



BOURNEMOUTH SCHOOL

Year 10

# Knowledge Organiser 3

Spring Term: 2025-26

Name: Master 10

Registration Form:   

✓ Hard Work

✓ Discipline

✓ Smart Appearance

✓ Respect

## Bournemouth School

### Knowledge Organiser: Year 10 Spring Term 3

*'Knowledge is power' by Francis Bacon*

A knowledge organiser provides you with all the most important knowledge you need for each unit of study this half term. Your aim is to transfer all of this information into your long-term memory so you can use it in your lessons and further expand your understanding of this work.

How to use your knowledge organiser (KO):

1. Ensure you have your KO and Homework Learning journal with you at all times in school and when you need to do your homework at home.
2. In lessons when you have covered information that appears on your KO, your teacher will ask you to put a tick next to that section. This means that is now added to what you must learn for homework.
3. Initially, follow your homework timetable to decide what to revise each evening.
4. There are 4 strategies that you can use to revise. They are progressively more challenging so always start with the first in the list.

**a. Look Cover Write Check**

- i. Identify the subject and section of your KO that you want to revise. This should be one of the ticked sections.
- ii. LOOK carefully at the subject and section of your KO you want to revise and try to remember as much as you can. Remember this should be a ticked section.
- iii. Now COVER this information so you can't read it.
- iv. WRITE out what you can remember word for word in your Homework Learning Journal.
- v. CHECK what you have written by comparing it to your KO. Tick each correct word in green pen and correct any errors you have made.
- vi. Repeat this process until you are confident you can remember everything you need.

**AIM: You should be able to repeat the information by rote**

**b. Self or peer quizzing**

- i. Identify the subject and section of your KO that you want to revise. This should be one of the ticked sections.
- ii. Write out a list of questions you could ask either yourself or a friend about this section of the KO. Write these in your Homework Learning Journal.
- iii. If you are working on your own, cover the KO and write a full answer to each question.
- iv. If you are working with a partner swap books and copy down their questions and have a go at answering them.
- v. Now uncover the KO and with a green pen correct your work.

**AIM: You should be able to repeat the information by rote but with a good understanding**

**c. Playing with words and sentences**

- i. Identify the subject and section of your KO that you want to revise. This should be one of the ticked sections.
- ii. You now want to check how well you have learnt the information in your KO.
- iii. Definitions – look at words that are used in this section. Can you write a definition in your own words?
- iv. Rephrasing – can you rewrite the sentences or explanations in your own words?

- v. Summary – can you summarise the main points of this section of the KO?
- vi. Synonyms – can you write synonyms for key words and ideas?
- vii. New Sentences – can you write a sentence that includes the key vocabulary or definitions that you have learnt?

**AIM: You should be able to use the information in your KO in a flexible and confident way in your writing.**

**d. Think it, Link it**

- i. This is a technique to use towards the end of the half term when you are revising all of the KO.
- ii. Think of the links or connections between different sections of your KO.
- iii. Write these out in your own words in your Homework Learning Journal.
- iv. Think about the links between a particular section of your KO and what you have learnt in your lessons. Can you expand on this section by linking it to your wider knowledge?
- v. Write this out in your Homework Learning Journal.

**AIM: You should be able to link your homework and your lessons to show a confident understanding of the work covered.**

**Homework Learning Journal**

1. Always write the subject and the date when you start your homework.
2. Always write the strategy that you are going to use for your homework.
3. Always use a ruler to underline titles and dates.
4. Use a blue or black pen to complete your homework or a pencil if you need to draw.
5. Use a green pen to complete corrections of your work.
6. **You are expected to complete half a side of your Homework Learning Journal each evening as a minimum.**

**Success Club**

You can attend Success Club every Monday to Thursday in room 53 until 5pm. This is a quiet room where you can complete your homework rather than doing it at home. There are also Sixth form helpers and staff who will be there to help you if you need it. You can also choose to work in the Library on a Monday, Tuesday and Thursday until 4:30 and a Friday until 4.

**Checking:**

Your teachers will check your Homework Learning Journal at least once a cycle. If they are concerned that you aren't doing your homework properly they will offer support and guidance. If you don't respond to this guidance, you will be added to the afterschool Detention where you will be expected to complete your homework.

You can attend Success Club every Monday to Thursday in room 53 or the library to complete homework. Sixth form helpers and staff will be there to help you if you need it. Your teachers will check your Homework Learning Journal at least once a cycle. If they are concerned that you aren't doing your homework properly, they will offer support and guidance. If you don't respond to this guidance, you will be added to the afterschool Detention where you will be expected to complete your homework.

At the start of every lesson you should expect a Do Now task. This is a low stakes retrieval quiz on what you have learnt so far. If you have completed your homework this should be easy. The aim is to get 100% in each of these. If you miss this target occasionally, don't worry. If it happens regularly your teacher will have a chat and offer you support.

**Maths:**

Your teacher will set you tasks to complete on Dr Frost Maths. This will be set every week on a Monday and will be collected in and checked on a Friday. If this has not been completed you will be issued a Detention on a Wednesday Lunchtime.

## How long should I spend on my homework?

Key Stage 4					
Week 1					
Time	Monday	Tuesday	Wednesday	Thursday	Friday
5 mins	MFL	MFL	Physical Activity	MFL	MFL
10	Maths	English		Maths	English
10	Biology	RS		Chemistry	Physics
10	Option C	Option D		Option A	Option B
55	Reading / Revision	Reading / Revision		Reading / Revision	Reading / Revision
Week 2					
Time	Monday	Tuesday	Wednesday	Thursday	Friday
5 mins	MFL	MFL	Physical Activity	MFL	MFL
10	Maths	English		Maths	English
10	Biology	RS		Chemistry	Physics
10	Option C	Option D		Option A	Option B
55	Reading / Revision	Reading / Revision		Reading / Revision	Reading / Revision

- You should spend about 35 minutes revising your KO each day.
- You should spend 55 minutes either reading or revising each day.
- This timetable is a guide. If you want to spend longer revising one subject that you find more difficult and less time on one you find easy, that is your choice.
- We would like you to spend one evening involved in a physical activity. This might be a sports club, a run, a game of football with friends or just a nice walk with the dog. Ask your PE teacher if you need guidance with this. It doesn't have to be on a Wednesday.



Technique	Description
Dry Brush	Using a brush with paint wiped nearly dry to create textured, scratchy strokes.
Wet on Wet	Applying wet paint onto previously applied wet paint for soft blending.
Scumbling	Using a dry brush with a small amount of paint to create broken, translucent layers.
Layering	Applying thin, transparent or opaque layers of paint one over another to build depth.
Stippling	Using the tip of the brush to apply many small dots or dabs of paint for texture.
Splattering	Flicking paint from a brush to create splashes or spots.
Palette Knife	Applying or shaping thick paint with a knife to create textured strokes or effects.

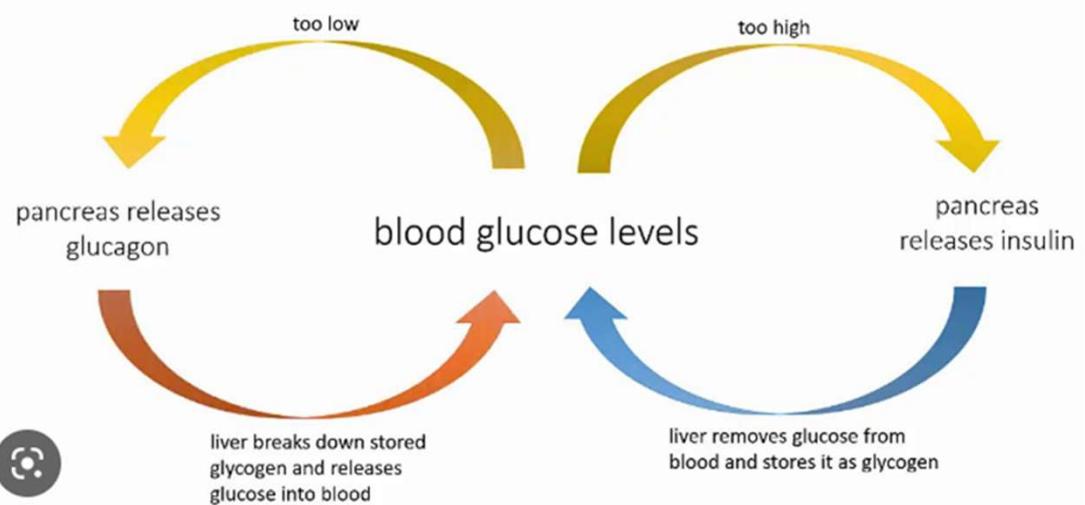
Term	Definition
Tint	Lightening a colour by adding white.
Tone	Darkening a colour by adding black or grey.
Glaze	Thin, transparent layer of paint applied over a dry base to adjust colour or add luminosity.
Impasto	Thick application of paint creating a raised texture, often using a palette knife.
Underpainting	First layer laying down tones and values before details.
Primary Colours	Red, blue, yellow; base colours that cannot be mixed from other colours.
Secondary Colours	Purple, green, orange; colours made by mixing two primary colours.
Medium	Additive mixed with paint to alter consistency or drying time, like gel or flow medium.

Application Tips	tick
Use heavy-bodied acrylics for thick texture and water to thin paint for washes.	
Paint on suitable surfaces such as canvas or primed board.	
Work quickly since acrylics dry fast; start with an underpainting to establish tones.	
Refine details by adding layers after previous ones dry.	
Experiment with tools like sponges or rags to lift or soften wet paint edges.	

Artist	Link to theme	Style
<b>Henri Rousseau (1844-1910)</b>	Painted exotic jungle scenes with stylised tigers, jaguars, and lions from imagination and zoo visits.	His naïve style features flat perspectives, vibrant colours, and dreamlike foliage blending animals into lush environments.
<b>Franz Marc (1880-1916)</b>	Depicted animals like horses, foxes, and tigers as symbols of harmony and spirituality in nature.	Expressionist style uses bold, pure colours and simplified forms to convey emotional and spiritual essence of beasts.
<b>Sophie Green (b.1984)</b>	Creates hyper realistic portraits of endangered species like elephants and rhinos to support conservation.	Photorealistic acrylic technique captures intricate fur, eyes, and textures for emotional impact and awareness.
<b>Alex Artiste Peintre (contemporary)</b>	Specialises in wildlife using everyday objects instead of brushes for textured animal overlays.	Intuitive, textured style blends abstract backgrounds with animals via object-stamping for imaginative realism.
<b>David Shepard (1913-2017)</b>	Famous for realistic African wildlife like elephants, tigers, and rhinos, inspired by Kenyan safaris.	Detailed realist oil paintings emphasise movement, light, and anatomy to highlight conservation.
<b>Sarah Taylor (contemporary)</b>	Paints vibrant wildlife and pets with geometric patterns and splashes for lively portraits.	Graphic contemporary style juxtaposes precise patterns, bold colours, and fluid marks for dynamic realism.



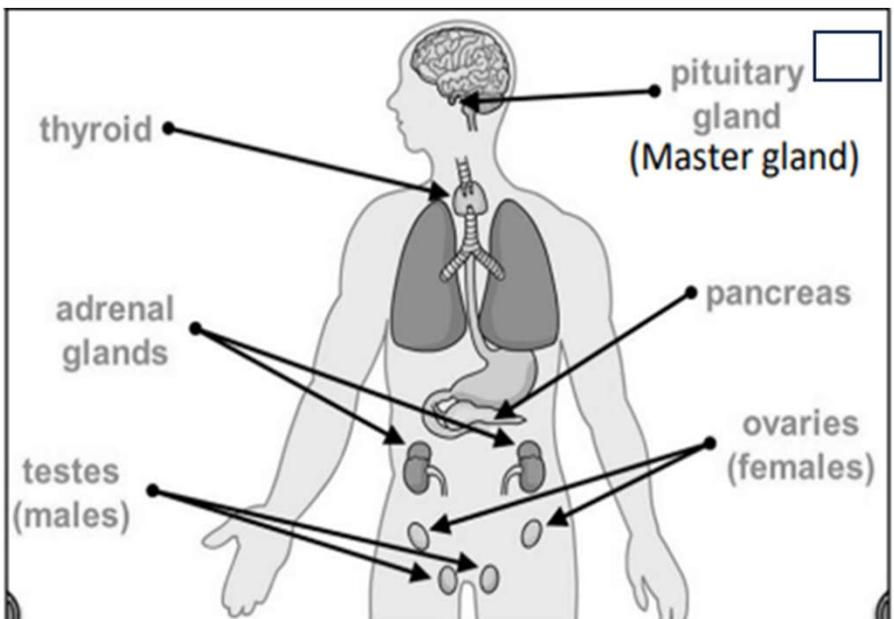
Keyword	Learn	✓	Keyword	Learn	✓
Homeostasis	Regulating the internal conditions of the body (temperature, water levels, blood glucose)		ADH (Anti-diuretic hormone)	Makes the tubules of the kidney more permeable to water.	
Endocrine System	Hormonal system - involves glands, hormones and blood vessels		Deamination	Converting amino acids into ammonia. This ammonia is then converted into urea to be excreted in urine.	
Hormone	Chemical messengers released by glands that travel in bloodstream		Thyroxine	Stimulates the basal metabolic rate. Plays an important role in growth and development	
Gland	Releases a chemical messenger (hormone) into the bloodstream		Adrenaline	Produced in times of fear or stress. Increases the heart rate (more oxygen and glucose delivery to brain and muscles). Prepares you for 'flight or fight'	
Thermoregulatory Centre	Contains receptors sensitive to the temperature of the blood		Type 1 Diabetes	The pancreas fails to produce sufficient insulin. It is characterised by uncontrolled high blood glucose levels and is normally treated with insulin injections	
Thermoregulation	If the body temperature is too high, blood vessels dilate (vasodilation) and sweat is produced from the sweat glands.  If the body temperature is too low, blood vessels constrict (vasoconstriction), sweating stops and skeletal muscles contract (shiver).		Type 2 Diabetes	The body cells no longer respond to insulin produced by the pancreas. A carbohydrate controlled diet and an exercise regime are common treatments. Obesity is a risk factor for Type 2 diabetes.	



Hormone	Role in menstrual cycle
FSH	Produced by the pituitary gland. Matures the egg.
Oestrogen	Produced by the ovaries. Thickens uterus lining and Inhibits FSH.
Progesterone	Maintains uterus lining.
LH	Produced by the pituitary gland. Releases the egg (ovulation)

### IVF – learn the steps

1. FSH/LH given to mature and release more eggs
2. eggs collected and fertilised artificially
3. fertilised eggs develop into embryos
4. implanted into mother's uterus



Contraception Type	Examples and how it works
Barrier Methods	Condom/diaphragm – prevent sperm reaching egg
Oral (The Pill)	Contains oestrogen to inhibit FSH and stop egg maturing
Long term Hormonal	Skin patch, injection, implant contains progesterone to inhibit maturation and release of egg for several months/years
IUD (Intrauterine device)	prevents implantation of egg into uterus/releases hormone

Key Term	Definition	<input checked="" type="checkbox"/>
Segmentation	Market segmentation splits a market into different groups to enable a business to target its products to the relevant customers	
Target market	Specific group of people that a product is aimed at	
Marketing strategy	How the marketing function fits in with the overall strategy for a business	

Benefits of market segmentation	<input checked="" type="checkbox"/>
Knowing different market segments can allow businesses to identify their target market	
A more specific targeted marketing strategy can be created.	
Marketing is more effective, for example promotion aimed at teenagers may include social media	

Methods of segmentation		<input checked="" type="checkbox"/>
Method	Explanation	
Age	The business can more precisely target its offerings to the needs and wants of each stage of life of interest to it.	
Income	How much people earn and how much disposable income they have to spend on products/services.	
	Geographic segmentation is splitting people into different groups or categories based on location factors such as: <ul style="list-style-type: none"> <li>○ Temperature/climate</li> <li>○ Population</li> </ul>	
Gender	Targeting products at a predominantly male or female customer. Both men and women have different interest in terms of shopping for various products and services	

Importance of identifying and satisfying customer needs		<input checked="" type="checkbox"/>
Customer need	Explanation	
Price	How much a business charges for its product or service It is important for a price to match the quality of the product or service.	
Quality	The standard of the product or service being offered. Customers always expect some level of quality, no matter how much they pay for a product or service.	
Choice	Many businesses have a range of products and/or services available to suit different groups of customers.	
Convenience	Convenience relates to something being easier, quicker or generally less hassle for customers.	

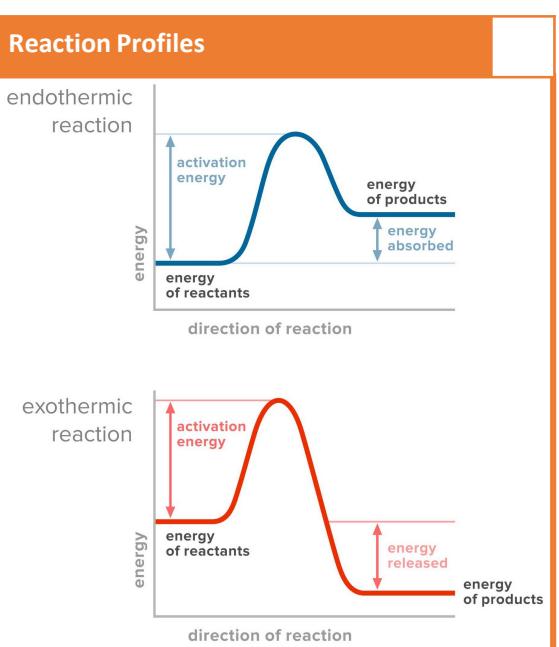
Importance of satisfying needs for a new business		<input checked="" type="checkbox"/>
Generate sales		
Survival		

Types of market research					<input checked="" type="checkbox"/>
Key term	Definition	Examples	Benefits	Drawbacks	
Quantitative research	<ul style="list-style-type: none"> <li>○ Concerned with and based on data</li> <li>○ Based on larger samples and is, therefore, more statistically valid</li> </ul>	Survey methods including: <ul style="list-style-type: none"> <li>○ Telephone</li> <li>○ Postal</li> <li>○ Face-to-face</li> <li>○ Online</li> </ul>	<ul style="list-style-type: none"> <li>○ Data is relatively easy to analyse</li> <li>○ Can be compared with data from other sources (e.g. competitors, history)</li> </ul>	<ul style="list-style-type: none"> <li>○ Doesn't explain the reasons behind numerical trends</li> <li>○ May lack reliability if sample size is small.</li> </ul>	
Qualitative research	<ul style="list-style-type: none"> <li>○ Based on opinions, attitudes, beliefs and intentions</li> <li>○ Aims to understand why customers behave in a certain way or how they may respond to a new product or service</li> </ul>	<ul style="list-style-type: none"> <li>○ Focus groups</li> <li>○ Interviews</li> </ul>	<ul style="list-style-type: none"> <li>○ Focused on understanding customer needs, wants, expectations</li> <li>○ Can highlight issues that need addressing – e.g. why customers don't buy</li> </ul>	<ul style="list-style-type: none"> <li>○ Expensive to collect and analyse – requires specialist research skills</li> <li>○ Based around opinions – always a risk that sample is not representative</li> </ul>	
Primary research	Research data that is collected <b>first-hand</b> for a <b>specific research purpose</b> .	<ul style="list-style-type: none"> <li>○ Focus groups</li> <li>○ Interviews (online &amp; in-person)</li> <li>○ Surveys &amp; questionnaires</li> <li>○ Mystery shoppers</li> <li>○ Product testing / product trials</li> </ul>	<ul style="list-style-type: none"> <li>○ Directly focused on research objectives = fit for purpose</li> <li>○ Tends to be more up-to-date than secondary research</li> </ul>	<ul style="list-style-type: none"> <li>○ Time-consuming and often costly to obtain</li> <li>○ Risk of survey bias – research samples may not be representative of the population</li> </ul>	
Secondary research	Uses <b>data that already exists</b> and has been collected by someone else for another purpose.	<ul style="list-style-type: none"> <li>○ Reports from market research organisations such as MINTEL</li> <li>○ Government websites/reports</li> <li>○ Competitors websites</li> <li>○ Trade Publications / Magazines</li> <li>○ Newspapers</li> </ul>	<ul style="list-style-type: none"> <li>○ Quick and easy to gather</li> <li>○ Can provide industry-specific information</li> <li>○ Cheaper than primary research</li> </ul>	<ul style="list-style-type: none"> <li>○ Not specific to businesses specific needs</li> <li>○ Could be out of date</li> </ul>	

Purpose of market research		<input checked="" type="checkbox"/>	Interpreting marketing data – Key Formulas		<input checked="" type="checkbox"/>
Collect information about:	<ul style="list-style-type: none"> <li>○ Demand</li> <li>○ Competition</li> <li>○ Target market</li> </ul>		Market Share = the % of the total market owned by a business, product or brand.	Market Growth = the % growth in the size of the market, measured over a specific period.	Market Size = the total volume of a given market
			$\text{Market Share (\%)} = \frac{\text{Company Sales}}{\text{Total Market Sales}} \times 100$	$\frac{\text{Current market size} - \text{Original market size}}{\text{Original market size}} \times 100$	Number of target users x purchases expected in a given period = market size

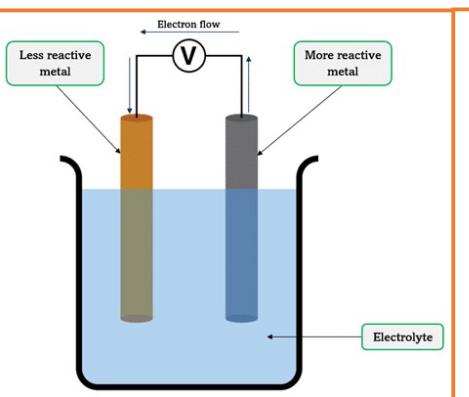


Key term	Definition	✓
Exothermic reaction	Thermal energy is transferred <u>from</u> the chemicals <u>to</u> the surroundings. The temperature of the surroundings <u>rises</u> .	
Endothermic reaction	Thermal energy is transferred <u>to</u> the chemicals <u>from</u> the surroundings. The temperature of the surroundings <u>decreases</u> .	
Activation energy	The minimum energy particles must have to react	
Bond energies	The amount of energy in kJ required to break 1 mole of a chemical bond.	
Bond breaking	This is an endothermic process. Energy is taken in.	
Bond making	This is an exothermic process. Energy is released.	
Reaction profile	A diagram to show the relative energies of reactants and products	
Cell	Two electrodes in an electrolyte used to generate electricity	
Battery	Two or more chemical cells connected together	
Electrolyte	A liquid containing ions that conducts electricity	
Fuel Cell	A chemical cell with a continuous supply of chemicals to fuel the cell	
<b>Exothermic reactions</b>	<b>Endothermic reactions</b>	✓
Calcium oxide reacting with water	Ammonium nitrate dissolving in water	
Combustion	Thermal decomposition	
Neutralisation	Photosynthesis	



**Exothermic profile:**  
Products are lower than reactants: more energy is given out when new bonds are made than is taken in to break the original bonds.

**Endothermic profile:**  
Products are higher than reactants: more energy is taken in to break the original bonds than is given out when new bonds are made.



The voltage of a cell is affected by:

- 1) The difference in reactivity of the metal electrodes. The bigger the difference, the bigger the voltage.
- 2) Changing the electrolyte or concentration of the electrolyte.

Type of cell	Pros	Cons
Alkaline cell	Cheaper to manufacture	May end up in landfill sites once fully discharged
Rechargeable cell	Can be recharged many times	Costs more to manufacture
Hydrogen fuel cell	No moving parts. Water is the only chemical product	Expensive to manufacture. Hydrogen is flammable

### Energy change calculation

1. Add together the bond energies for all the bonds in the reactants – this is the 'energy in'.
2. Add together the bond energies for all the bonds in the products – this is the 'energy out'.
3. Calculate the energy change = energy in – energy out.



## 1.2.4 Data Storage

Keyword	Definition	✓
Denary	Base 10 – 0, 1, 2, 3, 4, 5, 6, 7, 8, 9	
Binary	Base 2 – 0, 1	
Hexadecimal	Base 16 - 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F	
Character set	Every character the computer can understand. Each character is represented by a <b>unique</b> number.	
ASCII	Originally used 7 bits to represent each character so could represent 128 different characters (0-127). Later upgraded to use 8 bits to represent 256 characters (0-255)	
Unicode	Uses multiple bytes for each character and can represent millions of characters from every language.	
Bitmap	A type of image made up of lots of tiny dots, called pixels.	
Resolution	The <b>concentration</b> of pixels in an image.	
Colour depth	The number of bits used to represent each pixel. Represents the numbers of <b>unique</b> colours an image can display.	
Metadata	Data about data.	
Sample rate	The number of audio samples taken per second.	
Bit depth	The number of bits used to store each sampled value.	

## 1.2.5 Compression

Keyword	Definition / Example	✓
Compression	Uses an algorithm to reduce the file size by removing repeated/unnecessary data.	
Lossy	Reduces file sizes by removing some of the data permanently.	
Lossless	Reduces file sizes in such a way that no data is lost, and the original file can be regenerated exactly.	

### Practise Python coding at home!

- Code online using: <https://vscodeedu.com/>
- Online tutorial 1: <https://www.w3schools.com/python/>
- Online tutorial 2: <https://time2code.today/python-course>



# GCSE Design Technology

## TIMBER 7.3 part 2 Selection of timber

# GCSE Design Technology revision:

## CORE 1.13 Materials properties

Tick	Availability factors	Description/links to selecting timber
	Use of stock materials	Materials are processed and sold in standard sizes. If a designer uses standard stock forms, it saves costs and wastage.
	Specialist materials	Specialist timber is used for specific purposes i.e. marine plywood for outdoor use, HW veneers for laminates on manmade boards.
	Hurricanes, storms and diseases	Trees can be effected by naturally occurring events i.e. hurricanes. Diseases can kill trees i.e. ash dieback has killed off ash trees in the UK.

Tick	Cultural and ethical factors	Description/links to selecting timber
	Avoiding offence	If people find your product offensive, they will not buy your product. It is crucial for a designer to understand these differences and avoid accidental offence with a word, symbol, colour, picture etc. that has significance to other people.
	Suitability for intended market	It is important to understand the intended market for a product so that you can make sure that the product is suitable.
	The consumer society	In Britain, we live in a consumer society. We are relatively wealthy and products are quite cheap, so some people can afford to buy lots of things they do not need.
	Effects of mass production	Carpenters used to make one off products whereas nowadays, more products are mass produced and manufactured using cheaper timber. Lots more automation too.
	Built in product obsolescence	A lot of products only have a short lifespan. Manufacturers deliberately make some products with parts that fail after a time and can't be replaced. They like this as it means consumers need to then buy new products.

Property	Definition
Strength	Withstands forces by squashing (compressive strength) or stretching (tensile strength).
Elasticity	Can return to its original shape once the deforming force has been removed.
Plasticity	(plastics only) Ability to permanently deform without breaking when heated.
Malleability	(metals only) Ability to deform in all directions without fracture.
Ductility	To be drawn out, bent or twisted without fracture.
Hardness	Resists deformation, indentation or penetration.
Toughness	Withstands sudden shock or stress.
Brittleness	Inability to withstand sudden shock or stress.
Durability	Withstands deterioration over a long period of time.
Stability	Resists changes in shape over time.
Stiffness	Resists bending.



## GCSE Design Technology: TIMBER 7.4 Strengthening timber

Tick	Fabrication Method	Method Description
	Lamination	When thin layers/veneers of material are glued together to form a thicker material. Lamination is usually done to produce curved forms.
	Braces and Tie Bars	Brace = a bar added to a frame to strengthen it and are usually diagonal to form a triangle. Tie bar = a rod that is held in tension.
	Embedding composite materials	When composite materials are added to timber products to strengthen them i.e. steel strips fixed on a timber beam to give it high tensile strength.

Tick	Stresses	Stress description
	Compression	A squashing force – when a tree is bent over and is squashing in on itself.
	Tension	A pulling force – when a tree is bent over and the rear side is being pulled apart.
	Shear	When forces act in opposite directions from the same point – when a tree has a large branch hanging down one side and another on the opposite side to it.

### ***Pre-stressing beams and why the process is carried out***

It is the process used on wooden construction beams prior to them being used and is done to enable them to successfully take the compressive load of the roof without buckling under the weight of it.

- The construction beam will be placed under tension for a set amount of time
- Once the tension is released, the beam will bow slightly
- Once the compressive load is added, the beam will level out again and not dip/buckle underneath the weight.

## GCSE Design Technology revision: CORE 1.11 Textiles and fibres

Woven textile	Properties	Uses
Plain weave (calico)	<ul style="list-style-type: none"> <li>• Strong</li> <li>• Prints well</li> </ul>	<ul style="list-style-type: none"> <li>• Shirts</li> <li>• Bags</li> </ul>
Twill weave (denim)	<ul style="list-style-type: none"> <li>• Strong</li> <li>• Less stiff</li> </ul>	<ul style="list-style-type: none"> <li>• Jeans</li> <li>• Blankets</li> </ul>

Non-woven textile	Properties	Uses
Felted wool	<ul style="list-style-type: none"> <li>• Resistant to chemicals</li> <li>• Doesn't fray</li> </ul>	<ul style="list-style-type: none"> <li>• Pool table surface</li> <li>• Hats</li> </ul>
Bonded fibres	<ul style="list-style-type: none"> <li>• Doesn't fray</li> <li>• Not very strong</li> </ul>	<ul style="list-style-type: none"> <li>• Wet wipes</li> <li>• Face masks</li> </ul>

Knit type	Properties	Uses
Warp knit	<ul style="list-style-type: none"> <li>• Fairly stretchy</li> <li>• Doesn't unravel</li> </ul>	<ul style="list-style-type: none"> <li>• Lace</li> <li>• Fleece</li> </ul>
Weft knit	<ul style="list-style-type: none"> <li>• Stretchy</li> <li>• Comfortable</li> </ul>	<ul style="list-style-type: none"> <li>• T-shirts</li> <li>• Jumpers</li> </ul>



## Year 10 The Strange Case of Dr Jekyll and Mr Hyde

		Characters and quotes	✓
Ch	Title and Key events	✓	
1	<b>The Story of the Door</b> Utterson and Enfield encounter a strange and sinister looking door. This prompts Enfield to tell a story about how he met Hyde, who trampled over a child and then, blackmailed by the onlookers, entered this door, returning with a cheque made out by a respectable gentleman.	<b>Gabriel Utterson:</b> <i>The model of a Victorian Gentleman: restrained, serious and guards his friend's reputations.</i>	"lean, long, dusty, dreary and yet somehow lovable"  "He was austere with himself; drank gin when he was alone, to mortify a taste for vintages"
2	<b>Search for Mr Hyde</b> Utterson guesses the gentleman from Enfield's story from the troubling terms of Henry Jekyll's will, which leaves everything to Hyde. Utterson is sure Hyde must be blackmailing Hyde. He decides to arrange an encounter with him and meets him by the same door, which we later learn is the side entrance to Jekyll's own property. Like Enfield, Utterson finds Hyde instantly repulsive. He attempts to speak with Jekyll but is told that he is not at home. Jekyll's servant Poole reveals that all Jekyll staff have orders to obey Hyde.	<b>Richard Enfield:</b> <i>Respected but pursues a lively (and mysterious) social life.</i>	"I was coming home from some place at the end of the world, about three o'clock of a black winter morning"
3	<b>Dr Jekyll Was Quite At Ease</b> Utterson meets with Jekyll and expresses his concerns over Hyde and the will. Jekyll brushes his worries aside saying that he can be rid of Hyde whenever he chooses.	<b>Dr Henry Jekyll:</b> <i>An admired and respected Dr, but known to have had a wild streak in his youth.</i>	"the very pink of the proprieties, celebrated too"  "man is not truly one, but truly two"
4	<b>The Carew Murder Case</b> Nearly a year later, Hyde viciously beats a distinguished gentleman: Sir Danvers Carew with a cane, murdering him, apparently without provocation. Utterson identifies the body and recognises Jekyll's cane. He goes with the police to Hyde's dingy lodgings in disreputable Soho. There are signs that Hyde has fled.	<b>Mr Hyde:</b> <i>Repulsive, animalistic, driven by base desires and instincts. He is an expression of the repressed desires of Victorian society.</i>	"with ape-like fury, he was trampling his victim under foot"  "My devil had been long caged, he came out roaring."
5	<b>Incident of the Letter</b> Utterson goes to Jekyll's house and finds him looking "deadly sick". Jekyll gives Utterson a letter, supposedly from Hyde, stating his intention to disappear. However, inspection by Utterson's clerk: Mr Guest, suggests the letter has actually been written by Jekyll.	<b>Dr Lanyon:</b> <i>A disciplined and respected scientist, who disapproves of Dr Jekyll's rash approach.</i>	"it is more than ten years since Henry Jekyll became too fanciful for me. He began to go wrong, wrong in mind."
6	<b>Remarkable incident of Dr Lanyon</b> For a while Jekyll seems healthier and happier. Utterson visits Dr Lanyon who is on his death bed. Something has driven him to death but he will not say what. He gives Utterson a letter, to be opened if Jekyll dies or disappears. Utterson attempts to visit Jekyll once more but is told by Poole that he cannot see anyone.	<b>Sir Danvers Carew:</b> <i>Graceful, dignified and civilized.</i>	"an aged beautiful gentleman with white hair"
7	<b>Incident at the Window</b> Utterson and Enfield see Jekyll at his window. He greets them, but then a strange change sweeps over his features and he flees back inside.		
8	<b>The Last Night</b> Poole arrives to seek Utterson's aid. He believes that Hyde is shut up in Jekyll's home, pretending to be him and desperately requesting a certain chemical. They break the door down and find Hyde's body. Hyde has committed suicide. There is no sign of Jekyll, but left behind is a letter from Jekyll to Utterson and a note urging him to read Lanyon's account.		
9	<b>Dr Lanyon' Narrative</b> Dr Lanyon's account details how he received a letter from Jekyll, begging him to collect certain chemicals and a notebook from Jekyll's home. Hyde then arrived and the horrified Lanyon witnessed him turning back into Jekyll. The shock was so great that it sent him to his death bed.		
10	<b>Henry Jekyll's Full Statement of the Case</b> Jekyll's account details how he created the potion which turned him into Hyde. He was seeking to separate the animalistic/evil desires in him to better meet society's expectations. He used the discovery to indulge secretly in vice. However, he lost the ability to control the transformation and Hyde took over completely.		



Poem	Summary	Themes	Quotes	✓
Ozymandias- Shelley	The broken statue of a once-great Pharaoh acts a symbol for the impermanence of man's power, compared to nature.	Man vs Nature, Abuse/arrogance of power.	"My name is Ozymandias, King of Kings" "Round the decay of that colossal wreck"	
London- Blake	A man wanders the streets of Georgian London, witnessing the poverty and suffering of the working classes.	Abuse/arrogance of power, Inequality, Man vs Nature.	"the mind forged manacles" "the chimney-sweeper's cry, every black'ning church appals"	
The Prelude- Wordsworth	A young man steals a boat, only to be humbled by nature's power as an unseen mountain towers over him.	Man vs Nature, Arrogance of power.	"my boat went heaving through the water like a swan" "A huge peak, black and huge [...] upreared its head"	
My Last Duchess- Browning	An arrogant duke shows a guest a painting of his last wife; he hints that he had her murdered as she displeased him.	Abuse/arrogance of power, Inequality	"That's my last Duchess painted on the wall" "I gave commands then all smiles stopped"	
The Charge of the Light Brigade- Tennyson	600 soldiers bravely carry out a miscommunicated order. The charge is a failure, but their heroism is remembered.	Heroism of war, Memory.	"Half a league, half a league, half a league onward" "Into the valley of death rode the six hundred"	
Exposure- Owen	A group of soldiers in the trenches of WW1 suffer the appalling conditions and exposure to the cold.	Horror of war, Memory, Man vs Nature, Disillusionment.	"Our brains ache in the merciless iced east winds that knive us" "Dawn massing in the East her melancholy army"	
Storm on The Island- Heaney	A rural island community is swept over by a terrible storm. The storm can act as an extended metaphor for the troubles in Ireland.	Man vs Nature, Horror of conflict, social divides.	The sea "spits like a tame cat turned savage" "wind dives and strafes invisibly. Space is a salvo."	
Bayonet Charge- Hughes	A soldier is overcome with terror, going over the top of a trench during WW1.	Horror of war, Disillusionment.	"suddenly he awoke and was running" "in what cold clockwork of the stars and the nations was he the hand pointing that second?"	
Remains- Armitage	A soldier shoots a looter while on patrol and his haunted by PTSD and feelings of guilt.	Horror of war, Memory, Psychological suffering.	"his blood shadow stays on the street" "he's here in my head when I close my eyes, dug in behind enemy lines".	
Poppies –Weir	A mother grieves as she sees her son go off to war, remembering the boy he once was.	Memory, Loss/Grief (psychological suffering)	"released a songbird from its cage" "hoping to hear your playground voice catching on the wind"	
War Photographer- Duffy	A photographer suffers from feelings of depression and isolation after reporting on conflict around the world.	Horror of conflict, Psychological suffering, Memory.	"In his darkroom he is finally alone" "A stranger's features faintly start to twist before his eyes, a half formed ghost"	
Tissue- Dharker	Paper is used as an extended metaphor for the strength and fragility of the things which make up our lives: faith, finance, culture, cities etc.	Power of society, Individual identity.	"Paper that lets the light shine through" "Maps too. The sun shines through their borderlines"	
The Émigrée- Rumens	A girl, displaced from her home country struggles with conflicted feelings for her old/new homes.	Power of society, Individual identity, Memory.	"my original view, the bright, filled paperweight" "I am branded by an impression of sunlight"	
Checking Out Me History- Agard	The narrator explores the figures cut out of history by Eurocentric, whitewashed accounts of the world. He reclaims his cultural history.	Power of society, Inequality, Individual identity.	"Dem tell me Wha dem want to tell me" "now I checking out me own history, I carving out me identity"	
Kamikaze –Garland	A daughter looks back on how her father failed to carry out his mission as a WW2 kamikaze pilot, suffering disgrace for his choice.	Power of society, Family, Individual Identity, Memory.	"her father embarked at sunrise" "sometimes, she said, he must have wondered which had been the better way to die"	

## Primary Processing

### Wheat

**Harvesting:** Wheat is cut and collected from fields

**Cleaning:** removal of stones, dirt and other impurities

**Milling:** wheat grains are ground into flour

**Bran:** Outer layer of the grain, high in fibre

**Endosperm:** Starchy part used for white flour

**Germ:** Nutrient-rich part containing vitamins and fat

## Primary Processing

### Milk

**Milking:** collected from cows under hygienic conditions

**Filtration:** removes dirt and debris

**Cooling:** stored at 4°C to slow bacterial growth

**Transportation:** taken to dairy in refrigerated tankers

**Raw milk:** unprocessed straight from the cow

**Bulk tank:** large refrigerated container for milk storage.



## Secondary Processing

### Milk

**Pasteurisation:** heat milk to 72°C for 15 sec to kill harmful bacteria

**Homogenisation:** break down fat molecules so they stay evenly distributed

**Cheese making:** add rennet and bacteria to coagulate milk

**UHT:** ultra heat treatment, milk heat to very high temperatures for a long shelf life

**Sterilisation:** heat milk in sealed containers to kill bacteria.

### Flour

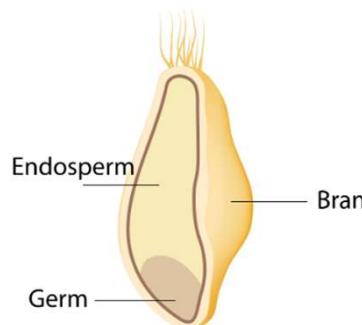
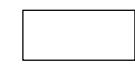
**Bread making:** mix flour with water, yeast, salt; knead and bake

**Cake making:** combine flour with sugar, fat and eggs

**Pasta production:** mix flour (usually durum wheat semolina) with water or eggs, knead, shape and dry

**Gluten:** protein in wheat gives elasticity

**Fermentation:** yeast produces carbon dioxide making dough rise



## Methods of preservation

**Chilling:** storing between 0-5°C to slow bacterial growth.

**Freezing:** storing below -18°C to stop bacterial growth

**Vacuum packing:** air is removed from packaging to prevent aerobic bacteria and mould growth

### **Modified atmosphere packing (MAP):**

air is replaced with an alternative gas e.g. nitrogen to slow spoilage and oxidation

**Canning:** food is heated in sealed cans to kill bacteria

**Drying:** Moisture is removed from food

**Pickling:** Food is stored in vinegar or brine to prevent bacterial growth

**Jam making:** fruit is boiled with sugar as sugar inhibits bacterial growth

**Pasteurisation:** liquid is heated to 72°C for 15sec to kill harmful bacteria

**UHT:** liquid is heated to 135°C to 1-2sec to extend shelf life without the need for refrigeration



### **TYPES OF PASTA**



Quand tu étais plus jeune (Imparfait)	When you were younger
<i>ta vie était comment?</i>	How was your life?
<i>Je suis né(e) en France/en Angleterre</i>	I was born in France/England
<i>Ma famille était ...</i>	My family was...
<i>Quand j'étais jeune,</i>	When I was younger
<i>J'habitais...</i>	I used to live...
<i>Je jouais au tennis/au basket</i>	I used to play tennis/basketball
<i>Je travaillais dans un hôtel</i>	I used to work in a hotel

Maintenant/de nos jours (présent)	Now/these days (present)
<i>Maintenant, je suis....</i>	Now, I am....
<i>J'écris des chansons/des poèmes</i>	I write songs/poems
<i>Je lutte pour les droits des travailleurs</i>	I fight for the rights of workers

### Using prepositions for countries and modes of transport

To say 'in' or 'to' a country in French, it is important to know the gender of the country. Most countries are feminine.

Feminine countries use *en* (*en France*).

Masculine singular countries use *au* (*au Canada*).

If the country is plural, use *aux* (*aux États-Unis*).

For towns, use *à* (*à Paris*).

e.g *je vais en France – tu vas aux États-Unis – elle va au Japon*

The conditional is used to say what you would do, e.g.

*je voyagerais* I would travel

To form it, take the future stem and add the **imperfect tense endings**

Note: for regular -er verbs, the future tense stem is the infinitive.

<i>je voyagerais</i>	<i>nous voyagerions</i>
<i>tu voyagerais</i>	<i>vous voyageriez</i>
<i>il/elle/on voyagerait</i>	<i>ils/elles voyageraient</i>

Pourquoi voudrais-tu voyager? Why would you like to travel?		
<i>Je voudrais/j'aimerais voyager pour me reposer</i>	I would like to travel to relax	
<i>me faire de nouveaux amis</i>	To make new friends	
<i>découvrir une nouvelle culture</i>	To discover a new culture	
<i>apprendre une nouvelle langue/un nouveau sport</i>	To learn a new language/sport	
<i>je voudrais passer mes vacances au camping/à l'hôtel/à la maison</i>	I would like to spend my holidays camping/in a hotel/at home	
<i>c'est où?</i>	Where is it?	
<i>c'est à 5 minute de la côte</i>	It's 5 minutes from the coast	
<i>on peut s'amuser en famille</i>	You can have fun as a family	
<i>se couper du monde/se faire plaisir</i>	Switch off from the world/treat yourself	

<i>Des vacances de rêve</i>	Dream holidays
<i>Des vacances...reposantes</i>	Relaxing holidays
<i>...culturelles</i>	Cultural holidays
<i>...d'aventure</i>	Adventure holidays
<i>Je passerais mes vacances ..</i>	I would spend my holiday
<i>À la montagne/sur une île/en ville</i>	In the mountains/on an island/in a town
<i>Je logerais...</i>	I would stay
<i>dans un hôtel de luxe</i>	In a luxury hotel
<i>dans une ferme</i>	In a farm
<i>dans un château</i>	In a castle
<i>sous une tente</i>	In a tent
<i>Je mangerais de la nourriture locale délicieuse</i>	I would eat delicious local food
<i>J'irais (avec mes copains)</i>	I would go (with my friends)



## Pour être en forme – In order to keep fit

Je ferai du sport	I will do sport
Je ferai trente minutes d'exercice par jour	I will do 30 mins exercise a day
J'irai au collège à vélo	I will go to school by bike
Je jouerai au foot	I will play football
Je mangerai équilibré	I will eat a balanced diet
Je marcherai au collège	I will walk to school
Je ne boirai jamais de boissons gazeuses	I will never drink fizzy drinks
Je ne jouerai plus à des jeux vidéo	I won't play video games anymore
Je ne mangerai plus de frites/hamburgers	I will not eat chips/hamburgers anymore
Je ne prendrai pas le bus	I will not take the bus
Je prendrai les escaliers	I will take the stairs
Je prendrai des cours d'arts martiaux	I will take martial arts lessons

## Future tense time phrases

À l'avenir	In the future
Un jour	One day
Si possible	If possible
A l'âge de	At the age of ..
Après mes études	After studying

## Higher structures for opinions

Étant donné que	Given that
Puisque	As/since
Vu que	Seeing that
Selon moi	According to me
Selon mes amis	According to my friends

## The simple future:

It is used to describe what will happen in the future "I will eat". **To form the future tense, use the infinitive plus the appropriate ending**

e.g je mangerai – *I will eat*.

For –er and –ir verbs, the future stem is the infinitive.

For –re verbs, drop the –e from the infinitive.

e.g. boire -> Je boirai – *I will drink*

\*\*for irregular verbs, see below

## Verb endings in the simple future

Je	-ai	Je mangerai
Tu	-as	Tu mangeras
Il/Elle/On	-a	Il/Elle/On mangera
Nous	-ons	Nous mangerons
Vous	-ez	Vous mangerez
Ils/Elles	-ont	Ils/Elles mangeront

## Picture Description - Actions

Il est/ils sont	He is/they are
Il fait/ils font	He is/they are doing
Il a /ils ont	He has/they have
Il mange/ils mangent	He is/they are eating
Il regarde/ils regardent	He is/they are watching
Il porte/ils portent	He is/they are wearing
Il travaille/ils travaillent	He is/they are working
Il lit/ils lisent	He is/they are reading
Il est assis/ils sont assis	He is/they are sitting
Elle est assise/elles sont assises	She is/they are sitting
Il parle avec/ils parlent avec	He is talking to
Il a l'air/ils ont l'air	He looks/they look
Il semble/ils semblent	He seems/they seem

## Picture description

Autre chose?	Anything to add?
Je pense..	I think..
Sur la photo	On the photo
Je peux voir/on peut voir	I can see/you can see
De plus je peux voir	Also I can see
À gauche/à droite	On the left/on the right
À l'arrière plan	In the background
Au premier plan	In the foreground
Il est en train de ...	He is in the middle of
Ils sont en train de ...	They are in the process of
La photo a été prise	The photo was taken
J'imagine que	I image that

## Irregular simple future verbs:

J'irai	I will go
Je ferai	I will do
Je serai	I will be
J'aurai	I will have
Je devrai	I will have to
Ce sera	It will be
Je pourrai	I will be able to
Il y aura	There will be

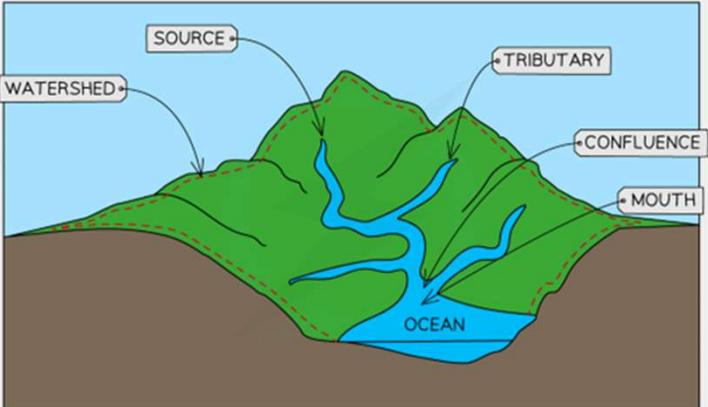


## Topic 4b: River Processes

### Section 1: Drainage basins

#### What is a drainage basin?

An area of land drained by a river and its tributaries.



**Watershed:** Highland or hill that separates one drainage basin from another

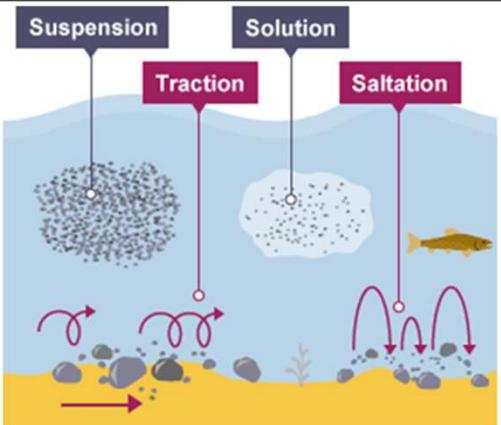
**Confluence:** the point where two rivers/streams meet/join

**Tributary:** a smaller stream or river that joins a bigger stream or river

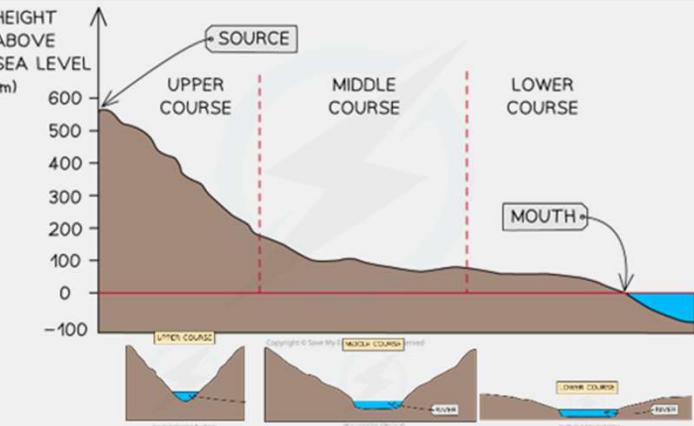
**Source:** the starting point of a river or stream

**Mouth:** the point where a river leaves the drainage basin and enters the sea

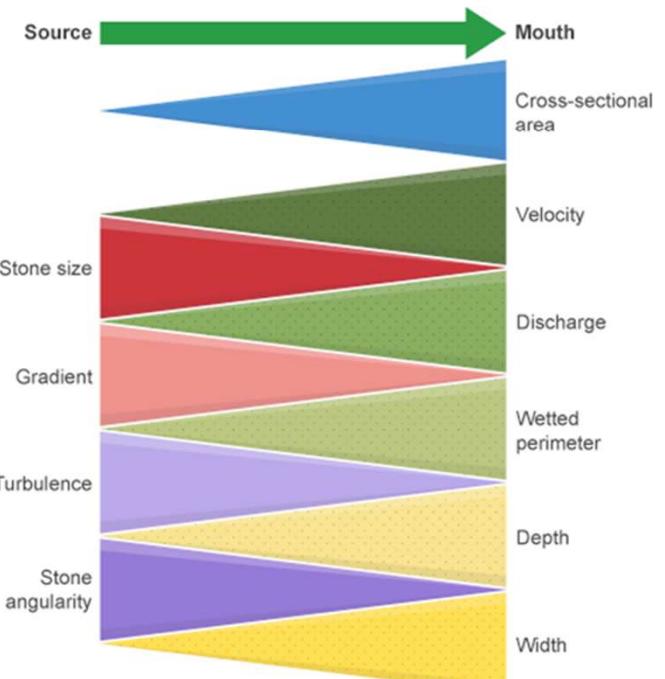
### Section 2: River transport



### Section 3: River courses



**Bradshaw Model:** theoretical model that shows how a river's characteristics change as it goes downstream. If the triangle increases in size it means that variable increases the further you go down the stream



### Section 4: River landforms

**V-Shaped Valleys:** In the upper course, the river erodes vertically, deepening the valley. Weathering weakens the sides, causing material to collapse, forming a steep V-shape.

**Interlocking Spurs:** The river weaves around resistant rock, unable to erode it. This creates protruding ridges, or interlocking spurs, forming a zig-zag pattern.

**Waterfalls:** harder rock overlays softer rock which is eroded more rapidly by abrasion, hydraulic action and solution. Overtime, this continues and a deep plunge pool forms undercutting the harder rock overhang. This is unsupported and collapses adding debris speeding up erosion and the waterfall retreats upstream, creating a gorge.

**Meander:** Large bends that swing from side to side (sinuosity) on the floodplain. Faster flowing water erodes the outside of the bend through lateral erosion creating a steep bank (river cliff) whilst the inside of the bend due to slower shallower water deposition takes place creating a gently sloping bank (slip-off slope).

**Oxbow Lake:** When a meander grows its neck narrows then at times of flood the river simply cuts straight through it leaving an old meander cut off (horseshoe-shaped lake). Deposition blocks up the old bend.

**Levees:** During floods, heavy sediment is deposited near the channel, while finer material spreads further. Over time, raised banks (levees) form along the river.

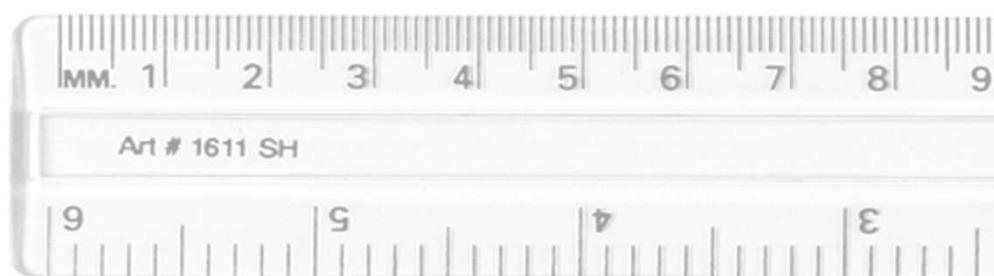
**Floodplains:** Repeated flooding deposits silt across the valley floor. This builds up over time, creating a wide, flat, fertile floodplain.



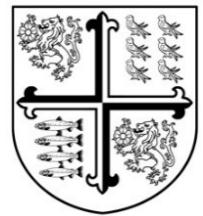
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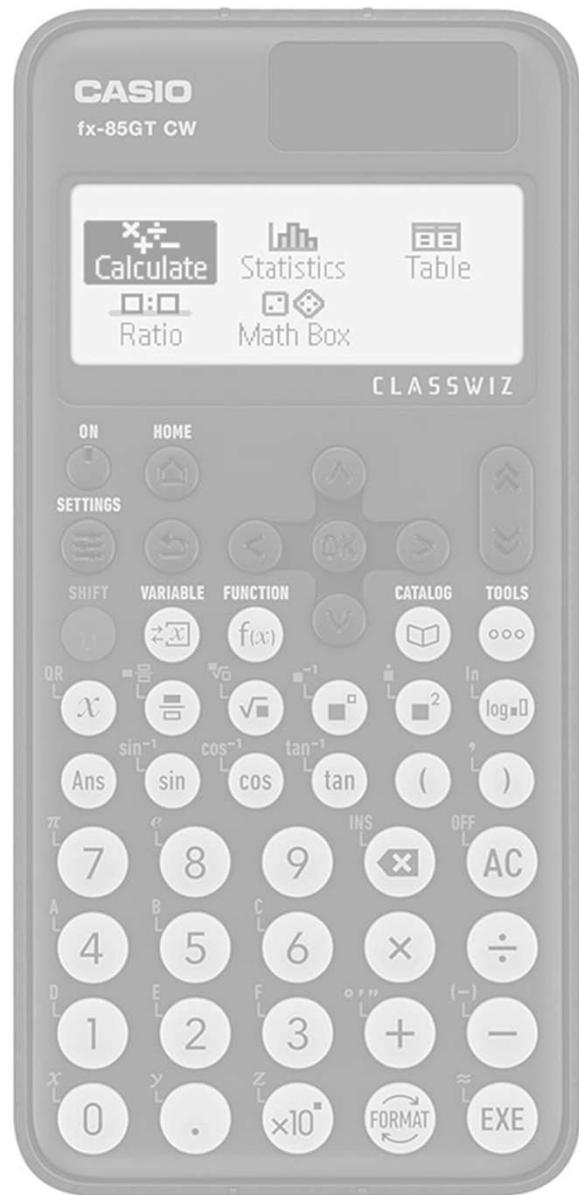
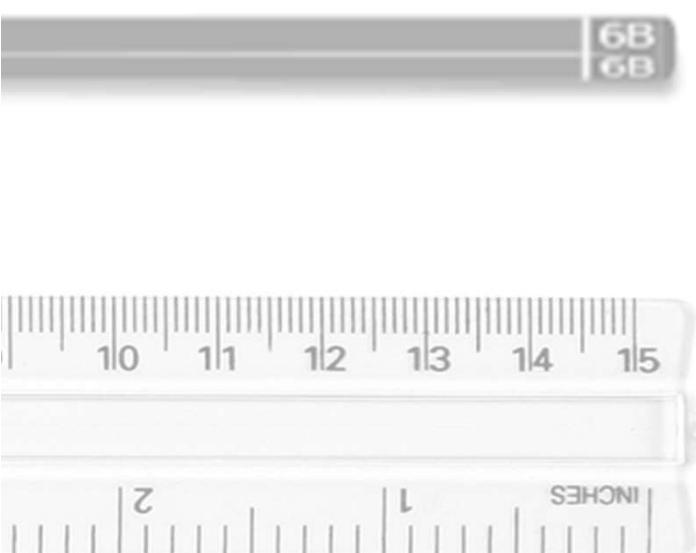
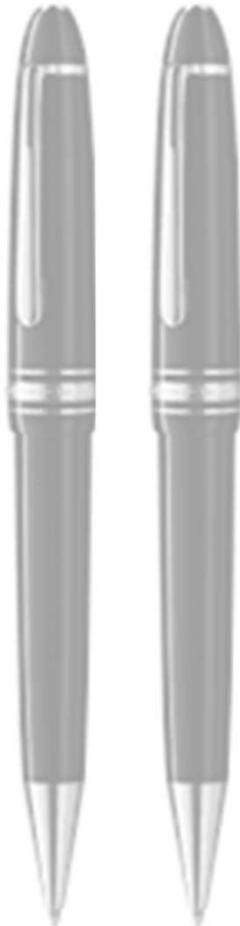
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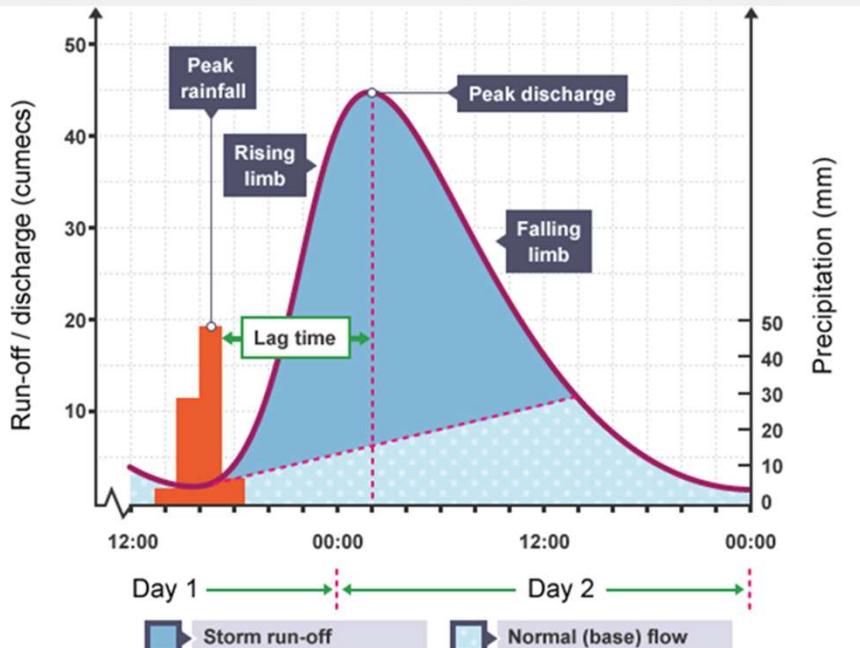
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- Whiteboard pens
- Black/blue pens
- Glue stick
- Pencil
- Ruler
- Calculator





## Section 5: Hydrographs

A **hydrograph** is a way of showing how a river responds to a rainfall event showing the relationship between rainfall (mm) and discharge ( $m^3/s$ ).



**Rising limb** = indicates discharge increases a few hours after rainfall.

**Peak flow** = Discharge reaches max levels.

**Recession (falling) limb** = indicates a fall in discharge once the water has passed downstream.

**Lag time** = time from peak rainfall to peak discharge

## Factors Affecting Flood Hydrographs

- Rock Type** – Impermeable rock = **flashy**. Permeable rock = **subdued**.
- Soil Type** – Clay (low infiltration) = **flashy**. Sandy (high infiltration) = **subdued**.
- Slopes** – Steep slopes = **flashy**. Gentle slopes = **subdued**.
- Vegetation** – Less vegetation = **flashy**. More vegetation = **subdued**.
- Land Use** – Urban areas (concrete, drains) = **flashy**. Natural land = **subdued**.
- Basin Shape** – Small, round basin = **flashy**. Large, long basin = **subdued**.

**Antecedent conditions** - **wet conditions before a storm cause the ground to become saturated**. This speeds up overland flow and shortens lag time. Drier conditions mean the rainfall can infiltrate into the soil slowing down lag time.

## Section 6: Somerset Levels

The Somerset levels are one of the UK's lowest lying areas (< 8m above sea level). It is a wetland system that was artificially drained in the 17th century for farming (grazing). During drainage the land shrunk, much of it is now below high tide water level. In the winter of 2014, a particularly serious flood hit the Levels.

## Causes:

**Prolonged Heavy Rainfall** – The area saw record-breaking rainfall in January and February.

**Flat, Low-Lying Land** – The Somerset Levels are naturally prone to flooding.

**River Dredging Issues** – Rivers had not been dredged for years, reducing their capacity.

**High Tides & Storm Surges** – Water backed up in rivers, worsening flooding.

**Urbanisation & Land Use Changes** – Some areas had poor drainage, increasing surface runoff.

## Impacts:

**Social:** Over 600 homes flooded, villages cut off, transport links disrupted.

**Economic:** £10 million+ in damages, businesses and farmland destroyed.

**Environmental:** Contaminated floodwater, loss of habitats, soil erosion

## Section 7: River management

## Hard Engineering

## Flood Walls

- Green circle: Immediate protection, low maintenance.
- Red X: Costly (£6m/km), ugly, worsens downstream floods.

## Embankments

- Green circle: Cheap (£1m/km), increases capacity.
- Red X: Can fail if overtopped, needs upkeep.

## Flood Barriers

- Green circle: Protects cities, used when needed.
- Red X: Very expensive (£534m Thames Barrier), needs monitoring.

## Soft Engineering

## Floodplain Retention

- Green circle: Cheap, absorbs floodwater naturally.
- Red X: Needs space, limits land use.

## River Restoration

- Green circle: Slows flow, improves habitats.
- Red X: Takes time, reduces farmland.

The Somerset Levels and Moors Flood Action Plan is a 20-year plan that was developed after the 2014 floods.

The Flood Action Plan aims to reduce the risk of future flooding through management of the river and the Somerset area.

In a 2022 review, the following were confirmed to have been completed:

- 4km of the River Tone and 4km of the River Parrett have been dredged (removed 130,000m<sup>3</sup> of silt)
- Repairs and reinstate river and flood banks
- Installation of permanent infrastructure to enable temporary pumping at Dunball, Northmorr and B&T Canal
- Support adoption of more flood resilient farming systems and adaptation



Was möchte ich ändern? – What would I like to change?	
Probleme und Lösungen ändern	problems and solutions to change, alter
aufgeben	to give up
essen	to eat
(sich) fühlen	to feel
gehen	to go, walk
hoffen	to hope
laufen	to run
lösen	to solve
planen	to plan
reduzieren	to reduce
schlafen	to sleep
schwimmen	to swim
verbringen	to spend (time)
versuchen	to try
verursachen	to cause
vermeiden	to avoid
werden	to become

Was möchte ich ändern? – What would I like to change?	
der Bildschirm	screen, monitor
der Freund	friend, ally, boyfriend
die Freundin	female friend, girlfriend
die Portion	portion, helping, serving
die Schule	school
die Woche	week
die Zeit	time
das Bett	bed
das Fitness-zentrum	gym
das Gemüse	vegetables
das Handy	mobile phone
das Obst	fruit
das Problem	problem
das Stück	piece
die Unterstützung	treatment, support

Gute Tage, schlechte Tage – Good days, bad days	
das Wohlbefinden	well-being
Wenn ich ... hätte, würde ich ...	If I had ... I would ...
Wenn ich ... wäre, würde ich ....	If I was ..., I would ...
mehr Sport treiben	do more sport
ein Instrument lernen	learn an instrument
öfter ins Kino gehen	go to the cinema more often
mit meinen Eltern (darüber) sprechen	talk to my parents (about it)
besser schlafen	sleep better
weniger gestresst sein	be less stressed
mir besser konzentrieren können	be able to concentrate better
glücklich / glücklicher sein	be happy / happier
mir besser fühlen	feel better
mehr Energie haben	have more energy
spazieren gehen / sich bewegen	go for a walk/stroll/ to exercise
helfen	help

Das finde ich wichtig – I find that important	
Das Wichtigste im Leben	The most important thing in life
Für mich ist/sind ... sehr wichtig / das Wichtigste	For me ... is/are very important / the most important
die Gesundheit	health
die Freizeit	free time
die Karriere	career
die Ruhe	silence / peace
persönliche Werte	personal values
Beziehungen	relationships

Neulich habe ich ... beschlossen / mich entschieden / versucht ... – Recently, I decided / decided / tried ...	
In der Zukunft habe ich vor, / plane ich / hoffe ich ...	In the future I intend / plan / hope ...
gesund / gesünder zu essen	to eat healthy / healthier
öfter Sport zu machen / treiben	to do more sport
früher ins Bett zu gehen	to go to bed earlier
mehr Energie zu haben	to have more energy
mehr Zeit mit der Familie zu verbringen	to spend more time with the family
weniger Stress im Leben zu haben	to have less stress in my life



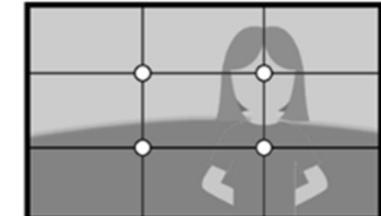
Wo wohnst du? – Where do you live?	
Ich wohne ...	I live ...
in einem Dorf	in a village
in einer Kleinstadt / Großstadt	in a small town / a city
in der Stadtmitte	in the town centre
in den Bergen	in the mountains
am Stadtrand	on the outskirts
auf dem Land	in the countryside
an einem See	by a lake
an der Küste	on the coast
das liegt ...	it lies / is situated ...
im Norden von ...	in the north of ...
im Osten von ...	in the east of ...
im Süden von ...	in the south of ...
im Westen von ...	in the west of ...

Wo wohnst du? – Where do you live?	
der Ort ist ...	the place/location/town is ...
der Bereich / die Gegend / Region ist	the area/region is ...
die Landschaft ist ...	The countryside/landscape is ...
die Umgebung ist ...	The surroundings are
besonders	particularly, especially
echt/extrem	really/extremely
ganz/relativ	quite/relatively
alt/neu	old/new
sauber/schmutzig	clean/dirty
schön	beautiful
historisch/modern	historic/modern
ruhig/laut	quiet/noisy
sicher	safe

Es gibt ... - There is/are	
(k)einen Flughafen	(no) airport
(k)eine Bank	(no) bank
(k)eine Bibliothek	(no) library
(k)eine Post	(no) post office
(k)eine Schule	(no) school
(k)eine Universität	(no) university
(k)ein Fitness-zentrum	(no) gym
(k)ein Geschäft	(no) shop
(k)ein Kino	(no) cinema
(k)ein Krankenhaus	(no) hospital
(k)ein Museum	(no) museum
(k)ein Schloss	(no) castle
(k)ein Schwimmbad	(no) swimming pool
(k)ein Stadion	(no) stadium
(k)ein Theater	(no) theatre
viel Verkehr	a lot of traffic

Picture description	
Im Bild/Im Foto	On the photo
Ich/Man kann ... sehen	I can see/You can see
Im Bild gibt es	In the picture there is
Auf der linken/rechten Seite	On the left/on the right
Im Hintergrund	In the background
Im Vordergrund	In the foreground
Das Foto wurde ..... gemacht	The photo was taken
Sie spielen, essen, tragen	They are playing, eating, wearing
USE PRESENT TENSE TO SAY WHAT PEOPLE ARE DOING – “NO IS-ING” “AM-ING” OR “ARE-ING”	

Verkehrsmittel – means of transport	
Man kann / muss / soll	You can / have to / must ...
reisen/fahren	travel / drive
fliegen	fly
mit dem Auto/Wagen	by car
mit dem Boot/Schiff	by boat/ship
mit dem Bus	by bus
mit dem Elektroauto	by electric car
mit dem Fahrrad	by bike
mit dem Flugzeug	by plane
mit dem Reisebus	by coach
mit dem Zug / der Bahn	by train/rail
mit der Straßenbahn	by tram
in die USA	to the USA
in die Stadtmitte	to the town centre
nach Hause	home
zum Flughafen/Bahnhof	to the airport/station
zur Schule	to school
, weil ich um die Ecke wohne	because I live around the corner
, weil wir weit von der Schule wohnen	because we live far from school
, weil die Schule ganz nah ist	because school is quite close
, weil es eine lange Fahrt ist	because it is a long journey
, weil die Reise/Fahrt ... dauert	because the journey takes ...
, weil es am schnellsten geht	because it is the quickest way



## RULE OF THIRDS

The photo is divided by nine boxes. The subject is in one of the intersecting lines, or the circles.

# PHOTO BASICS



## SHUTTER SPEED & APERTURE

These figures are on your SLR camera screen. The higher the number (1/400), the faster the shutter speed. You are able to shoot faster subjects. As your aperture number gets lower (F2.8), more light is allowed into the lens. More light allows you to shoot in lower light situations.



## LEADING LINES

The road in this picture serves as a guide that lead your eyes to the subject of the photo.



## FRAMING

This is when there are objects around the subject that frame the subject, making your eyes more drawn to it.



## DEPTH OF FIELD

This is when the subject of the photo is completely in focus and the background is blurry. This can be controlled by aperture.



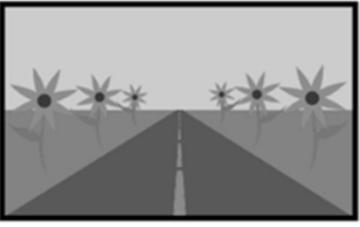
## BALANCE

Placing your main subject off-centre, as with the rule of thirds, creates a more interesting photo. You should balance the "weight" of your subject by including another object of lesser importance to fill the space.



## VIEW POINT

Before shooting your subject, think about where you will shoot it from. The viewpoint has a massive impact on the composition of a photo, and it can greatly affect the message that the shot conveys.



## SYMMETRY

This is when the photo is equally balanced or has a pattern, creating symmetry within the photo. This can be very eye-catching, particularly in situations where they are not expected.

## Annotating your work

Use these heading to explain your own graphic design work and how other designers have inspired you.

What? **What is it?** Explain the piece of work you are annotating Examples: This is a digital drawing that I made of a ... This is a series of photographs I took of... This is a collection of visual research about... This is information I gathered about... This is a copy that I made of a piece of design by... This is a mood board of... to show ideas relating...

Why? **Why did you make it?** Explain how this piece helped you in your project. Examples: to get ideas about... to get me thinking about... to show what I have learned about... to explore the ideas of... to examine the Element and Principles of Design of... to analyse the style of... to try out the technique of... to practice... to develop my skills in...

How? **How did you make it?** Explain how you created the piece of work Examples: ... I painted it with... I developed in digitally using... I built it up by collaging... I photographed/drew it from life... I drew/painted it from a photography... I gathered the images from the internet... I researched the information on a site called...

Quality **How good is it?** What are you pleased with? What could you improve? Examples: I am pleased with the way I... one good element of the work is... the best feature of this work is... a section of this work that is particularly successful is... I'm not happy with... one area I could improve is... the least successful part of the work is... I wish that I had...

Learning **What did you learn?** What have you found out? What are the next steps? Examples: I improved my skills in... I got better at working in the style of... I have a better idea of... I have a clearer understanding of... I feel more confident about... Next I will try... To follow this up, I will... To build on this piece of work I hope to...

## Skills – Photoshop/ Affinity

<input type="checkbox"/> Layers	<input type="checkbox"/> Transform
<input type="checkbox"/> History	<input type="checkbox"/> Define pattern
<input type="checkbox"/> Adjustment tools	<input type="checkbox"/> Filters
<input type="checkbox"/> Selection tools	<input type="checkbox"/> Puppet warp
<input type="checkbox"/> Liquify	
<input type="checkbox"/> Gradient	
<input type="checkbox"/> Brush tool	
<input type="checkbox"/> Pen tool	
<input type="checkbox"/> Type	
<input type="checkbox"/> Dodge/burn	

## Key Designers

Leif Podhajsky

Leif Podhajsky is an Australian graphic designer and art director, well known for his distinctive **album cover art**

Magdol Lopez

Magdol Lopez is a Cuban-born graphic designer renowned for his vibrant, **surrealist artwork**, particularly showcased in his "A Poster a Day" series.

Milton Glazer

Milton Glazer created playful, psychedelic graphics with controlled blasts of colours along with **silhouettes** and **bold geometric** outlines.

## Album Covers



# Year 10 Elizabeth (1) 1558 - 1569

## Timeline of key events:

**1558:** Accession to the Throne

**1559:** Religious Settlement;

**1559:** Treaty of Cateau-Cambresis;

**1559:** Scottish Prot. Lords' rebellion

**1561:** Mary Queen of Scots returns to Scotland from France

**1563:** King Philip II bans the importation of English cloth to the Netherlands

**1565:** Mary QoS marries Henry Stuart, Lord Darnley

**1566:** Mary's son James is born.

**1566:** Dutch Revolt begins

**1567:** Darnley murdered; Mary QoS marries Bothwell; she abdicates and is imprisoned.

**1567:** Spanish Fury: Alba sends 10,000 Spanish troops to crush Dutch Revolt

**1568:** Mary QoS escapes captivity and flees to England.

**1568:** Genoese Loan incident; Eliz took gold from Sp. ships sheltering in English ports

**1569:** Norfolk Plot and Revolt of the Northern Earls.

**1569:** Mary QoS placed under house arrest in England

# Year 10 Paper 2 Elizabeth (2) 1569 - 1588

## Timeline of key events:

**1569:** Norfolk Plot & Revolt of the Northern Earls

**1570:** Papal Bull against Elizabeth; Pope Pius V excommunicates Elizabeth from RC Church

**1571:** Ridolfi Plot

**1572:** Drake attacked Spanish at Nombre de Dios in Panama; seized silver worth £20,000

**1574:** first Jesuits priests smuggled into England

**1576:** 'Spanish Fury' sees the sacking of Antwerp, uniting Dutch against Spanish

**1577:** Don Juan honours the Pacification of Ghent; Spanish army arrive 6 months later

**Dec 1577:** Drake's circumnavigation of the globe begins

**1579:** Duke of Parma put in charge of The Netherlands

**Feb 1579:** Drake reaches Callao, Peru; attacks ships including the Cacafuego

**Nov 1580:** Philip takes control of Portugal

**Nov 1580:** Drake returns from circumnavigating the globe

**1581:** Drake Knighted on Golden Hind

**1582:** Duke of Alencon/Anjou returned to Netherlands, backed by Elizabeth's money

**1583:** Alencon/Anjou had failed in the Netherlands

**Nov 1583:** Throckmorton Plot uncovered

**1584:** Death of Alencon/Anjou leads to formation of a Catholic League in France

**July 1584:** Death of William of Orange.

**Dec 1584:** Treaty of Joinville;

**10<sup>th</sup> Aug 1585:** Treaty of Nonsuch

**Jan 1586:** Earl of Leicester accepts title 'Governor General of the Netherlands'

**1586:** Treaty of Bewick

**19<sup>th</sup> -22<sup>nd</sup> April 1587:** Drake's raid on Cadiz

**Late 1587:** Leicester recalled to England

**29<sup>th</sup> July 1588:** Armada spotted in Channel

**8<sup>th</sup> Aug 1588:** Battle of Gravelines

**Sept 1588:** Armada defeated

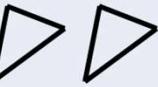
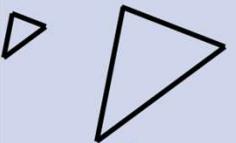


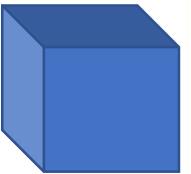
Term	Definition
Accession	The term given for when a monarch (King or Queen) takes the throne
Gentry	About 2% of the population; they were wealthy landowners; Knights & Squires
Nobility	Hereditary titles, passing from father to eldest son. Dukes, Barons or Earls.
Merchants	a person involved in trade, especially one dealing with foreign countries
Court	The community of people who lived with the Queen including advisers and officials
Privy Council	The committee of ministers appointed by the Queen to advise her
Parliament	House of Commons and Lords: summoned by the Queen for raising taxes / laws
Lords Lieutenant	Responsible for governing each county and organising the local army / militia
Justices of the Peace	Usually from the gentry; appointed by Monarch to keep law and order. Carried status.
Yeomen	Farmers who owned their own land; some growing quite wealthy in Elizabeth's reign
Vagrants	Homeless and jobless people who wandered the country and could turn to crime
Patronage	Providing someone with an important job or position or finance; to be a 'patron'
Divine Right	The belief that the Monarch has a God-given right to inherit the Throne
Crown	The refers to the Monarch and their government
Royal Prerogative	Some areas where only Elizabeth had the right to decide upon, such as marriage
Succession	The issue of who was going to succeed the Throne after the death of current Monarch
Legitimacy	The right to inherit, based on being born to reigning parents who were married
Crown Debt	Money owed by the crown; £300,000 in 1558 due to costly wars & selling of Crown land
Auld Alliance	The term given to the traditional friendship between France and Scotland
Cateau-Cambresis	The Treaty of 1559 that marked the end the war with France and the loss of Calais
Religious Settlement	Elizabeth's Act to create a new and moderate religious compromise with the intention of creating a form of Protestant worship acceptable to Catholics too.
Act of Supremacy	The law which made Elizabeth supreme governor of the Church of England
Act of Uniformity	The law given to setting up an agreed appearance for churches and services
Royal Injunctions	The term for the set of instructions from Queen to clergy, including how to worship
Papal Bull	Term given to a public decree or charter from the Pope, Head of the Catholic Church
Priest holes	Hiding places used by priests in many Catholic houses when facing persecution by law
Recusants	Term given to those who refused to attend services of the Church of England
Puritans	Protestants wanting to purify the Church of England from Roman Catholic practices
Crucifix	A representation of Jesus Christ dying on the cross
Vestments	Elaborate clothing worn by clergy during church services
Counter-Reformation	The name given to the active fight-back to strengthen Catholicism in Europe
Dutch Revolt	A reaction in the Netherlands to increased interference by Spain in Dutch govt
Sea Beggars	Name given to Dutch rebels who used the English Channel to attack Spanish ships
Spymaster	Name given to Sir Francis Walsingham, Elizabeth's Secretary of State
Plots	Secret plans to overthrow Elizabeth: Northern Earls, Ridolfi, Throckmorton, Babington



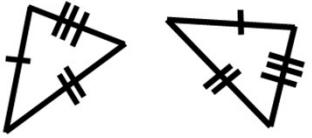
Term / key people	Definition / roles explained
<b>Norfolk Plot</b>	A Court plan to marry Mary Queen of Scots to Duke of Norfolk, a Protestant, & solve succession problem
<b>Revolt of Northern Earls</b>	Plot supported by ancient noble Catholic families to restore Catholicism & their power and influence lost since the 1558 Settlement
<b>Ridolfi Plot</b>	Plot led by Ridolfi (Pope's banker) to assassinate Elizabeth, replace with MQoS who would marry Duke of Norfolk. Norfolk subsequently executed.
<b>The Spanish Fury</b>	A mutiny of Spanish forces in Netherlands leading to violence in Antwerp
<b>'Pacification of Ghent'</b>	Drawn up by all 17 Dutch provinces, both Protestant and Catholic demanding the expulsion of Spanish troops from the Netherlands, political autonomy & no more religious persecution,
<b>Circumnavigation of the globe</b>	Drake's famous voyage of exploration, Dec 1577 – Sept 1580, where he sailed around the globe, on the Golden Hind and 4 other ships
<b>Duke of Parma</b>	Spanish military general, sent to Netherlands by Philip II & made some headway against the rebels
<b>Cacafuego</b>	A Spanish treasure ship captured and raided by Drake off the coast of Peru in 1579
<b>Duke of Alencon/ Anjou</b>	Heir to French throne; possible suitor for Elizabeth; fought the Spanish in Netherlands
<b>Throckmorton Plot</b>	Plot aiming to free Mary Queen of Scots and make her Queen instead of Elizabeth
<b>William of Orange</b>	Leader of Dutch Protestant rebels; killed by a Catholic supporter of Philip II of Spain
<b>Treaty of Joinville</b>	Agreement between French Catholic League & Philip II securing Spanish help against French Protestants
<b>Treaty of Nonsuch</b>	Signed by Elizabeth and Dutch Protestants, effectively put England at war with Spain
<b>Treaty of Berwick</b>	Signed with Scotland; secured English borders; England could now focus on Netherlands
<b>Earl of Leicester</b>	Robert Dudley; by accepting title of Governor General of Netherlands, he angered Elizabeth
<b>Raid on Cadiz</b>	'Singeing of the King of Spain's beard'; Drake sailed into Cadiz harbour and destroyed 30 ships and many Spanish provisions
<b>Armada</b>	Spanish naval fleet/ warships; 130 ships sailed with the intent of invading England in 1588
<b>galleons</b>	Large sailing ship with several decks, used originally as a warship and later for trade
<b>Duke of Medina - Sidonia</b>	Commander of the Armada; inexperienced in naval battles and reluctant to lead the Armada
<b>Fire-ships</b>	Naval tactic using old wooden ships packed with flammable material to scatter the Armada
<b>Gravelines</b>	Naval battle in English Channel; the wind direction scattered the Armada, breaking their crescent formation and Spanish out-moved by the faster, more mobile English ships
<b>The New World</b>	16 <sup>th</sup> Century name for North and South America
<b>Ambassador</b>	An official envoy representing a state or country
<b>Astrolabe</b>	An instrument used by sailors to calculate their position by the stars
<b>Bullion</b>	Bars of gold and silver
<b>Jesuits</b>	Catholic missionary priests who came to England to restore Roman Catholicism



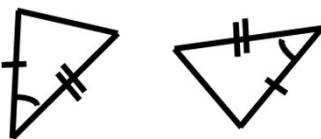
Keyword	Definition	Example(s)
Congruent	Congruent shapes are exactly the same shape and size	All angles and sides lengths are the same 
Congruent Triangles	There are four conditions for two triangles to be congruent SSS – all three sides equal SAS – two sides and the included angle are equal ASA – two angles and a corresponding side are equal RHS – right angle, hypotenuse and one other side are equal	
Similar	Two shapes are similar if one is an enlargement of the other	
Scale factor	The scale factor is how much the shape has been enlarged by	Scale factor of 3

If two 3D shapes are similar and the scale factor of their lengths is $k$
• The lengths are multiplied by $k$
• The surface area is multiplied by $k^2$
• The volume is multiplied by $k^3$


SSS



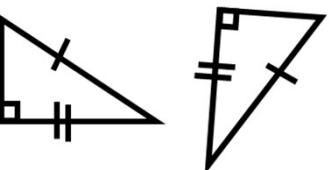
SAS



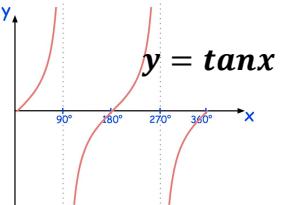
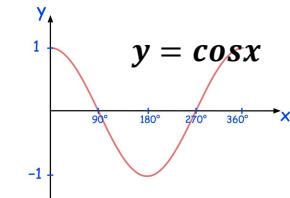
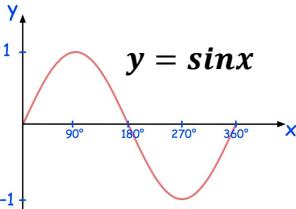
ASA



RHS



Keyword	Definition	Example(s)
Asymptote	A line which a graph tends towards but never reaches.	$y = \tan x$ has asymptotes at $x = \pm 90^\circ, x = \pm 270^\circ, \dots$
Bearings	Angles with a given direction. Always measured clockwise from North and written using 3 digits.	$093^\circ$ $125^\circ$



	${}^{\circ}0$	$30^\circ$	$45^\circ$	$60^\circ$	$90^\circ$
$\sin x$	0	$\frac{1}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{3}}{2}$	1
$\cos x$	1	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{1}{2}$	0
$\tan x$	0	$\frac{\sqrt{3}}{3}$	1	$\sqrt{3}$	n/a

### SINE RULE

$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$

$\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$

### COSINE RULE

$a^2 = b^2 + c^2 - 2bc\cos A$

$\cos A = \frac{b^2 + c^2 - a^2}{2bc}$

### TRANSFORMATIONS OF FUNCTIONS

$y = -f(x)$ : represents a reflection in the  $x$ -axis

$y = f(-x)$ : represents a reflection in the  $y$ -axis

$y = -f(-x)$ : represents a reflection in both axes, equivalent to a rotation of  $180^\circ$  about  $(0,0)$ .

$y = f(x) + a$ : represents a translation through  $(0, a)$

$y = f(x + a)$ : represents a translation through  $(-a, 0)$



## Context

**Jukebox musical** a musical in which the score is made up of existing songs, usually all by the same artist or with a strong thematic link

**Music theatre** integrates songs, spoken dialogue, acting and dance within a popular idiom.

**Musicals** are an extended piece of music theatre.

**Underscore (or Background music)** non-diegetic music adding to the mood of a scene, reinforcing character developments and aspects of character.

**Vaudeville** a form of comic musical theatre from the 1880s

## Rhythm

**Colla voce** literally 'with the voice'. This is an instruction to the accompanist or band and musical director to follow the vocalist's tempo and beat (allowing them more freedom).

**Cross rhythms** rhythms that cross the usual pattern of accented and unaccented beats, creating irregular patterns and syncopated effects.

**Metrical shifting** the downbeat is shifted to a different part of the bar

**Syncopation** emphasis on the offbeat

## Texture

**Duet** Music for two players or in this case singers

**Homophonic** a texture comprising a melody part and an accompaniment

**Monophonic** A single melodic line with no accompaniment

**Stab Chord** A single detached chord which adds dramatic punctuation to the music

**Unison** more than one part playing the same melody at the same pitch

**Vamp** a short repeated accompanying phrase

## Structure

**Chorus** a part of a song which is repeated after each verse. Lyrics and music usually the same each time.

**Recitative** a section or short piece of music which uses speech rhythms and usually has little accompaniment

**Verse** A verse is a part of a song that tells the story or moves the action forward. Music is the same each time, but the lyrics change

## Melody

**Compound interval** an interval wider than an octave. For example, a compound third could be a tenth or seventeenth.

**Conjunct** movement by step

**Disjunct** movement by leap

**Enharmonic** two identically sounding pitches with different names—for example Eb and D#.

**Motif** a short melodic phrase

**Sequence** repetition of a musical phrase at a higher or lower pitch than the original

**Syllabic** when one note is sung per syllable

**Vocalisation** wordless singing using a vowel syllable such as Ah

**Word painting** depicting a word in music to imitate its meaning



This QR code will take you to a Spotify playlist with audio examples of many of the concepts covered on this sheet and in lessons. You will find it helpful to listen to these as you learn.

## Defying gravity

### Instrumentation/ Sonority

**Distortion** an effect that increases the volume and sustain on an electric guitar as well as making the timbre more 'gritty'. Designed to emulate the effect of overloading the valves on an older amplifier.

**Effects** electronic devices designed to enhance or alter the basic sound quality (for example, delay, reverb).

**Over Drive** use of a distorted guitar sound

**Pad** a synthesiser sound designed to be used in chords as opposed to lead lines

**Synthesiser** an electronic musical instrument that creates sounds by manipulating combinations of waveforms or by modifying existing sounds

**Tremolo/tremolando** rapid repetition of the same note to create a wavering, tremulous sound.

**Vibrato** a technique used to cause rapid variations in pitch.

### Harmony

**Consonant** Intervals or chords that don't clash—major/minor triads and intervals of a third or sixth are examples

**Dissonant** sounds that clash. Dissonant intervals are major and minor second and seventh, and the triton (augmented fourth or diminished fifth)

**Pedal** a sustained or repeated note in the bass, with harmonic changes above the pedal note. Usually on either the tonic or dominant note of the scale



Keyword	Learn	✓
Addiction	An inability to stop doing or using something, especially something harmful: drug addiction.	
Habit	A settled or regular tendency or practice, especially one that is hard to give up	
Internal influence	Internal influences include: desires, likes, dislikes, personal values and perceptions of social norms.	
External influence	External influences include: community members, family, culture and traditions, friends, technology, and the media.	
Carcinogenic	Something that can cause or promote cancer, a disease of abnormal cell growth and spread.	
Toxic	Poisonous, very unpleasant or unacceptable, something causing you a lot of harm and unhappiness over a long period of time:	
Stimulant	A substance that raises levels of physiological or nervous activity in the body.	
Passive smoking	The involuntary inhaling of smoke from other people's cigarettes, cigars, or pipes. Passive vaping may also cause offence or harm.	
Drug	A substance which has a physiological effect when ingested or otherwise introduced into the body.	

**Help and support:****ChildLine:** Phone: 0800 1111[www.childline.org.uk](http://www.childline.org.uk)[www.childline.org.uk/info-advice/you-your-body/drugs-alcohol-smoking/smoking](http://www.childline.org.uk/info-advice/you-your-body/drugs-alcohol-smoking/smoking)[www.nhs.uk/live-well/quit-smoking/quitting-smoking-under-18s-guide](http://www.nhs.uk/live-well/quit-smoking/quitting-smoking-under-18s-guide)**Young Minds:**[www.youngminds.org.uk](http://www.youngminds.org.uk)**Samaritans:** Phone: 116 123[www.samaritans.org](http://www.samaritans.org)**Talk to frank – drug and substance misuse support:**<https://www.talktofrank.com>

In a crisis, text 'Shout' to 85258

**Useful Careers Websites**

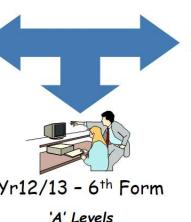
The **Unifrog** platform is designed to support learners in making the most informed decisions about their futures and has a range of tools that are suitable for all year groups. Each student has their own personal account that provides a wide range of information related to their interests and aspirations. [www.unifrog.org](http://www.unifrog.org)



Information on apprenticeships, including a range of different schemes:

<https://amazingapprenticeships.com/>[www.gov.uk/apply-apprenticeship](http://www.gov.uk/apply-apprenticeship)**KS4 – choices for Post 16**

General careers information:

<https://careerpilot.org.uk/>[www.nationalcareers.service.gov.uk](http://www.nationalcareers.service.gov.uk)[www.prospects.ac.uk/job-profiles](http://www.prospects.ac.uk/job-profiles)FE College  
'A' Levels,  
NVQ, BTec

**Key Words:**

- Adultery**- Cheating on the person you are married to.
- Divorce**- To legally end a marriage.
- Commitment**- A sense of dedication and duty to someone.
- Responsibilities**- Actions or duties you are expected to carry out.
- Cohabitation**- To live together in a sexual relationship without being married.
- Contraception**- Methods used to stop a woman getting pregnant or from people catching Sexual transmitted infections.
- Gender equality**- People of all genders enjoying the same rights and responsibilities.
- Roles**- Position, status or function of a person in society.

**The nature of Families:**

- Different types of families
- Nuclear family** → a mother, father and children (most common family type in the west)
- Extended family** > includes grandparents and other relatives.
- Jews view themselves as an extended family, descending from Abraham, Isaac and Jacob
- Families with same-sex parents → when a homosexual couple raise children together.
- Some Christians and Orthodox Jews disapprove as they believe children should have both male and female role models.
- Role of parents** → love and care for children, educate them about their faith, encourage positive morals and values.
- Role of children** → love and respect parents, support and care for them.

**Contraception and family planning**

- Most Christians and Jews accept family planning in certain circumstances, but not to stop having children altogether.
- Christian views**  
Catholics → artificial contraception goes against natural law. Sex should be about creating new life (rhythm method is allowed). Other Christian's → contraception should be allowed for family planning.
- Jewish views**  
Orthodox → accepts use of contraception by married couples.  
Reform → allow contraception for many reasons including social and financial reasons.

**The Purpose of Families**

- Procreation**: bringing babies into the world.
- For Christians and Jews** the purpose of families is to procreate, educate children in the faith and to protect children and keep them safe.
- Procreation**: Mainly takes place within the family. Jews consider a large family a blessing from God. For Christians, procreation is an important purpose of the family.
- Stability and the protection of children**  
Families provide secure, stable environments for children to grow up in.
- Educating children in a faith** – The Shema instructs parents to teach children God's laws. Christians are expected to teach children good morals and Christian values.

**Religious teachings about human sexuality**

- Human sexuality**: refers to how people express themselves as sexual beings
- Heterosexual**: Sexually attracted to members of the opposite sex.
- Homosexual**: Sexually attracted to members of the same sex.

**Religious Teachings about Marriage**

- Marriage**: legal union between a man and woman as partners in a relationship (same-sex marriage is legal in the UK).
- What is the nature and purpose of marriage?**  
Jews have a binding contract (Ketubah) that protects the woman's financial security. It provides a secure foundation to raise a family.
- Christians** believe marriage is the proper place to enjoy sex, raise children and provide a secure and stable environment for family life.

**Marriage Ceremonies:****Christianity**

- Is a sacrament
- Rings
- Readings from Bible
- Sermon
- Vows exchanged
- Pronouncement of couple

**Judaism:**

- Ketubah
- Chuppah
- Circling
- Exchange of rings
- Seven blessings
- Break glass
- Mazel Tov

\*Both ceremonies may include discussions with Rabbi or Priest beforehand.

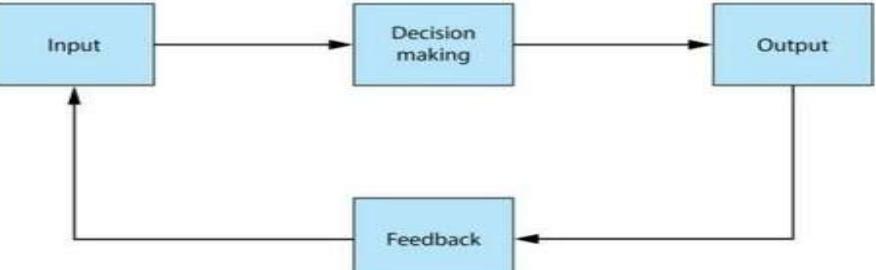
**For homosexual relationships**

Reform Jews believe that loving, committed homosexual relationships should be allowed.

**Against homosexual relationships**

Catholic Church teaches that homosexual relationships are wrong because they do not allow for new life to be created.

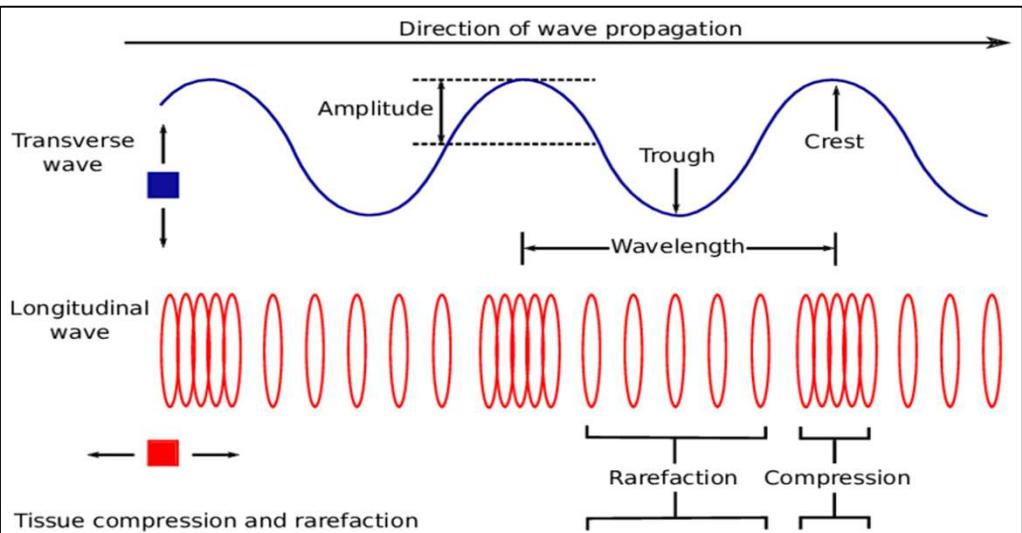
# Chapter 4 – Sports Psychology

Classification of Skills													
<p><b>Classification of skill</b></p> <p><b>Basic skill</b> — a simple skill that doesn't require much concentration.</p> <p><b>Complex skill</b> — a skill that requires a great deal of concentration and coordination to perform.</p> <p><b>Open skill</b> — a skill that is performed in a certain way to deal with changing or unstable environments.</p> <p><b>Closed skill</b> — a skill that is not affected by the environment or the performers in it. The skill tends to be done the same way each time.</p> <p><b>Self paced skill</b> — a skill that is started when a performer decides to start it. The speed, rate or pace of the skill is controlled by the performer.</p> <p><b>Externally paced skill</b> — a skill that is started because of an external factor. The speed, rate or pace of the skill is controlled by external factors, such as an opponent or the environment.</p> <p><b>Gross movement skill</b> — a skill that uses large muscle groups to perform big, powerful movements.</p> <p><b>Fine movement skill</b> — a skill involving small, precise movements, showing high levels of accuracy and coordination. It involves the use of a small group of muscles.</p>	<p><b>3.2.1.4- Guidance and Feedback on Performance</b></p> <p><b>Guidance</b> — a method of conveying information to a performer. Guidance can be verbal, visual, manual or mechanical.</p> <p><b>Feedback</b> — the information a performer receives about their performance.</p> <p><b>Visual guidance</b></p> <p>When a performer can see the skill being performed or practiced.</p> <table border="1" data-bbox="1044 389 2055 643"> <thead> <tr> <th data-bbox="1044 389 1538 436">Advantages</th><th data-bbox="1538 389 2055 436">Disadvantages</th></tr> </thead> <tbody> <tr> <td data-bbox="1044 436 1538 468">Useful for all levels of performer</td><td data-bbox="1538 436 2055 468">The demonstration must be good quality</td></tr> <tr> <td data-bbox="1044 468 1538 500">Very useful for beginners</td><td data-bbox="1538 468 2055 500">Some are too complex to demonstrate</td></tr> <tr> <td data-bbox="1044 500 1538 531">Vision is most peoples dominant sense</td><td data-bbox="1538 500 2055 531">It is not effective if performers aren't paying attention</td></tr> <tr> <td data-bbox="1044 531 1538 563">It is easy to follow and highlight key areas</td><td data-bbox="1538 531 2055 563"></td></tr> <tr> <td data-bbox="1044 563 1538 595">Performers can copy what they have seen</td><td data-bbox="1538 563 2055 595"></td></tr> </tbody> </table>	Advantages	Disadvantages	Useful for all levels of performer	The demonstration must be good quality	Very useful for beginners	Some are too complex to demonstrate	Vision is most peoples dominant sense	It is not effective if performers aren't paying attention	It is easy to follow and highlight key areas		Performers can copy what they have seen	
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<p><b>3.2.1.2- Goals and Targets</b></p> <p><b>Performance goals</b> — personal standards to be achieved. Performers compare themselves against what they have already done or suggest what they are going to do. There is no comparison with other performers.</p> <p><b>Outcome goals</b> — goals that focus on the end result, on winning.</p>	<p><b>Verbal Guidance</b></p> <p>Where someone explains to you in detail how to perform a skill or action.</p> <table border="1" data-bbox="1044 801 2055 1024"> <thead> <tr> <th data-bbox="1044 801 1538 849">Advantages</th><th data-bbox="1538 801 2055 849">Disadvantages</th></tr> </thead> <tbody> <tr> <td data-bbox="1044 849 1538 881">It is especially useful for high level performers</td><td data-bbox="1538 849 2055 881">It can result in an information overload</td></tr> <tr> <td data-bbox="1044 881 1538 913">Good way of highlighting key teaching points</td><td data-bbox="1538 881 2055 913">It can be boring</td></tr> <tr> <td data-bbox="1044 913 1538 944">Useful for sharing basic information</td><td data-bbox="1538 913 2055 944">Sports arenas are often noisy so it can be hard to hear what is being said.</td></tr> <tr> <td data-bbox="1044 944 1538 976">Questioning can often make a performer think</td><td data-bbox="1538 944 2055 976">Complex things are often difficult to explain verbally</td></tr> </tbody> </table>	Advantages	Disadvantages	It is especially useful for high level performers	It can result in an information overload	Good way of highlighting key teaching points	It can be boring	Useful for sharing basic information	Sports arenas are often noisy so it can be hard to hear what is being said.	Questioning can often make a performer think	Complex things are often difficult to explain verbally		
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<p><b>SMART Targets</b></p> <p><b>S</b> — Specific — the target must be specific to the demands of the sport, muscles used or movements used</p> <p><b>M</b> — Measurable — it must be possible to measure whether the specific target set has been met</p> <p><b>A</b> — Accepted — the target must be accepted by the performer and others involved in training and competition, such as a coach</p> <p><b>R</b> — Realistic — the target must actually be possible to complete and attain</p> <p><b>T</b> — Time-bound — the target covers a set period of time so that the performer knows whether or not they have achieved it.</p>													
<p><b>3.2.1.3- Information Processing</b></p> <p><b>Input</b> — data received from the display. The information will be received via the senses.</p> <p><b>Decision Making</b> — The selected data is analysed and an appropriate response is selected. This means the performer will access memories of similar experiences and will choose the appropriate response accordingly.</p> <p><b>Output</b> — The decision is acted upon. Information is sent to the performers brain to the working muscles to carry out the required response.</p> <p><b>Feedback</b> — Data is received in response to the output. This can become the input for future decisions, or can be used during future decision making. Intrinsic feedback — information a performer receives from within.</p>	 <pre> graph LR     Input[Input] --&gt; Decision[Decision making]     Decision --&gt; Output[Output]     Output --&gt; Feedback[Feedback]     Feedback --&gt; Input   </pre>												

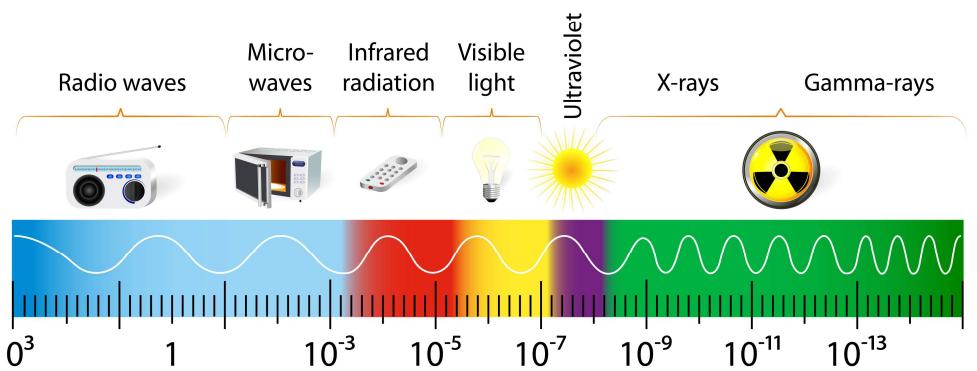


## Physics Chapter 6 Waves

Keyword	Learn	✓
Mechanical Wave	Disturbances that travel through matter, transferring energy from one place to another.	
Electromagnetic wave	Transverse waves. Their vibrations or oscillations are changes in electrical and magnetic fields at right angles to the direction of wave travel.	
Transverse wave	In transverse waves, the vibrations are at right angles to the direction of wave travel.	
Longitudinal wave	In a longitudinal wave, the vibrations are parallel to the direction of travel.	
Amplitude	The maximum displacement of a vibration or oscillation, measured from the position of equilibrium.	
Wavelength	The length of one wave measured in metres.	
Frequency	The number of waves passing a point in one second.	
Law of reflection	angle of incidence = angle of reflection, $i = r$ .	
Refraction	When light moves from less dense to more dense mediums the angle of refraction is less than the angle of incidence (and vice versa).	
Ultrasound	Any sound wave that has a frequency higher the range of human hearing, so above 20 000 Hz (20 kHz).	
Specular reflection	When all parallel rays of light are reflected in the same direction (this happens with a plain, smooth reflector like a mirror).	
Diffuse	When parallel light rays are reflected in multiple directions.	



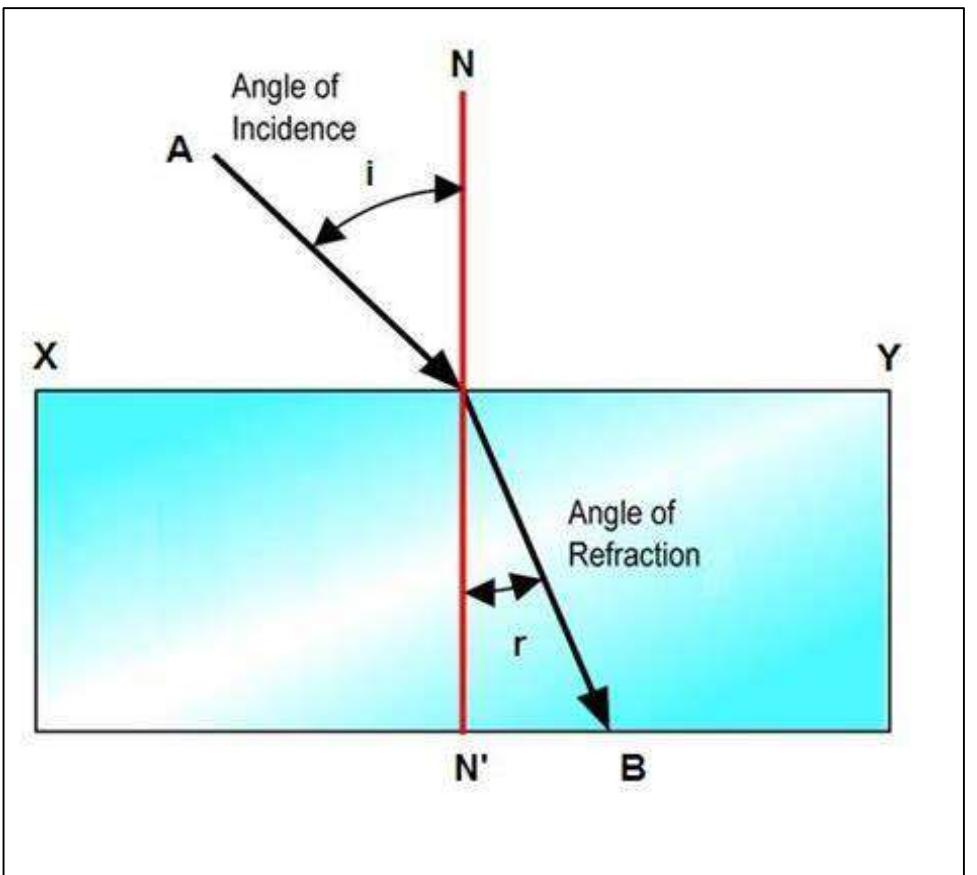
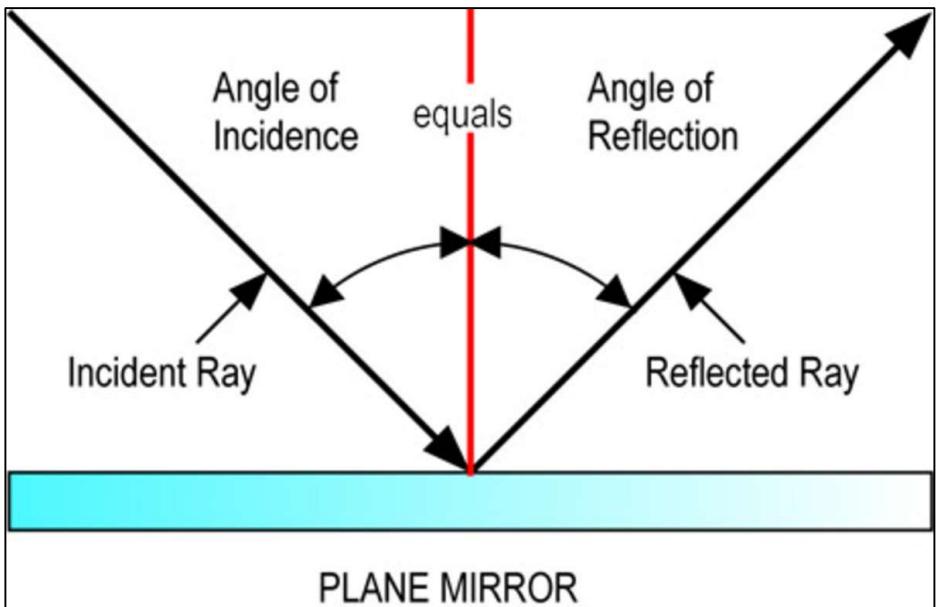
## THE ELECTROMAGNETIC SPECTRUM



### Equations:

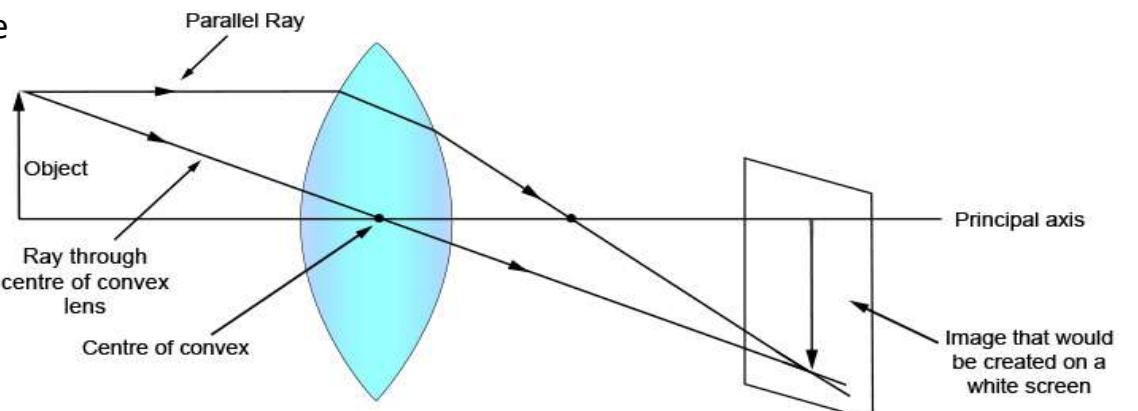
Wave Speed (m/s) = wavelength (m) x frequency (Hz),  
 $v = \lambda \times f$

Frequency (Hz) = 1/ the period of the wave (s),  
 $f = 1 / T$



### Drawing ray diagrams – the rules

- Draw a lens (be it concave, convex or any other).
- Draw an object on the right or left side of the lens.
- Draw a minimum of two rays starting from a single point (top of the object).
- Draw a ray from the object to the lens that is parallel to the principal axis.
- Once through the lens, the ray should pass through the principal focus.
- Draw a ray which passes from the object through the centre of the lens.
- Locate and mark the image of the top of the object.
- Repeat the process for the bottom of the object



<u>Las asignaturas</u>		
<b>el dibujo</b>	art	
<b>el teatro</b>	drama	
<b>el español</b>	Spanish	
<b>el inglés</b>	English	
<b>la geografía</b>	geography	
<b>la historia</b>	history	
<b>la música</b>	music	
<b>la religión</b>	P.R.E.	
<b>la educación física</b>	P.E.	
<b>la tecnología</b>	technology	
<b>las ciencias</b>	science	
<b>las matemáticas</b>	maths	
<b>duro/a(s)</b>	hard	
<b>práctico/a(s)</b>	practical	
<b>complejo/a(s)</b>	complex	
<b>pesado/a(s)</b>	annoying / boring	

## Adjectival agreement

Adjectives must agree with the noun they are describing (e.g. *la historia es divertida* / *las matemáticas son interesantes*).

	Singular	Plural		
	m	f	m	f
<b>Ending in - o</b>	-o	-a	-os	-as
<b>Ending in - e</b>	-e	-e	-es	-es
<b>Ending in a consonant</b>	-	-	-es	-es

## ¿Cómo son los profesores?

No pone demasiados deberes	He / she doesn't set too much homework	
Tiene un buen sentido de humor	He / she has a good sense of humour	
Nos deja usar el móvil en clase	He / she lets us use our phones in class	
Escucho al profe con cuidado	I listen to the teacher carefully	
No es demasiado estricto	He / she isn't too strict	
Crea un buen ambiente para los alumnos	He / she creates a good environment for the students	
Nos deja expresar nuestra individualidad	He / she lets us express our individuality	
Siempre entrega los deberes	He / she always turns in homework	

## Absolute superlatives

To say 'really [good]', 'extremely [expensive] etc., use the absolute superlative.

Add *ísmo/a* to the end of the adjective, and make it agree

Es facilísimo/a = It is extremely easy

If the adjective ends in a vowel, remove it before adding the ending.

Son buenísimos/as = They are really good

buenísimo	really good	
malísimo	really bad	
facilísimo	really easy	

## Opinion structures

Lo que más / menos me gusta es	What I like the most / least is
me interesa(n)	I am interested in
se me da(n) bien	I am good at...
mi pasión es	My passion is...
me cuesta(n)...	I find ... difficult

## Las reglas de mi insti

Las reglas de mi institución	
<b>Las reglas / normas</b>	The rules
<b>Hay que</b>	You have to
<b>No se debe</b>	You must not
<b>No se permite</b>	It is not permitted
<b>Está prohibido</b>	It is prohibited
<b>Tienes que</b>	You have to
<b>Llegar a tiempo</b>	Arrive on time
<b>Respetar a los alumnos</b>	Respect students
<b>Mantener limpio el patio</b>	Keep the playground clean
<b>Quedarse sentado durante la clase</b>	Stay seated during the lesson
<b>Traer aparatos electrónicos personales</b>	Bring personal electronic devices
<b>Tirar basura al suelo</b>	Throw rubbish on the ground
<b>Comer / beber en las aulas</b>	Eat / drink in the classrooms
<b>Ir al servicio sin el permiso</b>	Go to the toilet without permission

## -as reglas – opiniones

<b>Pienso que</b>	I think that
<b>Creo que</b>	I think that / I believe that
<b>Diría que</b>	I would say that
<b>En mi opinión</b>	In my opinion
<b>Estoy de acuerdo</b>	I agree
<b>No estoy de acuerdo</b>	I don't agree
<b>Mi amigo diría que</b>	My friend would say that
<b>es justo</b>	it's fair
<b>no es justo</b>	it's not fair



Body parts	
el cuerpo	body
la cara	face
los ojos	eyes
el pelo	hair
la nariz	nose
la garganta	throat
el diente / los dientes	tooth / teeth
el corazón	heart
el pie	foot
la pierna	leg
la rodilla	knee
la espalda	back
el hombro	shoulder
el brazo	arm
el dedo	finger
el estómago	stomach
la piel	skin
los oídos	ears

Illness & injury	
me duele	it hurts
me duelen	they hurt
el dolor	pain
doler	to hurt
médico/a	doctor
doctor/a	doctor
la medicina	medicine
una emergencia	emergency
una farmacia	a pharmacy
una fiebre	a fever
una herida	an injury
un virus	a virus
enfermo/a	ill
quemarse	to burn yourself
sufrir	to suffer

Giving advice	
debes	you must
tienes que	you have to
necesitas	you need to
descansar	to rest
ir al médico	to go to the doctor
comprar medicinas	to buy medicine
quedarte en casa	to stay at home
evitar el sol	to avoid the sun
relajarte	to relax

Resolutions	
Para ser más sano	To be healthier
haré (ejercicio)	I will do (exercise)
tendré (una dieta equilibrada)	I will have (a balanced diet)
seré (más activo)	I will be (more active)
cuidaré (de mi salud mental)	I will look after (my mental health)
beberé (más agua)	I will drink (more water)
estaré (en forma)	I will be (in shape)

Imperfect	
The imperfect tense is used to talk about habits in the past and to describe things in the past.	
<b>-ar verb endings imperfect</b>	
-aba	-ábamos
-abas	-abais
-aba	-aban

-ir / -er verb endings imperfect	
-ía	-íamos
-ías	-íais
-ía	-ían

## Preterite (past) tense

-ar verb endings preterite	
-é	-amos
-aste	-asteis
-ó	-aron

-er verb endings preterite	
-í	-imos
-iste	-isteis
-ió	-ieron

-ir verb endings preterite	
-í	-imos
-iste	-isteis
-ió	-ieron

## Simple future tense

To form the simple future, take the **infinitive** verb and add the endings (note: irregular stems – tendré, haré, podré, saldré)

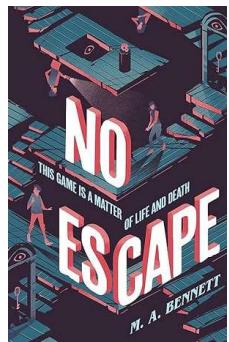
-ar, -er & -ir verb endings - future	
-é	-emos
-ás	-éis
-á	-án

## 'Si' (if) clauses

The simple future can be used in 'if' clauses to say what will happen

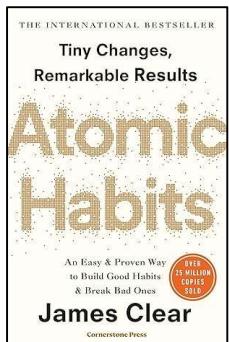
**Si + present + future**

Si me acuesto más pronto, no estaré cansado.  
If I go to bed earlier, I will not be tired.



### No Escape by M. A. Bennett

Estranged twins Mabel and Kai are pitted against each other to solve a deadly mystery set by their elusive grandfather ... but time is running out and there can only be one survivor.



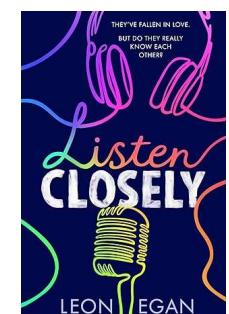
### Atomic Habits by James Clear

People think that when you want to change your life, you need to think big. But world-renowned habits expert James Clear has discovered another way. He knows that real change comes from the compound effect of hundreds of small decisions: doing two push-ups a day, waking up five minutes early, or holding a single short phone call. He calls them atomic habits.



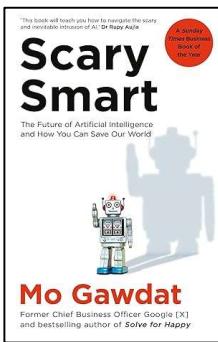
### Jurassic Park by Michael Crichton

On a remote jungle island, genetic engineers have created a dinosaur game park. But, as always, there is a dark side to the fantasy and after a catastrophe destroys the park's defence systems, the scientists and tourists are left fighting for survival...



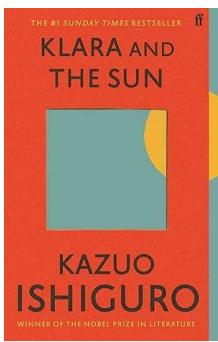
### Listen Closely by Leon Egan

When Jude and Aiden are paired up together for an internship at a local radio station, things are awkward. Jude is quiet, withdrawn, has one friend, and is suspicious of everyone. Aiden is charming, outgoing, and popular, with a seemingly easy confidence and golden retriever energy. But after they discover a shared love of podcast dramas, Jude and Aiden realise that they have more in common than they first realised...



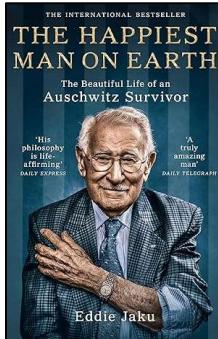
### Scary Smart by Mo Gawdat

Artificial intelligence is smarter than humans. It can process information at lightning speed and remain focused on specific tasks without distraction. AI can see into the future, predict outcomes and even use sensors to see around physical and virtual corners. So why does AI frequently get it so wrong and cause harm? This book offers a blueprint, pointing the way to what we can do to safeguard ourselves, those we love, and the planet itself.



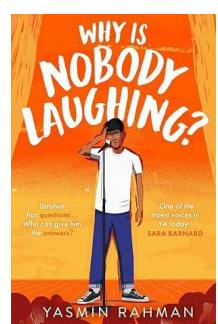
### Klara and the Sun by Kazuo Ishiguro

This novel tells the story of Klara, an Artificial Friend with outstanding observational qualities, who, from her place in the store, watches carefully the behaviour of those who come in to browse, and of those who pass on the street outside. She remains hopeful that a customer will soon choose her.



### The Happiest Man on Earth by Eddie Jaku

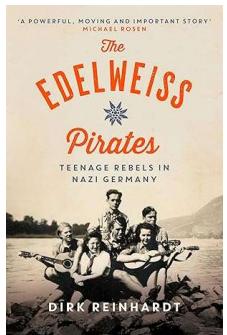
The moving and inspiring story of an Auschwitz survivor who shares what he's learned about gratitude, tolerance and kindness. Eddie Jaku pays tribute to those who were lost by telling his story and sharing his wisdom. *Life can be beautiful if you make it beautiful. It is up to you.*



### Why is Nobody Laughing? by Yasmin Rahman

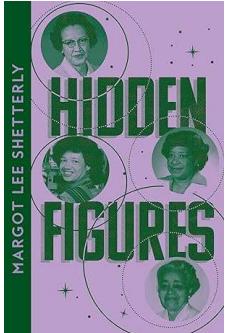
Ibrahim and Dexter are best of friends and spend all their time together, even including entering a local stand-up comedy competition together. Dexter is always confident and encouraging to Ibrahim, but Ibrahim begins to suffer what he slowly realises are panic attacks.





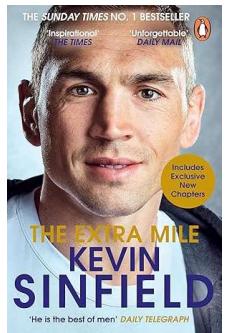
### The Edelweiss Pirates by Dirk Reinhardt

A heart-stopping adventure about real-life rebels against the Nazis. When sixteen-year-old Daniel befriends Josef Gerlach, he feels the old man is haunted by a secret from his past. Sure enough when Josef gives him his teenage diary to read, Daniel discovers a shocking story of rebellion and struggle.



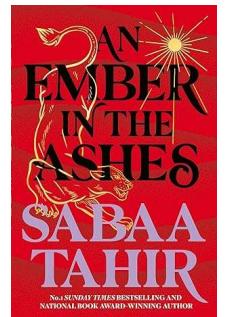
### Hidden Figures by Margot Lee Shetterly

Set amid the civil rights movement, the never-before-told true story of NASA's African-American female mathematicians who played a crucial role in America's space programme.



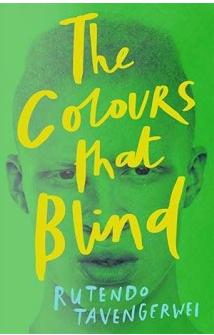
### The Extra Mile by Kevin Sinfield

A very British hero, the unassuming yet utterly superb Kevin Sinfield – rugby league great turned rugby union coach turned charity fundraiser, all while carrying a torch for the true meaning of sport and friendship. The Extra Mile tells how Sinfield set about raising money to combat motor neurone disease, the appalling condition that has gripped his former Leeds Rhinos teammate and best pal, Rob Burrow.



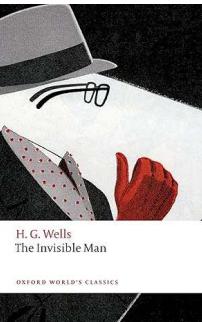
### An Ember in the Ashes by Sabaa Tahir

Set in a terrifyingly brutal Rome-like world, this is an epic fantasy debut about an orphan fighting for her family and a soldier fighting for his freedom. It's a story that's literally burning to be told. What if you were an ember, a spark that could ignite a revolution?



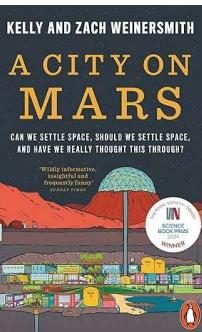
### The Colours that Blind by Rutendo Tavengerwei

15-year-old Tumirai lives with his protective big brother, Mkoma in Harare, Zimbabwe. He's the first albino kid ever to have attended his school and constantly feels like an outsider. When his brother has to travel work, Tumirai goes to stay with their grandmother; where he learns that memory is a treasure trove - and her stories of Zimbabwe's war for independence are a long, long way from the history Tumirai has heard before.



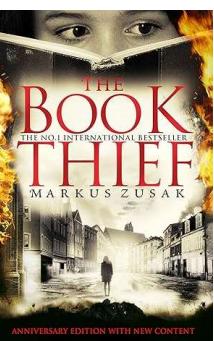
### The Invisible Man by H. G. Wells

With his face swaddled in bandages, his eyes hidden behind dark glasses and his hands covered even indoors, Griffin - the new guest at The Coach and Horses - is at first assumed to be a shy accident-victim. But the true reason for his disguise is far more chilling: he has developed a process that has made him invisible, and is locked in a struggle to discover the antidote.



### A City on Mars by Kelly and Zach Weinersmith

In a world hurtling toward human expansion into space, A City on Mars investigates whether the dream of new worlds won't create a nightmare, both for settlers and the people they leave behind. Can we settle space, should we settle space, and have we really thought it through?



### The Book Thief by Markus Zusak

Narrated in the all-knowing matter-of-fact voice of Death, witnessing the story of the citizens of Molching. By 1943, the Allied bombs are falling, and the sirens begin to wail. Liesel shares out her books in the air-raid shelters. But one day, the wail of the sirens comes too late.









## Timeable