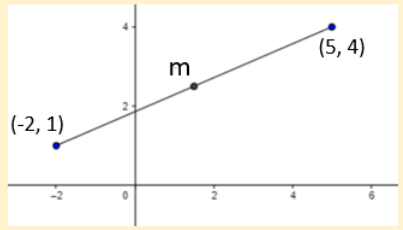
The points to plot are:
(-2,-3) (-1,-1) (0,1)
(1,3) (2,5)



Finding a mid-point

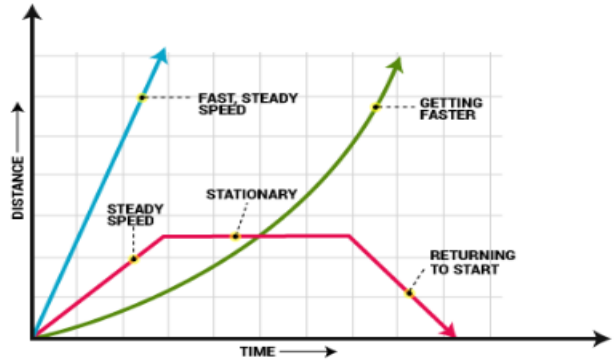
Midpoint Formula

$$\text{Midpoint} = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$$



$$m = \left(\frac{-2+5}{2}, \frac{1+4}{2}\right)$$
$$= \left(\frac{3}{2}, \frac{5}{2}\right)$$
$$= (1.5, 2.5)$$

Distance time graphs



Hegarty Maths Links

Co-ordinate – 199

Mid points – 200

Straight line graphs – 201, 205, 206, 207

Distance-time graphs – 874, 875, 876

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In the Year 7 JUNGLE

What will you learn?

In this project, you will develop your skills of recording from observation through exploring colour within drawing and painting. You will expand your knowledge of layering and blending coloured pencil to create tonal values and show form. You will experiment with watercolour paints by mixing a variety of tints, tones and shades to show shadows and highlights in your work like the great Henri Rousseau.

Click the links to read the stories

Reading

- **Where the wild things are**

WHERE THE WILD THINGS ARE READ ALONG.url

- **The very hungry caterpillar**

THE VERY HUNGRY CATERPILLAR READ ALONG.url

- **The Jungle book**

THE JUNGLE BOOK READ ALONG.url

Education

- **Fine Art (GCSE, A Level, Degree)**

https://www.ncl.ac.uk/undergraduate/degrees/w150/

- **Illustration (A level & Degree)**

https://northernart.ac.uk/ba-hons-illustration-commercial-application-2/

Careers http://www.creativejourneyuk.com

- **Freelance artist**
- **Illustrator**
- **Concept design**

Click the link to discover careers linked to this topic

Key Words

- Shape
- Tone
- Texture
- Detail
- Colour
- Form
- Pattern
- Gradient
- Mark-making
- Jungle
- Botanical
- Natural
- Imagination
- Layers
- Overlapping
- Dream-like
- Blending
- Layering
- Tints
- Tones
- Shades
- Shadows
- Highlights

Watercolour paint is used by mixing a colour with water to create light, translucent washes that can be layered to create a range of tones.

Remember:

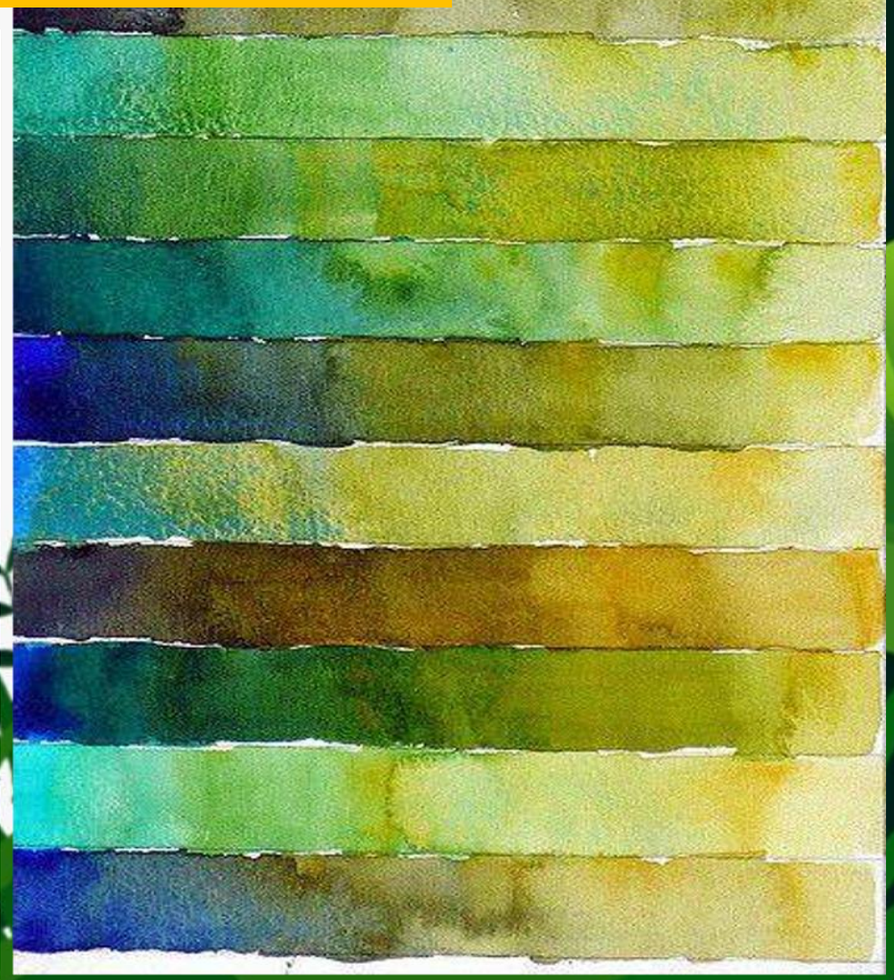
You can mix different ratios of paint to water in order to create lighter or bolder colours

Painting Top Tips:

- DO NOT cover your paintbrush in paint or apply too much water
- You can mix your paint on the table but DO NOT make large puddles and make a mess (a tidy work space is important)

- **TINTS** are created when either water or white is added to a colour to make it lighter
- **TONES** are created when either another colour or grey is added
- **SHADES** are created when black is added to a colour to make it darker

PAINTING RULES SKO.pptx



Henri Rousseau

Rousseau's favorite subject was the **jungle** but he never actually saw a jungle. He based his scenery on the **botanical gardens** in Paris and the animals were drawn from guide books and zoo pamphlets. Some of his subjects he never saw in **three dimensions** so his **paintings** have a flat look to them. Also, Rousseau sometimes **grouped together animals** that would never be seen together in **nature.** In one painting, the bananas hang upside down from a tree. There were some who liked Rousseau's paintings. For example, Picasso saw one of Rousseau's paintings being sold on the street as a junk canvas that could be painted over by a serious artist. Picasso bought the painting and then went to meet this ingenious artist.

"Nothing makes me so happy as to observe nature and to paint what I see."

Click me!

https://www.bbc.co.uk/teach/class-clips-video/art-and-design-ks2-henri-rousseaus-surprised/zrdyd6f

HERMITAGE STUDENT POD

Click me!

LAYERING & BLENDING COLOURED PENCIL.url

Sound like an expert

What is the subject of the work?

- The subject of the work is.....
- [Artist name] produces [media] based on the subject of.....

How is the work produced?

- The work is produced by....
- [Artist's name] produces their work by...

Why has the artist chosen to use these materials, techniques or processes?

- The artist has chosen to use these materials because...
- [Artist's name] has chosen to use these techniques and processes in order to...

Use these sentence starters to sound like an expert and have a postcard sent home!

In the JUNGLE

Coloured pencil leaf study

Step 1 – Lightest colours first

To begin with, you will need to select the appropriate colours. Sharpen all of the coloured pencils you intend to use. Start by using the lightest colour first. Use the side of your lightest coloured pencil to begin gently shading in areas of your drawing using controlled movements.

Step 2 – Layering

Then, you need to think about which colours you should use next to achieve the midtones. You will begin layering your midtones over your light coloured pencil shading to build up tone. Try using the method of cross-hatching or scumbling here. The more pressure you apply to your pencil, the more vibrant the colour will be.

Step 3 –Line direction

It is important to consider the direction that you are moving your pencil in when making lines as this will help you to create a more realistic and 3D outcome. Your directional lines should follow the contour of the surface (curved lines for curved surfaces).

Step 4 – Blending

It is important to blend the colours on the paper to create new shades of a colour. Try changing the pressure on your pencil when blending the colours to achieve a more subtle effect from your lightest to your darkest colour.

Step 5 – Texture

To create a more realistic outcome, use mark-making techniques such as hatching, crosshatching, scumbling and stippling to make marks on the surface of your drawing to suggest different surfaces.

If you have shaded an area too dark with your coloured pencil, remember that you can lift your coloured pencil shading with a rubber to add highlights to your drawing,.

In the JUNGLE

Watercolour leaf study

Step 1 – Lightest colours first

To begin with, you will need to select the appropriate colours. To achieve the lightest colour first, mix your colour with plenty of water in your pallette lid. Apply the lightest colour across the whole sketch but remember to avoid painting any areas of highlight.

Step 2 – Layering

Then, you need to think about which colours you should use next to achieve the midtones. You will begin layering your midtones over your light watercolour painting to build up tone. You must wait for each layer to dry before building up tone or you may distress the paper. Aim to paint around the outline then work your way into the center of the shape to achieve more control.

Step 3 –Line direction

It is important to consider the direction that you are moving your paintbrush in when making lines as this will help you to create a more realistic and 3D outcome. Your directional lines should follow the contour of the surface (curved lines for curved surfaces).

Step 4 – Blending

It is important to blend the colours on the paper to create new shades of a colour. You must not scrub the paper when blending the colours, gentle use the paintbrush against the paper. Try using the water on your brush when blending the colours to achieve a more subtle effect from your lightest to your darkest colour.

Step 5 – Texture

To create a more realistic outcome, use mark-making techniques such as stippling or the wet-on-wet technique. If you have shaded an area too dark with your watercolour, remember that you can use pure water to add highlights to your painting.

Art & Design
HERMITAGE ACADEMY

Year 7

What will you learn?

Explore the world of POP Art, delving deeper into 1950's POP culture and the extraordinary work of Andy Warhol. Develop your knowledge of colour theory and experiment with complementary colours to create your own POP Art inspired artwork! Improve your drawing skills by looking at shape, scale and proportion as you record from observation, then transform your drawings into your very own relief prints!

Reading
- Art Matters: Because Your Imagination Can Change the World – Neil Gaiman
- Steal Like An Artist: 10 Things Nobody Told You About Being Creative - Austin Kleon

Education
- Product Design - Manchester Metropolitan University

BA (Hons) Product Design · Manchester Metropolitan University (mmu.ac.uk)

- Printmaking – University of Chichester

BA (Hons) Fine Art with Printmaking Degree - University of Chichester

Careers
- Illustrator
- Product designer
- Package design
- Printmaker
- Graphic designer

POST-16

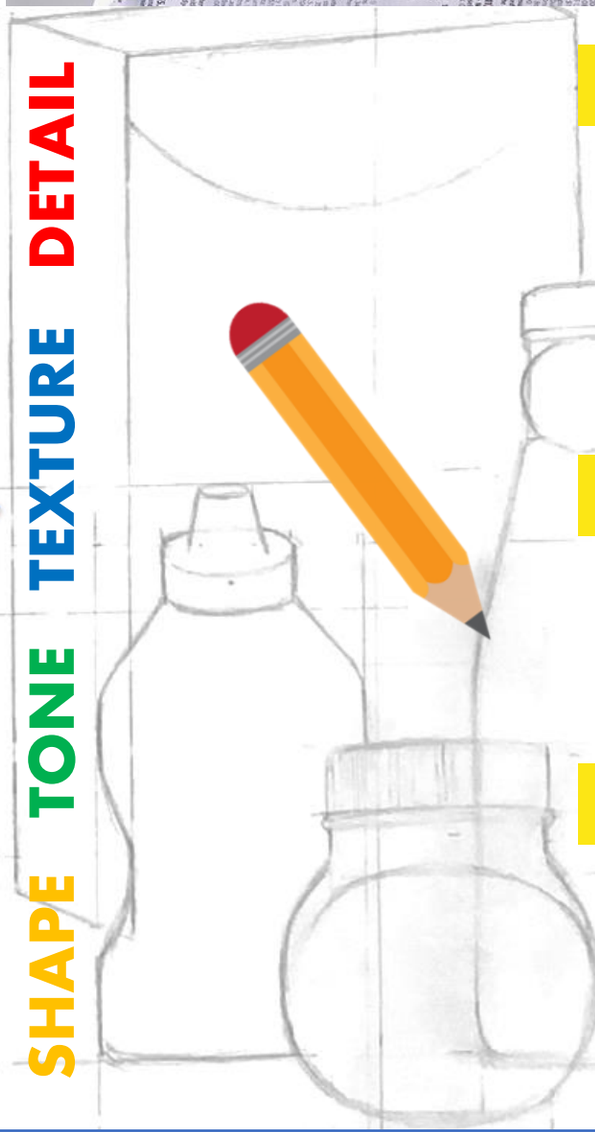
CAREERS

Key Words
- Shape
- Tone
- Texture
- Detail
- POP Art
- Complementary
- Scale
- Proportion
- Relief
- Mass Production
- Illustrate
- Influential
- Screenprint
- Contrasting

HOW TO MAKE A RELIEF PRINT.url

Click me!

Relief printing is when you carve into a printing block that you then use to press onto paper and make a print. The lines or shapes you carve into the printing block will not have ink on them, so will not show up on your paper. Instead, the print will reveal the parts you don't draw, because they come into contact with the ink. The print will be a mirror image of what you see on your printing block!



SHAPE

Shape and form define objects in space. Shapes have two dimensions–height and width–and are usually defined by lines. Forms exist in three dimensions, with height, width, and depth.

SCALE

Scale is the relationship of parts of an image to the image as a whole, or to something in the world outside of the image

PROPORTION

In art, proportion refers to the relationship between the different sized components within one whole composition.

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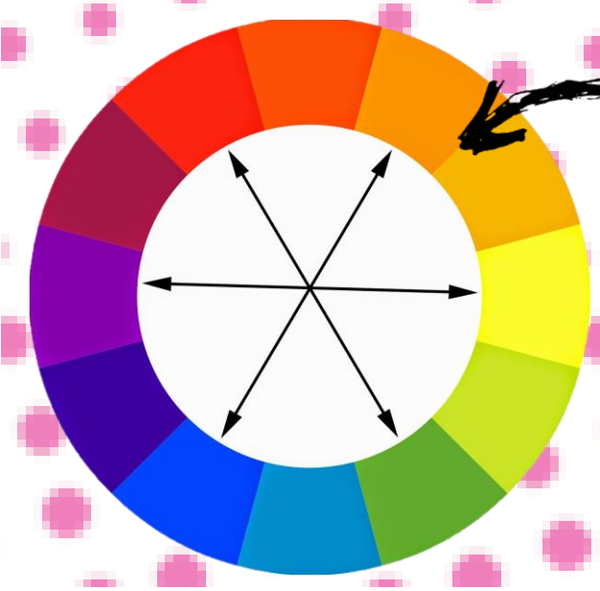
KS3 DRAWING RULES.pptx

ANDY WARHOL

Andy Warhol was part of the pop art movement. His first job was illustrating adverts in fashion magazines. Now is he known as one of the most influential artists who ever lived! He is famous for exploring popular culture in his work. Popular culture is anything from Coca Cola to pop stars to the clothes people like to wear. Warhol liked to use bright colours and silk-screening techniques. He liked using screen printing to mass-produce artworks based on photographs of celebrities, including Marilyn Monroe. He didn't just do prints though, he made films, digital artwork, installations, paintings and sculptures. Warhol liked making prints because it meant he could create multiples of the same image. Screen-printing is a printing process that can create lots of artworks that look the same. Sometimes Warhol would switch colours around and present a group of prints with

"Isn't life a series of images that change as they repeat themselves?"

HERMITAGE STUDENT POD



Complementary colours sit across from each other on the colour wheel. These are often referred to as opposite colours and even contrasting colours. When complementary colours are placed next to each other, a very strong contrast is created. The colours appear more vivid and brighter. Some people say these colours clash when used next to each other and create very visually stimulating artwork.

COLOUR THEORY - COMPLEMENTARY COLOURS.url

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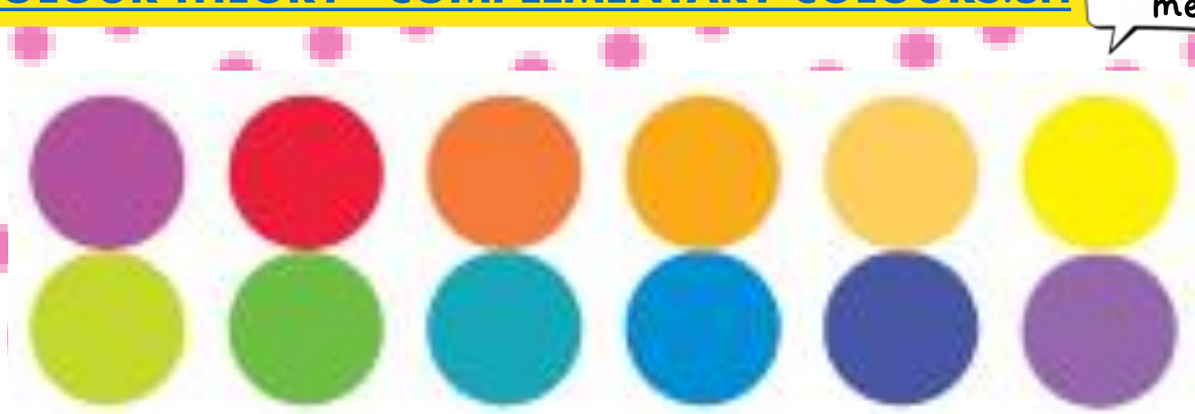

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- **The work is produced by….**
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- **[Artist's name] has chosen to use these techniques and processes in order to…**

Use these sentence starters to sound like an expert and have a postcard sent home!

CORE PE

Knowledge Organisers

Physical Education → Athletics Y7/8

Key Skills	Physical Attributes	Knowledge	Rules
Sprinting – 100m, 200m, 300/400m Jumping – long, triple and high Long distance running – 800m, 1500m Throwing – discus, javelin and shot put	Speed Agility Co-ordination Power Cardiovascular fitness Muscular endurance Reaction time Strength Flexibility Balance	Core skills Advanced skills Basic rules Basic regulations Tactics Warming up and cooling down Major muscle groups Heart rate and exercise intensity Outwitting opponents Analysis of performance	Awareness of the rules and regulations of the event and their application (including officials commands/signals)

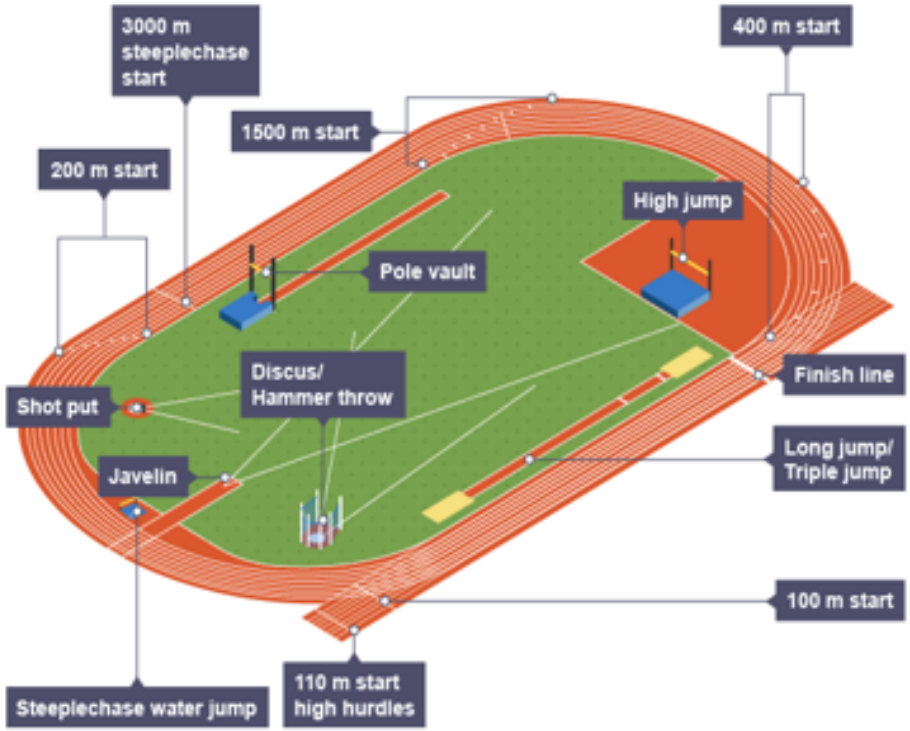
Teaching Focus	Literacy
<u>Year 7</u> • Repetition of **core skills** through **isolated drills** in order to develop **control** and **accuracy** • Application of **core skills** within a **competitive environment** in order to develop **confidence** whilst **under pressure** • Understanding of **basic rules** and **regulations** specific to each event • **Analysis** of **own performance** against practical criteria	Rules Regulations Tactics Analysis Track Field Starting Finishing Posture Leg action Arm action
<u>Year 8</u> • Repetition of **advanced skills** through **isolated drills** in order to develop **precision, control** and **fluency** • Application of **advanced skills** within a **competitive environment** in order to develop **confidence** whilst **under pressure** • Ability to **adapt** to **new situations** within **competitive situations** • Understanding of **all rules** and **regulations** specific to each event • **Analysis** of **own performance and the performance of others** against practical criteria	Head carriage Stride Bend running Approach Flight Take off Landing Synchronisation Stance Release phase Recovery phase Follow through Heart rate Intensity Blood flow Major muscles; Biceps, Triceps, Quadriceps, Hamstrings, Gastrocnemius, Gluteals, Abdominals, Deltoid and Pectorals. Outwitting opponents Accuracy

Useful resources
www.uka.org.uk www.englandathletics.org www.britishathletics.org

Subject Knowledge Organiser
Athletics – Competition, Scoring & Officials

Competition
Athletics is a collection of sporting events that consist of the three major areas of running, jumping and throwing. The running events include sprints, middle and long-distance events and hurdling. Jumping events include the long jump, high jump, triple jump and pole vault, while the throwing events include the discus throw, hammer throw, javelin throw and shot put. There are also combined events, such as the decathlon for men, which consists of ten events, and the heptathlon for women, which consists of seven events.

Shown below is a typical competition area for athletics.



Scoring
Success in athletics is judged on times and distances rather than points or goals.

Track events – These races are started with an electronic pistol which is only sounded again on a false start. In races that are very close, officials use a digital line-scan camera across the finish line to give them a photo finish picture. The clock stops when an athlete has passed through the finish line.
Jumping events – These events are measured from the front edge of the take-off board to the first mark made in the sand by the athlete. The distance is always measured to the nearest centimetre and athletes will always be given a minimum of three jumps.
Throwing events – These events are measured from the front edge of the throwing line to the first mark made in the ground by the implement. The distance is always measured to the nearest centimetre and athletes will always be given a minimum of three attempts.

Officials
An athletics competition requires a wide range of officials. These include:

Starter – Starts all track events.
Starter's marshals – Line up competitors in correct order ready for starting.
Timekeepers – Provide official times for all track competitors.
Place judges – Ensure the correct order of positions are given.
Field event judges – Measure, record and let athletes know when it is safe to compete.
Relay judges – Make sure runners at change-overs are in the correct lane and within the change-over box.

Key Vocabulary

- Batting - Bowling - Fielding - Running - Throwing
- Stumps - Wicket - Stumps - Wicket Keeper - Umpire
- Innings - Wide - No Ball - Over - Four - Six

Lesson Overview

1. Aim of the game
2. Rules of the game
3. Basic Cricket skills
4. Positions/playing area
5. Throwing
6. Catching
7. Batting
8. Bowling

Cricket

KS3 Knowledge Grid

Aim of the game

The object of Cricket is to either outscore a team with the most runs when batting or stop the opposition scoring the most runs when bowling and fielding.

Rules of the game

There are various versions of cricket such as Test, One Day, 50 over, 20/200, indoor and quick cricket.

- A game in school typically has two teams of eleven players
- Each team bats once in each innings before the sides switch.
- The fielding team has a bowler, wicket keeper, and then the field is set depending on the size of pitch
- A batter must successfully strike the ball and run between the stumps as many times as possible with their partner or hit the ball over set a set boundary. If the ball rolls over this boundary it is 4 points if the ball without bouncing reaches this point they get 6 runs.
- Batters can be out by being bowled (ball hitting stumps), LBW (Ball hits the **L**eg **B**efore **W**icket) or by being Caught (by the fielding team)
- Once all Batters are out, they can swap and the bowling/ fielding team become the batting team.
- Typically cricket is played with a hardball and is split by genders.
- The number of innings or number of overs can be pre-set and make up the duration of the game

Playing Positions and basic skills

Basic Cricket skills:

BATTING – The batter will swing the bat and aim to strike the ball that is bowled from the bowler

BOWLER – The bowler deliver six balls (Over) at the batter in an attempt to hit there stumps to get them out or have them caught out.

THROWING – Fielders will throw the ball to where it is needed in an attempt to get the batters out, usually at the stumps

CATCHING – Fielders have will either catch a ball that is hit by the batter or that is thrown by a fielder

RUNNING – Batter will run as fast as they can between the stumps with their partner

FIELDING – The aim is to get the batting players out by catching the ball after it is hit, or by throwing it back to the stumps and running the batter out at the stumps

Fielding positions and playing area:

Key Vocabulary

- Batting - Bowling - Fielding - Running - Throwing
- Base - Back Stop - Rounder - Half Rounder - No Ball
- Innings - Obstruction - Catching

Lesson Overview

1. Aim of the game
2. Rules of the game
3. Basic Rounders skills
4. Positions/playing area
5. Throwing
6. Catching
7. Batting
8. Bowling

Rounders

KS3 Knowledge Grid

Aim of the game

The object of Rounders is to either outscore a team with the most runs when batting or stop the opposition scoring the most runs when bowling and fielding.

Rules of the game

WE ARE ALL ROUNDERS
ROUNDERS ENGLAND

SIMPLIFIED RULES

TEAMS

- Games are played between two teams. Each team has a maximum of 15 and a minimum of 6 players. No more than 9 players may be on the field at any one time
- If a mixed team—there should be no more than 5 male players
- List of players and substitutes should be submitted to the Umpire prior to play
- Games are usually played over 2 innings
- Players once substituted may return during the game, but batters only in the position of their original number

BATTING

- Wait in the backward area well away from 4th post
- If out, wait in the backward area well away from 1st post
- Enter the batting square when called to do so by the Umpire
- You will have one good ball bowled to you
- Batter can use 2 hands
- You can take a no ball and score in the usual way, but once you reach 1st post you cannot return. You cannot be caught out or stumped out at 1st post on a no ball

NO BALLS

- Not smooth underarm action
- Ball is above head or below knee
- Ball bounces on way to you
- Wide or straight at body
- The Bowler's foot is outside the square during the bowling action

Playing Positions and basic skills

Basic Cricket skills:

BATTING – The batter will swing the bat and aim to strike the ball that is bowled from the bowler

BOWLER – The bowler will bowl at the batter in an attempt to get them caught out.

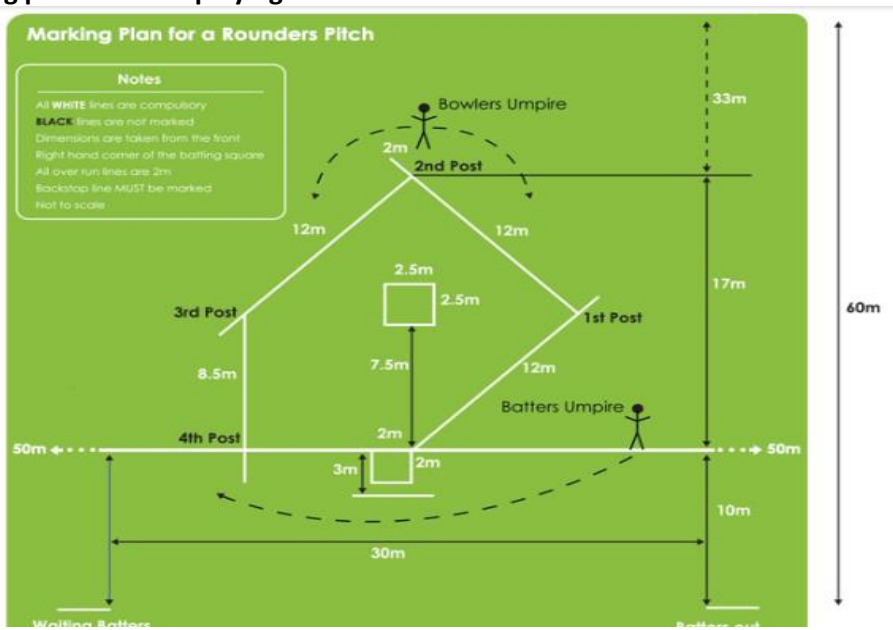
THROWING – Fielders will throw the ball to where it is needed in an attempt to get the batters out, usually at the bases.

CATCHING – Fielders have will either catch a ball that is hit by the batter or that is thrown by a fielder

RUNNING – Batter will run as fast as they can between the bases and score Rounders base on where they can get to.

FIELDING – The aim is to get the batting players out by catching the ball after it is hit, or by throwing it back to the stumps and running the batter out at the stumps

Fielding positions and playing area:



Key Vocabulary

- Hitting - Throwing - Catching - Base running - Fielding - Pitching
- Pitcher - Catcher - Base fielder - Deep fielder - Short stop - Innings
- Home run - Foul area - Outfield - Dead ball area - Tied game

Lesson Overview

1. Aim of the game
2. Rules of the game
3. Basic softball skills
4. Positions/playing area
5. Throwing
6. pitching
7. Batting
8. Catching

Softball

KS3 Knowledge Grid

Aim of the game

The object of softball is to hit the ball with a bat and try to run around a pitch with four bases. Once a player manages to get right round without being given out, a run is scored. The team with the most runs at the end of the game is deemed the winner.

Rules of the game

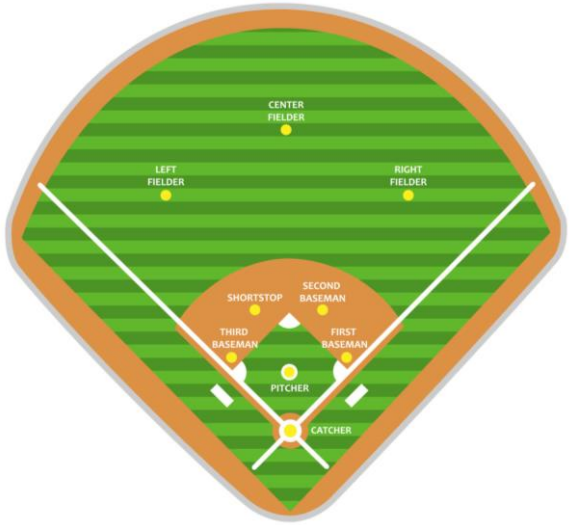
- Each team consists of 9 players and teams can be of mixed gender
- A game lasts for 7 innings and is split into two sections; the top and bottom of the innings.
- Each team bats once in each innings before the sides switch.
- The fielding team has a pitcher, catcher, a player on first base, second base, third base, three deep fielders and short stop.
- A batter must successfully strike the ball and run around as many bases as possible. Once they get all the way around and back to home plate without being given out, a run is scored.
- The fielding team can stop the batter by making them miss the ball, catching the ball, tagging one of the bases before they reach it or tagging the batter whilst they are running with the ball in hand.
- Behind the first and third base line is a foul area. Once the ball crosses this line before it bounces the ball is deemed 'dead' and play restarts with a new pitch.
- A home run can be scored by hitting the ball over the outfield and into a dead ball area. The batter can then stroll around the bases to score along with any additional batters on base.
- The winners of the game will be decided after the 7 innings have all been completed. The team with most runs after 7 innings will be declared the winner. If after 7 innings the game is tied, then an extra innings will be played until a winner is found

Playing Positions and basic skills

Basic softball skills:

HITTING – The batter will swing the bat and aim to strike the ball that is pitched from the mound
THROWING – Fielders will throw the ball to where it is needed in an attempt to get the batters out
CATCHING – Fielders have will either catch a ball that is hit by the batter or that is thrown by a fielder
BASE RUNNING – Batter will run as fast as they can in between the bases
FIELDING – The aim is to get the batting players out by catching the ball after it is hit, or by touching a base with the ball before they reach it.
PITCHING – A method of throwing the ball at the batter waiting to hit

Fielding positions and playing area:



Year 7 – English - Individual Voices Poetry KO

Tier 2 Vocabulary

Injustice	Unfair
Nuance	A subtle difference
Deplorable	Awful and immoral
Incandescent	Passionate, usually angry
Vacillate	Indecisive, move between
Ideology	System of ideas and ideals
Despicable	Deserving hatred
Unconscionable	Going beyond the bounds of respectability & understanding
Adversity	Difficulties to face and overcome
Laconic	Brief and to the point

Terms for Analysis: The poem…

Achieves	Advances	Affects
Allows	Alludes to	Builds
Concludes	Confirms	Conveys
Denotes	Develops	Demonstrates
Displays	Justifies	Exaggerates
Encourages	Enhances	Establishes
Exemplifies	Emphasises	Explores
Exposes	Forces	Generates
Highlights	Hints	Identifies
Ignites	Illustrates	Impacts
Implies	Identifies	Indicates

Structural Techniques

Rhythm	The beat of the poem
Volta	The point in the poem where the mood changes
Caesura	A deliberate break or pause in a metric line
Enjambment	Sentences running on over more than one line
Stanza	A group of lines in a poem
Rhyme	Words that have the same rhyming sound
Rhyme Scheme	Patterns of rhyming words
Meter	The pattern of stressed and unstressed syllables
Free Verse	Lines of poetry that do not follow any regular metrical structure
Blank Verse	Lines of poetry that are unrhymed but follow a regular meter
Repetition	Repeated words or phrases
Anaphora	The repetition of words or phrases at the beginning of a line or sentence
Motif	A recurring image in a poem

Language Techniques

Simile	A comparison using *like* or *as*.
Metaphor	A comparison using *is*, *was* or *were*.
Imagery	When the writer creates a mental picture or image.
Personification	Giving human attributes to something non-human.
Zoomorphism	Giving animal attributes to something which is not an animal.
Oxymoron	Two words which directly contrast, placed together.
Alliteration	Repeating the same letter.
Connotations	Associated words or meanings.
Pathos	Creating a strong emotional effect.
Semantic field	A group of words related by meaning.
Emotive Language	Language which appeals to the emotions.
Rhetorical Question	A question which does not require an answer.
Imperatives	Command words which direct the reader.

Poetry Key Terms

Word classes	Nouns, adjectives, adverbs, verbs, pronouns
Language	The word choices made by the poet and their effect
Structure	The way the poem appears to a reader, the order and flow
Form	The physical layout of the poem, what kind of poem it is
Tone	Refers to "tone of voice" and how a text sounds, e.g. humorous or serious
Mood	Connected to readers and how they feel or respond to texts, e.g. playful, lonely, warm

Number of lines in or within a poem

Couplet	2
Tercet	3
Quatrain	4
Quintet	5
Sestet	6
Septet	7
Octave	8

Year 7 - English—Victorian Britain SKO

Comparing Texts

1. Comparative Connectives

On the other hand	Similarly
Alternatively	In the same way
Unlike	Like
Despite this	As well as
In contrast	

2. Stock Phrases

This suggests	This emphasises
This implies	This highlights
This demonstrates	This indicates

A Alliteration
F Facts/ Figures
O Opinion
R Rhetorical Question
E Emotive Language
S Statistics
T Triples/ Rule of 3
R Repetition
I Imperative Verbs
P Personal Pronouns

Topics Covered

- **Victorian London**
- **Victorian slums**
- **Victorian children**
- **Victorian Work Houses**
- **Robert Blincoe**
- **Victorian Child Labour**
- **Modern Child Labour**
- **The work of Thomas Barnardo**

4. Tier 2 Vocabulary

Victorian	Period from 1837-1901
Saturated	Can't get any wetter
Poverty	The state of being very poor
Dormitory	Room or building for sleeping
Institution	Establishment
Endeavour	Try hard to do or achieve something
ventilation	Letting air in
enraged	Furious
Practice/ practise	Think about how advice/ advise works
Divergence	Moving apart

5. Discourse Markers

Cause and Effect	Therefore, as a result, in consequence, consequently
Sequencing	Firstly, secondly, next, thirdly, after this, finally, additionally

6. This Quotation/ Reference…

Achieves	Advances	Affects
Allows	Alludes to	Builds
Concludes	Confirms	Conveys
Denotes	Develops	Demonstrates
Displays	Justifies	Exaggerates
Encourages	Enhances	Establishes
Exemplifies	Emphasises	Explores
Exposes	Forces	Generates
Highlights	Hints	Identifies
Ignites	Illustrates	Impacts
Implies	Identifies	Indicates

Language Subject Terminology

1. Word Classes

Noun	Identifies a person (girl), thing (wall), idea (luckiness) or state (anger).
Verb	Describes an action (jump), event (happen), situation (be) or change (evolve).
Adjective	Describes a noun (**happy** girl, **grey** wall).
Adverb	Gives information about a verb (jump **quickly**), adjective (**very** pretty) or adverb (**very quickly**).
Preposition	Describes the location of something, e.g. the pen was found **under** the table.

Language Techniques continued

Sibilance	Alliteration using 's' sounds
Pathos	Persuading the reader using emotion
Hyperbole	Exaggeration
Simile	Something is presented as like something else.
Metaphor	Something is presented as something else.
Imagery	When the writer provides mental "pictures".
Personification	Giving human traits to something non-human.
Onomatopoeia	Where the word sounds like what it describes
Alliteration	The occurrence of the same sound/letter at the beginning of words

7. SQI

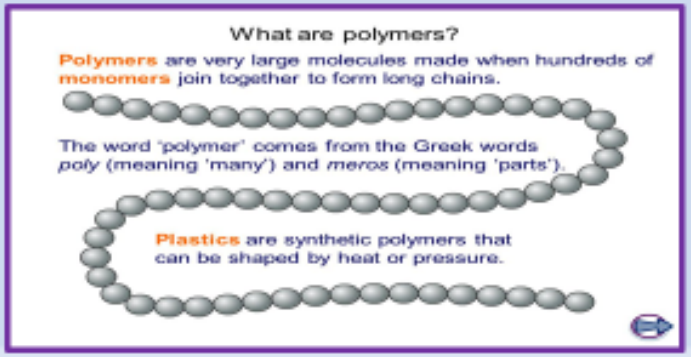
Statement	Answers the question
	A clear point made
Quotation(s)	Precise and embedded
	Might group quotations
Inference	What is suggested/implied

Knowledge Organiser – Year 7 – Atoms and the Periodic table

1. Key Words!

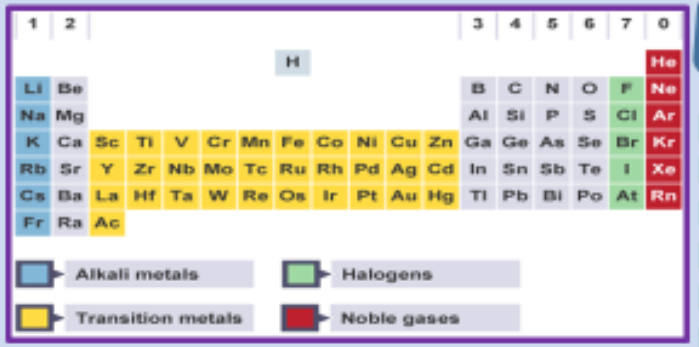
Periodic table: Shows all the elements arranged in rows and columns.
Physical properties: Features of a substance that can be observed without changing the substance itself.
Chemical properties: Features of the way a substance reacts with other substances.
Groups: Columns of the periodic table. Periods: Rows of the periodic table.
Elements: What all substances are made of, and which contain only one type of atom.
Atom: The smallest particle of an element that can exist.
Molecules: Two to thousands of atoms joined.
Compound: Pure substances made up of two or more elements strongly joined.
Chemical formula: Shows the elements present in a compound and their relative proportions.
Polymer: A molecule made of thousands of smaller molecules in a repeating pattern.

2. Polymers



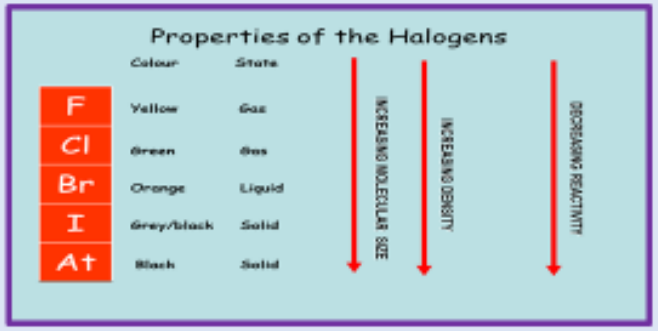
Natural polymers like wool and cotton are made by plants and animals. Polymers do not occur naturally. They are formed during chemical reactions.

3. Periodic table



The horizontal rows are called periods. The vertical columns are called groups.
Group 1: Alkali metals
Group 7: The Halogens
Group 0: Nobel Gases
Middle Section: Transition elements

4. The halogens



These are group 7 elements. They all have 7 electrons in the outer shell. A more reactive halogen will displace a less reactive halogen.

5. Group 1

Chemical properties When added to water all group 1 metals produce hydrogen gas. The reactions also produce an alkaline solution so universal indicator turns purple. As you move down the group the reactions become more vigorous.

Physical properties
The melting points decrease as you move down the group.

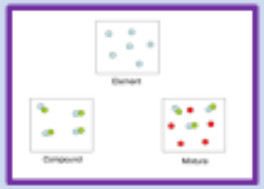
Element	Boiling point
Lithium	1330
Sodium	890
Potassium	774
Rubidium	688

6. Elements, mixtures, compounds.

The atoms of some elements do not join together, but instead they stay as separate atoms. Helium is like this. The atoms of other elements, such as hydrogen and oxygen, join together to make **molecules**.

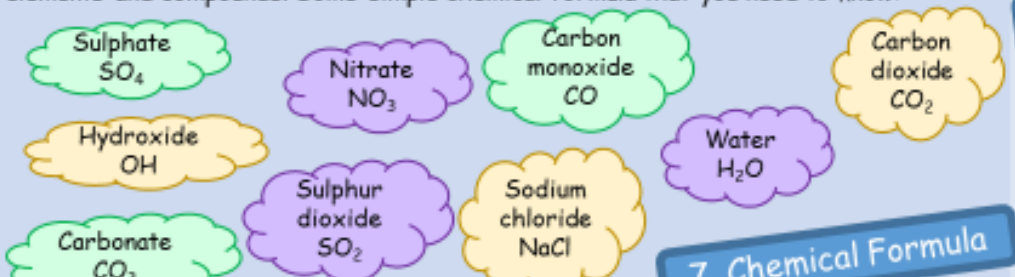
A **compound** is a substance that contains atoms of two or more different elements chemically joined together. For example, water is a compound of hydrogen and oxygen.

This is a common examination question. You must be able to recognise diagrams of a element, mixture and compound.



7. Chemical Formula

Chemical formula Chemical symbols and formulae are used to represent elements and compounds. Some simple chemical formula that you need to know:



8. Further Reading

Atomic Structure	https://www.youtube.com/watch?v=cpBb2bgFO6I
Atomic Model Development	https://www.youtube.com/watch?v=xazQRcSCRaY
Bonding	https://www.youtube.com/watch?v=NgD9yHSJ29I
Group 0 Elements	https://www.youtube.com/watch?v=qNaBMvJXdJ4
Group 7 Elements	https://www.youtube.com/watch?v=yW_C10cEzMk
Periodic Table Song	https://www.youtube.com/watch?v=VgVQKCcfwnU

Knowledge Organiser – Year 7 – Current and Static Electricity

1. Key Words!

Potential difference (voltage): The amount of energy shifted from the battery to the moving charge, or from the charge to circuit components, in volts (V).
Resistance: A property of a component, making it difficult for charge to pass through, in ohms (Ω).
Electrical conductor: A material that allows current to flow through it easily, and has a low resistance.
Electrical insulator: A material that does not allow current to flow easily, and has a high resistance.
Negatively charged: An object that has gained electrons as a result of the charging process.
Positively charged: An object that has lost electrons as a result of the charging process.
Electrons: Tiny particles which are part of atoms and carry a negative charge.
Charged up: When materials are rubbed together, electrons move from one surface to the other.
Electrostatic force: Non-contact force between two charged objects.
Current: Flow of electric charge, in amperes (A).
In series: If components in a circuit are on the same loop.
In parallel: If some components are on separate loops.
Field: The area where other objects feel an electrostatic force.

2. Current and potential difference

Potential difference

A cell or battery provides a push that makes charge move. The push is called the potential difference or p.d. for short.

- The potential difference tells you the size of the force on the charge
- The energy transferred by the cell to the charge
- The energy transferred by the charges to components

Current

When you complete a circuit electrons in the metal wove through the wires. The electrons are tiny negative charges that are already in the metal wires. The current is the amount of charge flowing per second.
Current in measured using an ammeter.

Series

Series circuits have one continuous loop.

- Current is the same everywhere
- Potential difference is shared across the components in the loop

Parallel

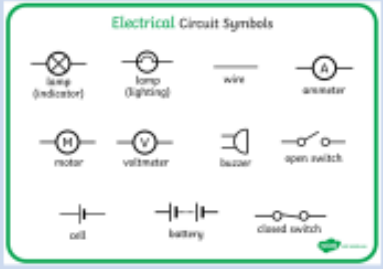
Parallel circuits have more than one loop or branch.

- **Current is split across the branches**
- Potential difference is the same everywhere

3. Circuit symbols

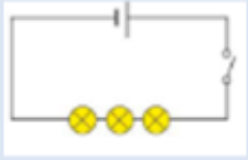
The following symbols show the different **components** that can be found in an electrical circuit.

The symbol for a **battery** is made by joining two more symbols for a cell together.



The idea of a **circuit diagram** is to use circuit symbols instead of drawing each component in the circuit. Always try to make the wires straight lines. Do not be tempted to make them wiggly because the whole point is to make it easier to see what is connected to what.

4 Series and Parallel



5. Resistance

Ω

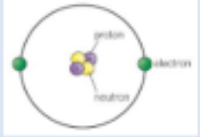
Each circuit component has a different resistance. This tells you how difficult it is for the charges to pass through the component. The current is the amount of charge flowing per second. The current depends on the amount of 'push' of the battery and the resistance. Resistance has the symbol R and the unit Ohms Potential difference has the symbol V and the unit Volts. Current has the symbol I and the unit Amps.

6. Static

Static electricity happens when two insulating materials are rubbed together. This friction causes the electrons, tiny negative charges (electrons), to move from one material to another.
There are two types of electric charge, positive charge and negative charge.

- Positive charges repel positive charges
- Negative charges repel negative charges
- Positive charges attract negative charges

There is an electric field around a charge. The electric field strength decreases as you move away from the charge.



7. Further Reading

Electromagnets	
What is electricity?	hhttps://www.bbc.co.uk/bitesize/articles/z8mxgdm
Electric current and potential difference	https://www.bbc.co.uk/bitesize/guides/zsfqr82/revision/1
Static electricity	https://www.bbc.co.uk/bitesize/guides/zthyvcw/revision/1
Circuits	https://www.youtube.com/watch?v=-w-VTw0tQIE
Static electricity	https://www.youtube.com/watch?v=V1c61Q7qU-s

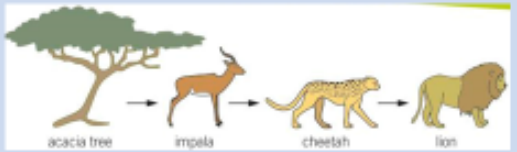
Knowledge Organiser – Year 7 – Relationships in an Ecosystem

1. Key Words!

Food web: Shows how food chains in an ecosystem are linked.
Food chain: Part of a food web, starting with a producer, ending with a top predator.
Ecosystem: The living things in a given area and their non-living environment.
Environment: The surrounding air, water and soil where an organism lives.
Population: Group of the same species living in an area.
Producer: Green plant or algae that makes its own food using sunlight.
Consumer: Animal that eats other animals or plants.
Decomposer: Organism that breaks down dead plant and animal material.
Pollen: Contains the plant male sex cells found on the stamens.
Ovules: Female sex cells in plants found in the ovary.
Pollination: Transfer of pollen from the male part of the flower to the female part.
Fertilisation: Joining of a nucleus from a male and female sex cell.
Seed: Structure that contains the embryo of a new plant.
Fruit: Structure that the ovary becomes after fertilisation, which contains seeds.
Carpel: The female part of the flower, made up of the stigma, style and ovary.

2. Food chains & webs

A food chain is a list of organisms in a that shows their feeding relationship, i.e what eats what.



A food chain always starts with a **producer**, an organism that makes food. This is usually a green plant, because plants can make their own food by **photosynthesis**, using light energy from the Sun..

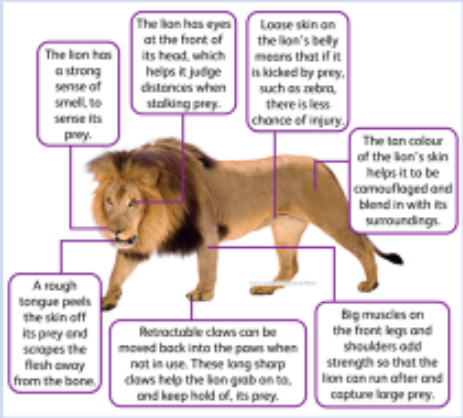
The arrows of a food chain show the flow of energy. Energy is transferred to the surroundings by heating and as waste products. This means that at each level of the food chain, less energy is transferred to the organism in the food chain.

Most **populations** of organisms that live in a habitat usually have more than one food source. They usually consume more than one organism. This means that there are almost always more than one food chain and these are interlinked into a food web

3. Predators

A **predator** is an animal that hunts, kills and eats other animals

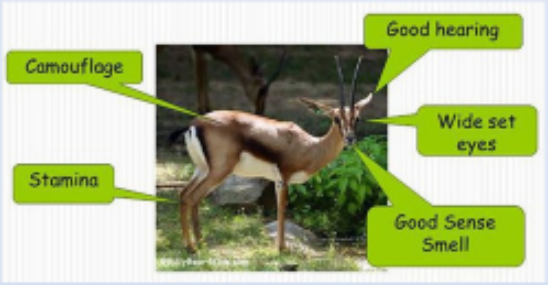
Predators have evolved a variety of physical adaptations for detecting, catching, killing, and digesting prey. These include **speed, agility, stealth, sharp senses, claws, teeth, filters, and suitable digestive systems.**



4. Prey

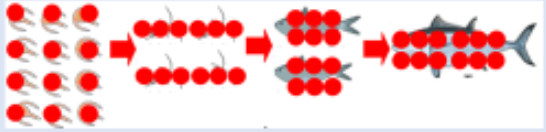
Prey is a term used to describe organisms that predators kill for food.

Many prey animals have developed different adaptations to protect themselves from becoming another animal's dinner. **Camouflage, highly developed senses, warning signals, and different defensive weapons and behaviours** are all used by prey animals for survival.



5. Bioaccumulation

Bioaccumulation is the build-up of poisons along a food chain



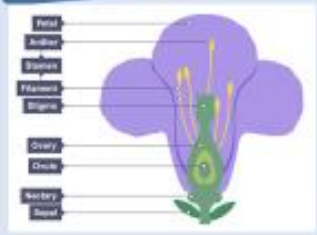
Toxic chemicals such as mercury and DDT are **persistent** (they stay in the environment and do not break down). These substances **accumulate** (build-up) in the food chain and damage the organisms in it, particularly in the predators at the end of the chain. This is because accumulating compounds cannot be excreted.

6. Further Reading

Habitats	https://www.youtube.com/watch?v=p15IrEuhYmo
Habitats Song	https://www.youtube.com/watch?v=byvf7jwdvOI
Food Chains Song	https://www.youtube.com/watch?v=5Gv9yuN2Ch8
Food Chains	https://www.youtube.com/watch?v=CZhE2p46vJk
Food Webs	https://www.youtube.com/watch?v=Vtb3I8VzIfg
BBC Bitesize	https://www.bbc.com/bitesize/topics/zxhhvcw
Kerboodle	www.kerboodle.com

Knowledge Organiser

7. Flower Structure



The flower is the reproductive part of the plant.

Petal: May be brightly coloured to attract insects
Anther: Produce male sex cells (pollen grains)
Stamen: The male parts of the flower (each consists of an anther held up on a filament)
Filament: Thread like structure that supports the anther
Ovary: Produces the female sex cells (contained in the ovules)
Ovule: The female gamete of a plant, this turns into a seed if fertilised
Nectary: Produce a sugary solution called nectar, which attracts insects
Sepal: Protect the unopened flower

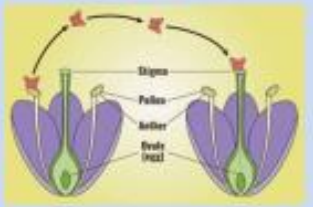
8. Pollination

Pollination is when pollen grains from the anther of one flower move to the stigma of another.

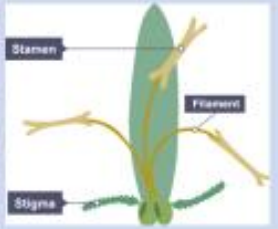
Flowers can be pollinated by insects or wind. We depend upon insects for many of our crops. Without them the security of our food would be threatened.

Plants that are pollinated by the wind have different features to those that are pollinated by insects.

Insect pollinated flowers are:
- Brightly coloured flowers scented with nectar to attract insects
- Sticky pollen grains so it sticks to the insect.
- Anther inside the flower, stiff and firmly attached to brush against the insect.
- Sticky stigma to allow pollen to attach.



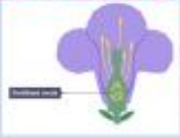
Wind-pollinate flowers are:
- Small, often dull green or brown, no scent or nectar.
- Pollen grains are smooth and light so they can be carried by the wind.
- Anthers are outside of the flower to release pollen grains.
- Stigmas are outside of the flower to catch pollen grains.



9. Fertilisation

1) Pollen lands on the stigma of a flower of the same species. A pollen tube grows from the stigma to the ovary.

2) The nucleus of the pollen grain passes through the pollen tube and joins with the egg cell inside an ovule in the ovary..

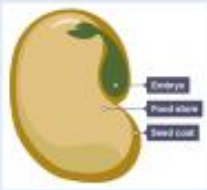


3) The fertilised egg cell develops into an embryo, the ovules become seeds and the ovary wall becomes the rest of the fruit. .

10. Seeds

A seed has three main parts:

- embryo – the young root and shoot that will become the adult plant
- food store – starch for the young plant to use until it is able to carry out photosynthesis
- seed coat – a tough protective outer covering



11. Seed dispersal

Plants have to compete for factors such as; light, water, space and minerals.
So that parent plants do not have to compete with their offspring their seeds must be dispersed (spread out).

Seeds can be dispersed by:

Wind. They have lightweight parts, wings or parachutes allowing them to travel in the air

Animals (inside). Animals eat the fruits of plants. The seeds travel through the digestive system undamaged. When an animals excretes faeces the seed enters the soil.

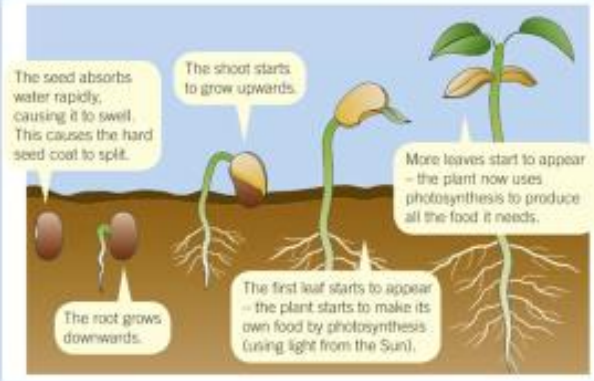
Animals (outside). Sticky or hooked fruit attach to the fur of passing animals.

Self-propelled. Pods containing seeds burst open when ripe throwing seeds away from the plant.

12. Germination

When a seed starts to grow it is called germination.
A seed needs three things to germinate:

1. Water: the seed swells and the embryo grows.
2. Oxygen: used for respiration, providing energy for germination.
3. Warmth: speeds up reactions in the plant, speeding up germination.



Further Reading

https://www.youtube.com/watch?v=YpGg-m8wyY4
https://www.youtube.com/watch?v=ak7tFOL32sE
https://www.youtube.com/watch?v=aG8fMxaSSNw

Year 7: Elizabethan England

Key Vocabulary	Definitions
Economy	The supply of money and the production of products
Nobility	The rich people in England
Gentry	The middle class
Poverty	Being poor to the point of struggling to survive
Leisure	Time not working, doing activities for fun
Elizabethan	The name given to the time period when Elizabeth I was Queen of England
Legacy	How you will be remembered
Empire	Land taken over and controlled by another country
Migration	Movement from one area to another
Urban	Another term for towns and cities
Rural	Another term for the countryside
Patriarchal	A system of society or government in which men hold the power and women are largely excluded from it
Domestic	Something which takes place or comes from inside the country, rather than from abroad

Problems faced by Elizabeth:

Gender: During the 16th Century, it was believed that women were weak and unable to rule on their own. As a female monarch, it was expected that Elizabeth would listen carefully to her advisors and that she would marry. It surprised many government minister when Elizabeth would argue with them and refused to marry.

Religion: Elizabeth was raised Protestant and had witnessed the many religious rebellions faced by her siblings. Her predecessor, Mary I, had changed England back to Catholic. Elizabeth wanted to find a balanced between the two faiths. England returned to Protestantism, but Elizabeth changed her title to 'Supreme Governor of the Church of England' and kept crucifixes in Churches to please the Catholics.

Inheritance: Many Catholics did not see Elizabeth as the rightful heir to the English throne. This is due to Henry VIII, rather than the Pope dissolving his first marriage. Elizabeth also inherited lots of debt, making it difficult to strengthen England against potential attacks from France, Scotland or Spain.

The Religious Settlement:

Act of Supremacy: This made Elizabeth the supreme governor of the Church of England. All the clergy and royal officials had to swear an oath of allegiance to her.

Act of Uniformity: This established the appearance of churches, church services and a book of common prayer. It created a fine for people who did not attend church on Sundays.

Royal injunctions: These were created to make the rules of religious settlement clear and followed by all. If you did not follow you would be punished.

Education:

Most everyday people could not read or write. Elizabeth insisted on more education for females – they mainly did domestic tasks at home. Sons of nobles had private tutors. Elizabeth I was well educated herself – she could speak 5 different languages!

Voyages of Discovery

English sailors, such as **Walter Raleigh & Francis Drake**, went on daring expeditions. Raleigh sailed to **the New World** & claimed North Carolina & Virginia for England.

Voyages of exploration increased due to:

Economic reasons – new markets were needed.

New technology – The astrolabe and improved compass made navigation accurate.

Religion/Culture - Elizabethans thought their way of life was superior and wanted to influence others.

The Spanish Armada

In 1588 Spanish King Philip II launched the Spanish Armada, an invasion fleet of 130 ships and 30,000 soldiers and sailors. He wanted to conquer England and restore Catholicism.

After several fights in the Channel the English navy scattered the Spanish fleet using fire ships. 5,000 Spanish sailors died and only half of the fleet returned to Spain.

Mary Queen of Scots

Elizabeth's half cousin plotted against Elizabeth to try and take the throne. Mary was involved in plots to kill Elizabeth:

- **1569 Northern Earls' Rebellion** - FAIL
- **1571 Ridolfi Plot** - FAIL
- **1583 Throckmorton Plot** - FAIL
- **1586 Babington Plot** - FAIL

Elizabeth kept Mary prisoner for nearly 20 years, Mary's death warrant was signed in 1587.

1558	1559	1568	1569	1585	1587	1588	1601	1603
Elizabeth inherits the English throne	Elizabeth sets her religious policy in law	Mary, Queen of Scots arrives in England	First Catholic revolt against Elizabeth	Roanoke colony established	Mary, Queen of Scots executed	Spanish Armada defeated	Poor Law passed	Elizabeth dies. End of Tudor dynasty

MUSICAL THEATRE
Knowledge Organiser

Musical Theatre - Context and Background Facts

Musicals use singing, dancing, and talking to tell stories. They are meant to be entertaining and are usually lighter and funnier than opera. They have easy melodies – audiences could sing along.

They usually have an orchestra to accompany the singers, but many musicals today also have rock instruments such as electric guitars, synthesisers and drumkits.

Early musicals were influenced by jazz and swing music while lots of musicals from the 1970s onwards used rock music.

The types of musicals that are around today began in the 1920s and developed into the 21st Century.

The genre started out on Broadway, a famous theatre street in New York. Later ones were shown in London's West End.

Some songs from Musicals have hit the charts such as Evita's "Don't Cry For Me Argentina" and "Memory" from Cats.

Many musicals have been made into popular musical films; The Sound of Music, Hairspray, Grease, Billy Elliot, Mamma Mia and Les Miserables, Rent, Annie and West Side Story are just a few.

Musicals are usually written in the styles of the popular music that is around at the time. For example, Hamilton, which premiered in 2015, draws on elements of hip hop, as well as R&B, pop, soul, and traditional-style show tunes.

Types of Musicals:
Book Musical (A musical with a story), **Concept Musical** (the idea or concept is more important than the plot – A Chorus Line), **Jukebox Musical** (Popular songs by one artist; We Will Rock You, Mamma Mia), **Rock Musical** (uses rock music).

Voice Types

There are 4 main different voice types we need to be able to recognise. Each voice type is based on how high or low the singer can sing.

Soprano - a HIGH female voice.

Alto - a LOW female voice.

Tenor - a HIGH male voice

Bass - a LOW male voice.

Song Types found in Musicals

Solo: A solo is a song sung by only one character. Solo songs are often deeply meaningful and give an insight into what the character is thinking and feeling in the moment.

Duet: Duets are songs sung by 2 characters. These often include vocal harmonies and question and answer phrasing to suggest a certain relationship or conversation between the two characters.

Chorus: Chorus songs are often (but not always) the big, catchy songs that show what the musical is about. These are usually sung by the chorus in the show or, quite often, everyone in the cast. Chorus numbers often open or close the different acts and show major changes that affect a large number of characters.

Ensemble: Ensemble songs are usually sung by a group of the main characters. The group size can range anywhere from 3 to about 10 singers. Often different characters will have solo lines within the song, but the whole ensemble will come together to sing the chorus.

Singing Techniques

There are also various singing techniques.
Two are most used in musicals; these are:
Falsetto – A man adapting his voice to sing higher than his normal range.
Belting – A forced style of singing that gives power and a fuller sound to the note.

Key Words

Dance Break: included in a song for a dance routine.

Libretto: the words and lyrics to a musical.

Word Painting: Often used where the music reflects the words.

Sung-Through: A musical where all he dialogue is sung. (eg. Miss Saigon)

Hook: a line of the song that sticks in the audience's head.

Triple Threat: Someone who can sing, dance and act.

Overture: The music to open the show, often a mix of the best songs in the show.

Important Composers and their Musicals: ***Gilbert & Sullivan*** 1842-1900 (The Mikado, HMS Pinafore), ***Cole Porter*** 1891-1964 (Anything Goes, Kiss Me Kate), ***Rodgers & Hammerstein*** 1895-1960 (Sound of Music, Oklahoma, Carousel), ***Leonard Bernstein*** 1918-1990 (West Side Story) ***Stephen Sondheim*** 1930 (Sweeny Todd, Into the Woods), ***Jerry Herman*** 1931-2019 (Hello Dolly), ***Schonberg & Boubill*** 1941 (Les Misérables, Miss Saigon) ***Andrew Lloyd Webber*** 1948 (Joseph & the Amazing Technicolor Dreamcoat, Evita, Cats, Phantom of the Opera) ***Alan Menken*** 1949 (Little Shop of Horrors) ***Stephen Schwartz*** 1948 (Godspell, Wicked).

Year 7 History : The Reformation

Key Vocabulary	Definitions
Monarch	The king or queen.
Catholicism	An ancient, worldwide Christian religion led by the **Pope** in Rome.
Protestantism	A form of Christianity that began in northern Europe in the early 16th century. It began as a **protest** against the corruption of the Catholic Church.
The Reformation	A split in the Catholic Church where a new type of Christianity called Protestantism was born. It was started by **Martin Luther** in Germany.
Heir to the throne	The person **next in line** to the throne. Usually the monarch's eldest son.
Execution	Carrying out a **death sentence** e.g. beheading or burning at the stake.
Monastery	A building where monks live & work.
Heretic	Someone whose **religion** goes against the official position of the Church. **Heresy** was a crime in Tudor times.
Treason	The crime of **betraying** one's king or country.
Armada	A fleet of warships.
Relic	An object from an earlier time. Claimed to have been near to Jesus and sold to people.
Indulgence	Signed by the Pope to give permission for someone to go to heaven. They had to be bought.

The Roman Catholic Church

Most people in Medieval England followed the Roman Catholic Religion, but people were becoming annoyed with the church because it was greedy and too powerful. They didn't like that the church took money from the poor through indulgences and tricked them into buying relics.

Features of the Catholic Church are:

- Decorated with stained glass windows, gold, statues.
- The Pope is head of the church
- Money should be given to the church
- The Bible is in Latin
- Priests can't marry

The Protestant Church

The English Reformation began in 1532 when Heny created the Church of England.

Features are:

- Plain churches to focus on God
- The King is head of the Church
- The Bible is written in English so everyone can understand
- Only God can forgive sins
- Priests are not special and can marry if they wish

Henry VIII (1509-47)

Wives

1. **Catherine of Aragon** (Child: Mary) DIVORCED
2. **Anne Boleyn** (Child: Elizabeth) BEHEADED
3. **Jayne Seymour** (Child: Edward) DIED
4. **Anne of Cleves** DIVORCED
5. **Catherine Howard** BEHEADED
6. **Catherine Parr** SURVIVED

The Reformation in England

Henry wanted to **divorce** Catherine of Aragon because she did not produce a **male heir** for him, but the Catholic Church would not let him. He decided to **split from the Roman Catholics** & create the **Church of England.** The **1534 Act of Supremacy** declared Henry to be the **Supreme Head of the Church of England**.

Dissolution of the Monasteries:

Henry VIII closed 800 Monasteries because Monks still wanted the Pope to be the leader of the Church. The Monasteries were also wealthy and if Henry VIII closed them he would gain their wealth.

Edward VI (1547-53) 'The Boy King'

Crowned age 9 & **died aged 15**. He was raised as a **Protestant**. Because of his youth, the country was run by his **protectors**: the **Duke of Somerset**, then the **Duke of Northumberland**. Edward's reign saw **major changes to religion.** This was **a major break from Catholicism**.

Lady Jane Grey (The Nine Day Queen, 1553)

Edward's **ministers persuaded him to name Lady Jane Grey his successor**. They wanted to keep England a Protestant country. **Jane was only 16.** English people supported Mary, so she took the throne **9 days later**. Jane was imprisoned in the Tower of London & Queen Mary had her executed.

Mary I (1553-58)

Mary Tudor was Henry's eldest daughter. She **reversed** Edward's religious changes as she was a strict **Catholic.**
Nearly 300 Protestants were **burned at the stake** during her reign for being **heretics;** hence her nickname, ***Bloody Mary***.

1485	1509	1547	1553	1558	1588	1603
Henry VII	Henry VIII	Edward VI	(Lady Jane Grey) Mary I	Elizabeth I	Spanish Armada	Elizabeth dies James Stuart crowned

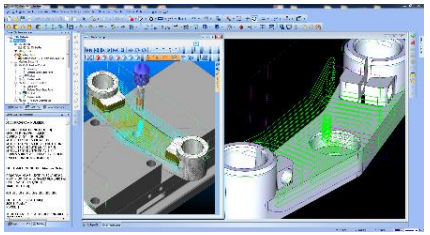
STUDENT KNOWLEDGE ORGANISER

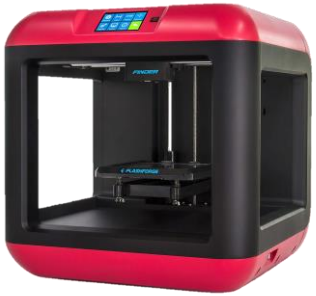
CAD Packages: CAD programmes come in a variety of versions to carry out different design tasks. Believe it or not PowerPoint and Word are CAD packages because you can use the design features to create documents and designs for printing. The programmes help you design something even if it is a written document. For designing objects there are different programmes. Often these files can then be sent to a machine for manufacturing.

Autodesk | Photoshop | PowerPoint | TechSoft 2D Design | SolidWorks | Word

CAD

CAD is the shortened term for Computer Aided Design. Computer programmes are used to make complex models in 2D or 3D and these can be run through simulators or spun about 360deg to see what the design looks like.





CAM

CAM is the shortened term for Computer Aided Manufacture. Machines such as laser cutters and 3D printers follow instructions from a 3D model drawn in CAD and make the item. A 3D printer prints with softened plastic, building up layers. A laser cutter cuts material such as boards of plywood.

Materials and applications

Various materials can be cut, engraved, scored, machined or moulded using CAM. A 3D printer softens a polymer so it can then layer it in a pattern that its been programmed to follow. Over time (this can be many hours) the layers build up to the desired shape. Laser cutters can cut materials such as plywood, acrylic and some fabrics, card and paper and can engrave many of them too using a high powered laser beam. More powerful laser cutters can be used on harder materials such as metal. Vinyl plotters can be loaded with a sticky vinyl tape available in various colours. This then cuts with a blade following a 2D pattern. Some CAM machines such as printers lay ink or using cutting tools to remove material from blocks or 'billets' of material.

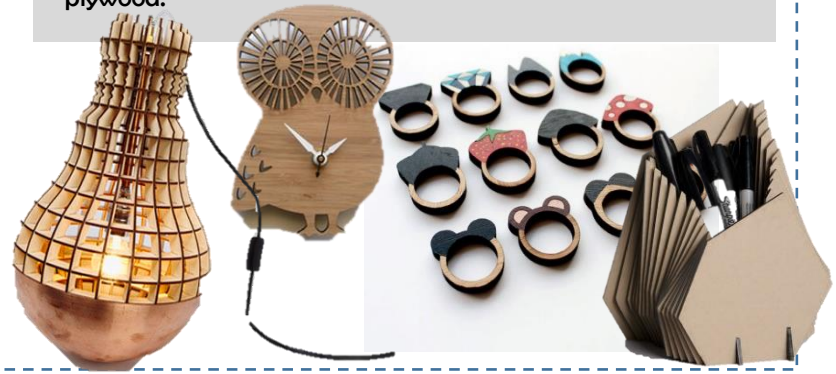
Papers and Boards and Timbers

Papers and boards primarily come from trees or wood pulp. Trees are debarked and then processed to make various grades of paper and board. Corrugated cardboard is often found in packages we order online. The inner layer insulates the object inside but also protects it from impact. The triangular structure inside the inner and outer layer of the card add the strength. Other boards such as foil lined board can be used for wrapping hot food.

Hardwood, Softwood or Man-made boards?

Woods can be grouped into 3. Softwoods, Hardwoods and man made boards. Softwoods are woods that come from trees that don't lose their leaves in the winter. We call these coniferous trees such as Pine or Spruce. Hardwoods come from slower growing deciduous trees such as Oak or Mahogany.

Man-made boards are woods that have been processed into flat often large sheets using waste wood material. Sometimes they are made using layers of wood which are glued and compressed together. An example would be plywood.



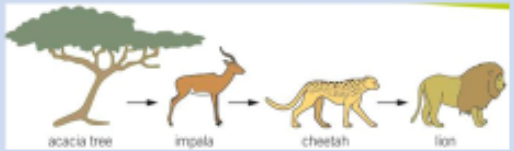
Knowledge Organiser – Year 7 – Relationships in an Ecosystem

1. Key Words!

Food web: Shows how food chains in an ecosystem are linked.
Food chain: Part of a food web, starting with a producer, ending with a top predator.
Ecosystem: The living things in a given area and their non-living environment.
Environment: The surrounding air, water and soil where an organism lives.
Population: Group of the same species living in an area.
Producer: Green plant or algae that makes its own food using sunlight.
Consumer: Animal that eats other animals or plants.
Decomposer: Organism that breaks down dead plant and animal material.
Pollen: Contains the plant male sex cells found on the stamens.
Ovules: Female sex cells in plants found in the ovary.
Pollination: Transfer of pollen from the male part of the flower to the female part.
Fertilisation: Joining of a nucleus from a male and female sex cell.
Seed: Structure that contains the embryo of a new plant.
Fruit: Structure that the ovary becomes after fertilisation, which contains seeds.
Carpel: The female part of the flower, made up of the stigma, style and ovary.

2. Food chains & webs

A food chain is a list of organisms in a that shows their feeding relationship, i.e what eats what.



A food chain always starts with a **producer**, an organism that makes food. This is usually a green plant, because plants can make their own food by **photosynthesis**, using light energy from the Sun..

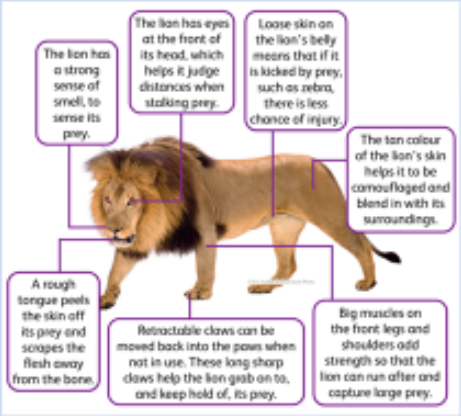
The arrows of a food chain show the flow of energy. Energy is transferred to the surroundings by heating and as waste products. This means that at each level of the food chain, less energy is transferred to the organism in the food chain.

Most **populations** of organisms that live in a habitat usually have more than one food source. They usually consume more than one organism. This means that there are almost always more than one food chain and these are interlinked into a food web

3. Predators

A **predator** is an animal that hunts, kills and eats other animals

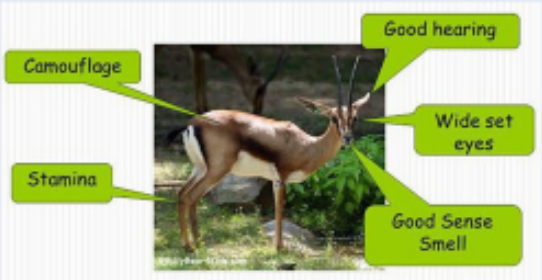
Predators have evolved a variety of physical adaptations for detecting, catching, killing, and digesting prey. These include **speed, agility, stealth, sharp senses, claws, teeth, filters, and suitable digestive systems.**



4. Prey

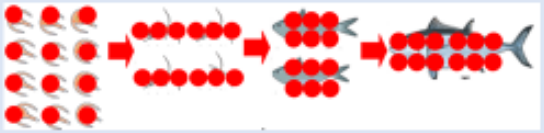
Prey is a term used to describe organisms that predators kill for food.

Many prey animals have developed different adaptations to protect themselves from becoming another animal's dinner. **Camouflage, highly developed senses, warning signals, and different defensive weapons and behaviours** are all used by prey animals for survival.



5. Bioaccumulation

Bioaccumulation is the build-up of poisons along a food chain



Toxic chemicals such as mercury and DDT are **persistent** (they stay in the environment and do not break down). These substances **accumulate** (build-up) in the food chain and damage the organisms in it, particularly in the predators at the end of the chain. This is because accumulating compounds cannot be excreted.

6. Further Reading

Habitats	https://www.youtube.com/watch?v=p15IrEuhYmo
Habitats Song	https://www.youtube.com/watch?v=byvf7jwdvOI
Food Chains Song	https://www.youtube.com/watch?v=5Gv9yuN2Ch8
Food Chains	https://www.youtube.com/watch?v=CZhE2p46vJk
Food Webs	https://www.youtube.com/watch?v=Vtb3I8VzIfg
BBC Bitesize	https://www.bbc.com/bitesize/topics/zxhhvcw
Kerboodle	www.kerboodle.com

Student Knowledge Organiser 7.4 – Tiempo Libre

Key Questions	
¿Qué te gusta hacer en tu tiempo libre?	What do you like to do in your free-time?
¿Por qué?	Why?
¿Qué haces normalmente el fin de semana?	What do you normally do at the weekend?

Actividades	Activities
el atletismo	athletics
el baloncesto	basketball
el béisbol	baseball
el ciclismo	cycling
el criquet	cricket
el fútbol	football
el golf	golf
el hockey	hockey
el karate	karate
el rugby	rugby
el tenis	tennis
el voleibol	volleyball
la cocina	cooking
la equitación	horse riding
la guitarra	guitar
la gimnasia	gymnastics
la música	music
la natación	swimming
los videojuegos	videogames

Intensifiers	
bastante	quite
muy	very
pero	but
también	also
un poco	a little

Verbos	Verbs
aprender	to learn
bailar	to dance
beber	to drink
cantar	to sing
charlar	to chat
cocinar	to cook
comer	to eat
correr	to run
hacer*	to do
jugar*	to play
leer	to read
mandar	to send
nadar	to swim
navegar	to surf
practicar	to do
tocar	to play (an instrument)

Verbs and activities	
juego **al** fútbol	I play football
hago cocina	I do cooking
toco **la** guitarra	I play the guitar

¿Cuándo?	When?
después del insti	after school
todos los días	every day
dos veces por semana	twice a week
a veces	sometimes
por la tarde	in the evening
por la mañana	in the morning
a menudo	often
el fin de semana	at the weekend

En mi opinión ...	In my opinion ...
Creo que es	I think it's
Pienso que es	I think it's
porque	because
pero	but
más ... que	more .... than
menos ... que	less ... than
aburrido	boring
activo	active
artístico	artistic
caro	expensive
difícil	difficult
divertido	fun
fácil	easy
físico	physical
emocionante	exciting
genial	great
gracioso	funny
gratis	free
interesante	interesting
popular	popular
relajante	relaxing
social	social

North East Learning Trust

Student Knowledge Organiser 7.5 – Vivo Aquí

Key Questions	
¿Dónde vives?	Where do you live?
¿Qué hay en tu pueblo?	What is there in your town?
¿Qué se puede hacer en ...?	What can you do in ...?
¿Te gusta tu pueblo?	Do you like your town?

Edificios	Buildings
hay	there is/are
tiene	it has
un aeropuerto	an airport
un banco	a bank
un castillo	a castle
un centro comercial	a shopping centre
un cine	a cinema
un estadio	a stadium
un hotel	a hotel
un instituto	a secondary
un lago	a lake
un mercado	a market
un museo	a museum
un parque	a park
un puerto	a port
un restaurante	a restaurant
un supermercado	a supermarket
una biblioteca	a library
una estación	a station
una fábrica	a factory
una iglesia	a church
una piscina	a swimming pool
una plaza	a square
una tienda	a shop
una torre	a tower

¿Dónde está?	Where is it?
está	it is (location)
en España	Spain
en Inglaterra	England
en Sudamérica	South America
en el este	the east
en el norte	the north
en el oeste	the west
en el sur	the south
en el centro	the centre
en el campo	in the countryside
en las afueras	in the suburbs
en la ciudad	in the town
en la costa	on the coast

¿Dónde está ...?	Where is ...?
sigue todo recto	keep straight on
dobla a la derecha	turn right
dobla a la izquierda	turn left
toma la primera a la derecha	take the first right
toma la segunda a la izquierda	take the second left
cruza la plaza	cross the square
está a la derecha	it's on the right
está cerca	it's near
está lejos	it's far
está entre el café y el parque	it's between the café and the park

¿Cómo es?	What's it like?
es	it is
animado	lively
antiguo	old
bonito	pretty
enorme	enormous
feo	ugly
histórico	historic
industrial	industrial
limpio	clean
moderno	modern
peligroso	dangerous
pobre	poor
sucio	dirty
tranquilo	calm

Connectives	
con	with
donde	where
que	which
sin embargo	however
porque	because
pero	but

Intensifiers	
bastante	quite
muy	very
pero	but
también	also
un poco	a little

Actividades	Activities
se puede	you can
bailar	to dance
comer en el restaurante	to eat in the restaurant
comprar una camiseta	to buy a t-shirt
ir a la playa	to go to the beach
ir al cine	to go to the cinema
ir al parque	to go to the park
ir de compras	to go shopping
jugar al fútbol	to play football
montar en bici	to ride a bike
ver un partido de fútbol	to watch a film
ver una película	to watch a film
visitar el museo	to visit the museum

North East Learning Trust

What do Muslims believe?

Allah

Allah is the God of Islam. There are 99 names of Allah in total that help Muslims to understand Him. However, it is understood that Allah can never be fully understood, but that Muslims should strive to get closer to Allah through their actions, thoughts and beliefs.

Some Allah's characteristics are: He always forgives us if we are sorry; He controls our destinies; He is the supreme being and can have no equal; Allah is the end, the final judge of everything.

Tawhid

The Oneness of Allah; understanding that Allah is unique.

Shirk

A sin where Muslims put something or someone above Allah.

Prophethood

Prophets are people who are chosen as messengers to pass on information given from God to humans. This is called revelation. There are other forms of revelation in Islam, but prophets are considered to be very important. It's believed there were 124,000 prophets in total.

Prophets tend to have similar characteristics and some examples would be: kind, trustworthy, loyal, dedicated, responsible, courageous and faithful.

Prophet Muhammad (PBUH)

Muhammad was the final prophet who founded Islam. The Qur'an was revealed to Muhammad. Muslims aspire to live like Prophet Muhammad as it is believed he lived the perfect Muslim life.

Muhammad's life was difficult to begin with – he lost both parents early as a child. This meant he developed characteristics that would set him up for life – resilience and determination. He was successful in his adult life, and then went on to be the final and perfect prophet for Islam. There have been no more prophets since Prophet Muhammad.

Predestination

The Muslim belief that Allah has decided everything that will happen in the world and in people's lives. Some Muslims (Shi'a) believe it is not fair that we are judged when Allah has predetermined our actions.

Holy Books

The Qur'an is the final revelation and Muslims believe that the Qur'an is perfect and unchanged. As well as the Qur'an, Muslims consider parts of the Bible and the Torah as holy books.

Angels

Muslims believe that angels were created before humans with the purpose of following the orders of Allah and passing messages on to humans.

Is death the end?

Beliefs

Christianity:

Christians believe that this earthly life is only temporary and that the life everlasting is to come. You will be judged according to your actions and if you do good, you will be rewarded in Heaven. If you do bad, you will be punished in Hell. Some Christians believe humans are judged as and when they die, others believe it will happen on the Day of Judgement. Either way bodies will be resurrected for judgement. Roman Catholics believe in Purgatory – a place where humans who have committed forgivable sins until they are 'cleansed' of their sin.

Islam:

Muslims also believe that this earthly life is temporary and that the akhirah is the afterlife. Muslims believe that when someone dies their soul is taken to the barzakh (the holding place until the Day of Judgement). Once the Day of Judgement is here (we will know from the sounds of trumpets) everyone will be resurrected and judged according to how they acted on earth. Those who are rewarded will go to Jannah (paradise) and those who are punished will go to Jahannam (hell).

Sikhism:

Sikhs believe in the cycle of samsara – the cycle of life, death and rebirth. This means that everyone has a chance to reach Waheguru (God) in Mukti (liberation from this cycle). Before they are liberated from this cycle, their soul will be reincarnated and live many lives in other forms such as humans, animals, plants etc.

How does a belief in the afterlife affect a persons' attitude to their earthly life?

All Christians, Muslims and Sikhs all believe that there is more beyond this current earthly life. Therefore it will affect the way that they live:

- Behaviour – they will act in a way so that they avoid punishment and can reap the rewards of Heaven/Jannah/Mukti.
- Reassurance – that despite suffering in this life, there is good things to come (if one behaves well).
- Confirms belief in a God – An afterlife shows that there is more to our existence than just this earthly life. For most, a belief in an afterlife also confirms their belief in a God.

Actions

Christianity:

The funeral may take place at a church, or at the crematorium. It is a way of saying thank you to God for the life of the loved one, a celebration of their life and also to say goodbye. It is common for people to wear dark colours to funerals as a sign of their sadness. The committal is probably the most solemn moment of the service. This is when the coffin is lowered into the grave or at a cremation, the curtains are closed around the coffin. "We therefore commit (his or her) body to the ground […] ashes to ashes, dust to dust; […] Resurrection to eternal life."

Islam:

Relatives are sent for and gather around the bed, so that the last word their loved on hears is 'God' (just as it is the first word they hear). The body is washed and wrapped in a shroud (white cloth) and prayers are said over the body. Muslims are not cremated as they believe that on the Day of Judgement bodies will be resurrected. The funeral itself should be simple and inexpensive. The body is carried to the cemetery and buried in the earth facing Mecca (not placed in a coffin).

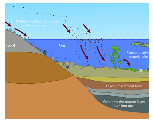
Sikhism:

The Body will be bathed and dressed in clean clothing. They should keep the 5K's on as they would have in life, and any hair must not be cut/removed from the body. In Sikhism, the body is cremated and the ashes are often scattered in flowing water such as a river or the sea. in The Guru Granth Sahib is read from beginning to end after a funeral and there will be a feast, and gifts are given to charities.

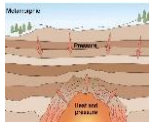
Rocks and Coasts Knowledge Organiser

Rock Types

Igneous – Formed by the cooling of magma inside the Earth's surface and lava outside of the Earth's surface. These are made of crystals and are usually hard.
Examples: **Granite** and **Basalt**
Location: **Dartmoor, Scotland, Lake District**

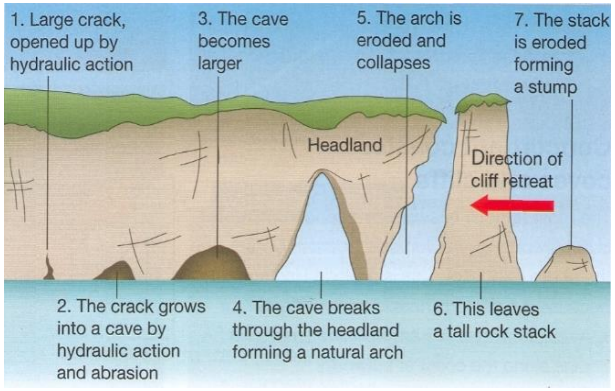


Sedimentary – Formed from compressed rock sediments and dead plants and animals at the bottom of the sea floor. These are made of layers or rounded grains. Contain fossils. Softer. Examples: **Sandstone, Limestone** and **Chalk.**
Location: **Most of UK,** particularly **South** and **East.**



Metamorphic – Formed from intense heat or pressure, changing the form of a previous rock type. Often near plate boundaries.
They are usually in layers or bands and are very hard.
Examples: **Schist** and **Slate.**

Cave, arch, stack and stump formation



As well as **erosional** processes forming these features (hydraulic action and abrasion), **weathering** also occurs at the top of the arch.

Mechanical (freeze thaw) and chemical (acids).

Coastal areas provide economic, environmental and recreational opportunities, which is why many people in the UK choose to live within the coastal zone. Across England and Wales, about 28% of the coastline is eroding by more than 10cm per year
Coastal erosion = The breaking down and removal of material

Causes of Coastal Erosion

Rising Sea Levels - Levels are expected to increase by another 11-16cm by 2030 due to Global Warming. **Storms and Storm Surges** - A Storm Surge is a large scale increase in sea level due to gale force winds (Up to 3m around the UK).
UK Weather and Climate - Rainfall causes weathering leading to mass movement. Increased storms means higher erosion rates.
Urbanisation - Over 20 million people in the UK live on the coast. The weight of these buildings make cliffs more vulnerable
Agriculture - Farmland near the coast adds to soil erosion and the instability of the cliffs.
Industry - Industry can bring a lot of pollution which can destroy habitats. Dredging reduces natural protection.

Erosion - The breaking down of rocks which are then moved to another location

Hydraulic action – Force of water building up pressure
Abrasion – Rocks scraping away at rock like sandpaper.
Attrition – Rocks in the water hit each other and break up
Solution – Chemical action dissolving rocks in water.

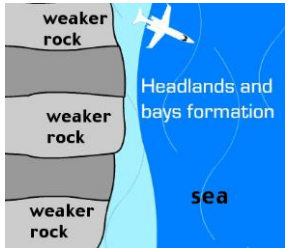
Weathering – Where rock is broken down in its place

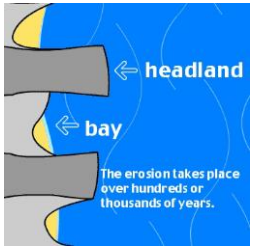
Mechanical/ Physical (Freeze Thaw) – Rainwater freezes, expands and breaks rock.
Chemical – Acid rain dissolves rock
Biological - The roots of plants, split the rock apart

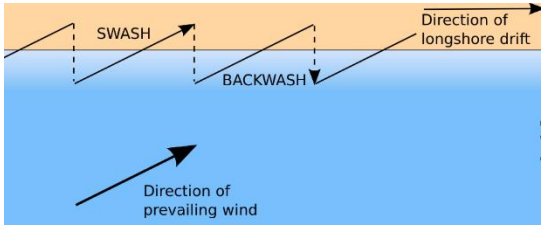
Deposition – When sediment is dropped.

Coast – Narrow zone where land meets the sea
Constructive Waves – Gentle, low, build up beach
Destructive Waves – Powerful, tall, erode beach

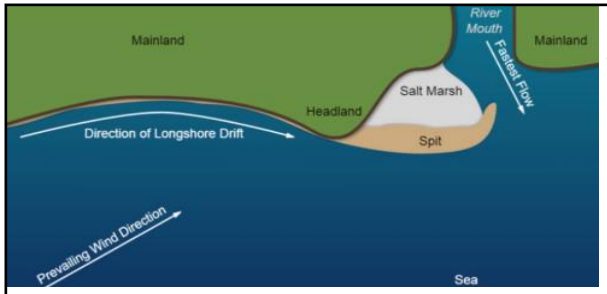
Headlands and Bay formation – Weaker rock erodes faster that hard over time because it is less resistant.







Longshore Drift
Waves can approach the coast at an **acute angle** because of the direction of the prevailing wind (SW in the UK).
The **swash** of the waves carries material **up** the beach at an angle (45°). The **backwash** then flows **down** to the sea in a straight line at 90°. The Continual **swash** and **backwash transports** material sideways along the coast. This movement of material occurs in a zigzag.



Spits
A spit is formed when sediment is moved along the beach due to **longshore drift**, which takes the direction of the prevailing wind (SW in the UK). This works by sediment being moved up the beach by the **swash** at an angle and then straight back down the beach due to gravity by the **backwash**. If the coastline **changes direction**, the sediment continues to build out into the sea to form the start of a spit. The spit will grow if the rate of deposition is **greater** than the rate of erosion. The end of the spit will be affected by a change in wind directions over time to form a series of '**hooks**' at the end of the spit. The area behind the spit is protected from the sea and the energy is reduced. This allows deposition to occur (from coastal and river sediment) and salt from the sea to be trapped. This forms a **Saltmarsh**, a coastal wetland habitat for birds and marine life.

Coastal Management

Hard Engineering - **Sea Wall -** Walls made of concrete or stone which reflect wave energy.
+ Very effective/ Provide a walk way along beach.
- Very expensive/ Restrict access
Rip Rap/Rock Armour – Pieced of hard igneous or metamorphic rock placed at the foot of the cliff to absorb wave energy.
+ Long Lasting/ Low Maintenance.
- High transport costs/ Unsightly.
Groynes – Walls built at right angles on beach. Reduce longshore drift by trapping sediment on one side.
+ Widens beach/ Contributes to tourism.
- Increases erosion down coast.

Soft Engineering - **Beach nourishment** - Sand or shingle is added to the beach to make it higher or wider.
+ Natural/ cheap/ attracts tourists.
- Needs constant maintenance.
Managed Retreat – Coastline is allowed to change naturally, but the process is managed. Usually used on low value land.
+ Cheap.
- Land is lost/ owners need to be compensated.