



BOURNEMOUTH SCHOOL

# Year 11

## Knowledge Organiser 1

### Autumn Term: 2025-26

Name: \_\_\_\_\_ Master Copy \_\_\_\_\_

Registration Form: 11

✓Hard Work

✓Discipline

✓Smart Appearance

✓Respect

## Bournemouth School

### Knowledge Organiser: Year 11 Autumn Term 1

*'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.

**DO NOW tasks:**

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 25 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.





Year 11 ‘The strange case of Jekyll and Hyde’.

Thesis	Key Quotations	Context	☑
J&H is a critique of Victorian society, highlighting hypocrisy and the need to maintain reputation above morality.	<ul style="list-style-type: none"><li>“If you choose to make capital out of this accident,’ said he, ‘I am naturally helpless. No gentleman but wishes to avoid a scene,’ says he. ‘Name your figure.” Chapter 1 (Hyde to Enfield)</li><li>”ghost of some old sin” Chapter 1 (Utterson)</li><li>“the person who drew that cheque is the very pink of proprieties... an honest man paying through the nose of some capers of his youth” Chapter 1 (Enfield about Jekyll)</li><li>“If it came to a trial, your name might appear” Chapter 5 (Utterson to Enfield)</li><li>“I was thinking of my own character which this hateful business has rather exposed” Chapter 5 (Utterson to Enfield)</li><li>“plod in the public eye with a load of genial respectability, and in a moment, like a schoolboy, strip off these lendings and spring headlong into a sea of liberty” Chapter 10 (Jekyll)</li></ul>	Victorian society were very concerned with reputation. John Hunter: respectable surgeon involved in unsavoury activities – links with seemingly moral characters such as Jekyll, Utterson & Enfield.	
It highlights the duality of the human condition, and the dangers of repression.	<ul style="list-style-type: none"><li>“A volume of some dry divinity on his reading-desk.. Until the clock of the neighbouring church rang out the hour of twelve, and he would go soberly and gratefully to bed” Chapter 2 (Description of Utterson).</li><li>“My devil had been long caged, he came out roaring” Chapter 10 (Jekyll)</li><li>“With ape-like fury...trampling his victim underfoot... hailing down a storm of blows” Chapter 4 (description of Hyde)</li><li>“My imperious desire to carry my head high, and wear a more than commonly grave countenance before the public. Hence it came about that I concealed my pleasures” Chapter 10 (Jekyll)</li><li>“man is not truly one, but truly two” Chapter 10 (Jekyll)</li></ul>	Stevenson constructs Utterson as a parody, mocking the oppressive expectations of Victorian society. Repressed desires manifest into violence as a result of oppressive society – further links to Darwinism.	
Science is seen as important and valuable but should be approached with restraint as unchecked scientific pursuit can lead man to ‘play God’.	<ul style="list-style-type: none"><li>“Jekyll became to fanciful for me. He began to go wrong, wrong in mind.” &amp; “Unscientific balderdash” Chapter 2 (Lanyon about Jekyll)</li><li>“something troglodytic” Chapter 2 (Utterson about Hyde)</li><li>“A new province of knowledge and new avenues of fame and power shall be laid upon you...your sight shall be blasted by a prodigy to stagger the unbelief of Satan” Chapter 9 (Hyde to Lanyon)</li></ul>	Body snatchers: The idea of criminal activity happening behind the scenes and its effect of reputation Darwin and the Theory of Evolution: The figure of Hyde embodies the fear of regression. Strength and physicality over intellect.	
Themes	✓	Methods	✓
Good v Evil		Motifs	Fog: London is often shrouded in fog which represents the central mystery in that the characters cannot ‘see’ clearly. Light and dark: hope v danger
Repression & duality		Religious allusion	Biblical references serve to contrast immoral behaviour and serves to remind reader of the juxtaposition between science and religion.
Friendship & loyalty		Narrative voice	With exception to the last two chapters, the story follows Utterson. This elevates the mystery as our information is limited to Utterson’s POV.
Reputation		Epistolary	The use of letters, diary entries and other documents in a novel. This is a common trope of gothic fiction and it also increases the mystery and tension.
Science v Religion		Setting	Houses are symbols of man’s duality, e.g. Jekyll’s façade is a symbol of respectability but the laboratory entrance represents the hidden side to man.
Lies & Deceit			
Violence			
		Methods	✓
		Pathetic fallacy	Gloomy weather is used to create a dark and mysterious mood.
		Character constructs	Characters are used to represent different aspects of Victorian society. Lanyon’s language is factual in contrast to Jekyll’s poetic and often metaphorical language. Represents the differing ideas in science: Lanyon is traditional and Jekyll is transformative.



## Year 11 Macbeth Knowledge organiser



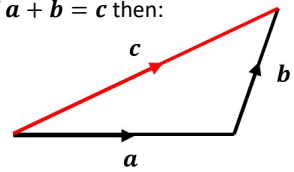
Contextual points	Link to argument – what is Shakespeare trying to say?	✓	Themes	Key quotations	✓	Tragedy in the play		✓
Divine right	Regicide is disobeying an act of God, and Macbeth and Lady Macbeth's mental decline shows that this does not go unpunished.		Ambition	"I have no spur to prick the sides of my intent, but only vaulting ambition, which o'erleaps itself" (Macbeth) "...and chastise with the valour of my tongue all that impedes thee from the golden round" (Lady Macbeth)		Structure – everyone is affected from the top down. Each time Macbeth's status increases, Scotland suffers more, there is more blood shed. Fall of a nobleman.		
Great Chain of Being	Macbeth's attempt to climb the hierarchy disturbs the natural world and he is punished.		Good and evil	"If good, why do I yield to that suggestion whose horrid image doth unfix my hair and make my seated heart knock at my ribs, against the use of nature?" (Macbeth)		Fatal flaw - ambition and greed		
Religion	Macbeth claims life is "a tale told by an idiot...signifying nothing" and a Jacobean audience would have been greatly shocked that he dares to question God. This solidifies his tyrannical ways.		Loyalty/ betrayal	"The service and the loyalty I owe, in doing it pays itself" (Macbeth) "Look like the innocent flower, but be the serpent under't" (Lady Macbeth)		External pressures – witches, Lady Macbeth,		
Patriarchal society	Gender roles are subverted as women give commands, at the time these women were accused of being witches.		Kingship	"Bleed, bleed, poor country! Great tyranny!" (Macduff) "Those he commands move only in command, nothing in love: now does he feel his title hand loose about him, like a giant's robe upon a dwarfish thief." (Angus)		Key term	Meaning	✓
Witchcraft	King James I was obsessed with this. Shakespeare links Lady Macbeth to evil.		Violence	"Unseamed him from the nave to the chops" (Captain) "Blood will have blood" (Macbeth)		Hamartia	Tragic flaw	
The Gunpowder Plot	King James I would have approved of the play as it punishes regicide, something he was the target of himself.		Fate	"If chance will have me king" (Macbeth?) "Which fate and metaphysical aid doth seem/ To have thee crowned withal" (Lady Macbeth)		Peripeteia	Sudden turn of events/ unexpected reversal	
			Supernatural	"The instruments of darkness tell us truths, win us with honest trifles, to betray's in deepest consequence." (Banquo)		Catharsis	Relief of emotional tension	
			Guilt	"I am in blood steep'd in so far, that, should I wade no more, returning were as tedious as go o'er." (Macbeth) "Out, damned spot!" (Lady Macbeth)		Regicide	The action of killing a king	
						Pathos	An experience that evokes pity, sympathy or compassion	
						Dramatic irony	Audience knows something characters do not	
						Soliloquy	Speaking one's thoughts aloud (character in a play)	
						Basic essay plan		✓
						Thesis – introduce your argument		
						Point 1 – Develop your argument with a focus on the extract, using evidence		
						Point 2 – Link to examples in the rest of the play		
						Point 3 – Link and develop argument with context		
						Conclusion – sum up your findings		




## Year 11 – Maths – Autumn 1 – Units 17 &amp; 18

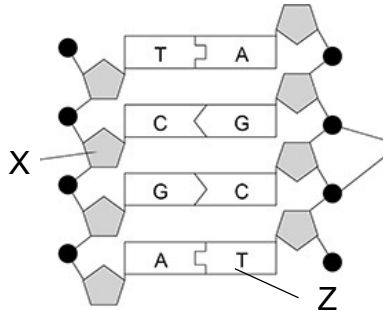
Keyword		Definition	Example(s)
Subject		The variable that is on its own on one side of the equals sign.	$F$ is the subject of $F = ma$
Algebraic Fractions		Fractions with algebraic terms. Can be operated in the same way as numerical fractions	$\frac{2}{3x} + \frac{x}{5} = \frac{2(5)}{15x} + \frac{x(3x)}{15x} = \frac{10+3x^2}{15x}$
Cross cancelling		Before multiplying, cancel any common factors across numerators and denominators.	$\frac{x(x+2)}{3(x-2)} \times \frac{6(x-2)}{5x} = \frac{x+2}{1} \times \frac{2}{5} = \frac{2x+4}{5}$
Simplifying algebraic fractions		First Factorise. Then cancel common factors un the numerator and denominator.	$\frac{x^2+3x+2}{x^2-4} = \frac{(x+2)(x+1)}{(x+2)(x-2)} = \frac{x+1}{x-2}$
LCM for addition and subtraction		Factorise denominators, and find the LCM using repeated factors once.	$\frac{2}{x^2+x} + \frac{2}{x^2-1} = \frac{2}{x(x+1)} + \frac{2}{(x+1)(x-1)} = \frac{2(x-1)+2x}{x(x+1)(x-1)}$
Identity		An equivalence of expressions, which is true for all values of the variable.	$6x^2 - 3x \equiv 3x(2x - 1)$
Algebraic Proof		Algebraically showing a statement is true for all cases.	Prove the sum of sum of squares of consecutive numbers is always odd. $n^2 + (n+1)^2$ $= n^2 + n^2 + 2n + 1$ $= 2(n^2 + n) + 1$ 1 more than an even number is odd
Counter-example		An example that does not fit the statement, and thus disproves it.	"All prime numbers are odd" $\rightarrow$ the number 2 is prime and even
Simplifying Surds		Writing a surd $\sqrt{a}$ in the form $b\sqrt{c}$ where $c$ cannot be simplified further.	$\sqrt{72} = \sqrt{36 \times 2} = 6\sqrt{2}$
Rationalising denominators		Writing a fraction with a rational denominator.	1. $\frac{2}{\sqrt{5}} \rightarrow \frac{2}{\sqrt{5}} \times \frac{\sqrt{5}}{\sqrt{5}} = \frac{2\sqrt{5}}{5}$ 2. $\frac{1}{2+\sqrt{2}} \rightarrow \frac{1}{2+\sqrt{2}} \times \frac{2-\sqrt{2}}{2-\sqrt{2}} = \frac{2-\sqrt{2}}{2}$

Keyword		Definition	Example(s)
Function		A rule for finding the outputs for given values of the input.	$f(x) = 3x - 4$ $g(x) = x^2 + 1$
Composite function		Where 2 functions are applied consecutively to an input.	$fg(x)$ represents applying $f$ to the output of $g(x)$ i.e: apply $g$ first, then $f$
Inverse function		$f^{-1}(x)$ reverses the original function, $f(x)$	Using $f(x)$ from above: $f^{-1}(x) = \frac{x+4}{3}$

Keyword		Definition	Example(s)
Vector		A quantity with magnitude and direction	Forces, velocity, displacement
Displacement vector, $\overrightarrow{AB}$		How to get from $A$ to $B$	$\overrightarrow{AB} = \mathbf{p}$ You must underline, $\overrightarrow{AB} = \underline{\mathbf{p}}$
Magnitude of a vector, $ \mathbf{a} $		The length of a vector, found using Pythagoras	$\mathbf{a} = \begin{pmatrix} x \\ y \end{pmatrix} \rightarrow  \mathbf{a}  = \sqrt{x^2 + y^2}$
Scalar		The amount a vector is multiplied by.	$2\mathbf{a}$ is twice the length of $\mathbf{a}$ in the same direction $-\mathbf{a}$ is the same length as $\mathbf{a}$ in the opposite direction
Resultant vector		The sum of multiple vectors, which can be represented diagrammatically.	If $\mathbf{a} + \mathbf{b} = \mathbf{c}$ then: 
Position vector, $\overrightarrow{OA}$		How to get from the origin to $A$	$\overrightarrow{AB} = \overrightarrow{OB} - \overrightarrow{OA}$
Parallel vectors		Vectors in same direction. May be different lengths or the negative.	$\overrightarrow{CD}$ is parallel to $\overrightarrow{EF}$ if $\overrightarrow{CD} = k\overrightarrow{EF}$
Collinear		Points which lie on the same line	If $\overrightarrow{PR} = k\overrightarrow{PQ}$ then $P$ , $Q$ and $R$ are collinear



Keyword	Learn	✓
Chromosome	Found in the nucleus of a cell, made of DNA and carries a large number of genes. Found in pairs. Humans have 46 chromosomes (23 pairs).	
DNA 	A polymer made up of two strands forming a double helix.	
Nucleotide	A sugar and phosphate group with one of four different bases attached to the sugar. (A, C, G and T)	
Gene	A small section of DNA. Each gene codes for a particular sequence of amino acids, to make a specific protein. Codes for a characteristic.	
Allele	Version of a gene.	
Genome	The entire genetic material of an organism.	
Homozygous	Two of the same allele.	
Heterozygous	Two different alleles.	
Recessive	Will only display when there are two of that allele.	
Dominant	Will always display if one (or two) alleles are present.	
Mutation	A change in the DNA.	
Phenotype	An organism's displayed characteristics. (What they look like.)	
Genotype	An organism's genetic code.	
Mitosis	Cell division that produces two identical cells. (From Year 9 - Mitosis and the Cell Cycle need to be revised.)	
Meiosis	Cell division that produces gametes (sex cells). Copies of the genetic information are made, the cell divides twice to form four gametes, each with a single set of chromosomes (23 chromosomes in humans), all gametes are genetically different from each other.	
Fertilisation	Fusion of male and female gametes: sperm and egg cells in animals, pollen and egg cells in flowering plants.	
Sexual reproduction	Gametes fusing- creates variation through mixing of genetic information.	
Asexual reproduction	No gametes - offspring are clones which all have identical genetic information.	



X – sugar  
 Y – phosphate  
 Z – base  
 X + Y + Z = nucleotide

C pairs with G  
 A pairs with T

A sequence of three bases is the code for a particular amino acid. The order of bases controls the order in which amino acids are assembled to produce a particular protein.

Learn the advantages and examples of the different types of reproduction.

Sexual Reproduction	Asexual Reproduction
Variation in offspring  1. Malarial parasites in the mosquito. 2. Many fungi (as part of their life cycles). 3. Plants producing seeds.	Offspring are identical.  1. Malarial parasites in the human host. 2. Fungi using spores. 3. Plants by runners such as strawberry plants, or bulb division such as daffodils.

Learn the stages in the development of an embryo.

1. By meiosis, a cell divides to form gametes, with half the number of chromosomes.
2. Gametes join at fertilisation to restore the normal number of chromosomes.
3. The new cell divides by mitosis.
4. The number of cells increases.
5. As the embryo develops cells differentiate.

Uses of the Human Genome Project.

1. We can search for genes linked to different types of disease.
2. Helps us to understand inherited disorders and improve their treatment.
3. Tracing human migration patterns from the past.

## Steps in protein synthesis

1. The structure of the DNA affects the protein made. The DNA remains in the nucleus.
2. A template is made. This is a copy of the DNA and is able to leave the nucleus and enter the cytoplasm.
3. Proteins are synthesised on ribosomes, according to the template.
4. Carrier molecules bring specific amino acids to add to the growing protein chain in the correct order.
5. When the protein chain is complete it folds up to form a unique shape.
6. This unique shape enables the proteins to do their job as enzymes, hormones or forming structures in the body such as collagen.

## The effect of mutations

Mutations in DNA occur continuously. A change in DNA structure may result in a change in the protein synthesised by a gene.

Most mutations do not alter the protein that is synthesised, or only alter it slightly so that its appearance or function is not changed.

A few mutations, in coding sections of DNA, code for an altered protein with a different shape. An enzyme may no longer fit the substrate binding site or a structural protein may lose its strength. These changes may alter the activity of a protein.

Not all parts of DNA code for proteins. Non-coding parts of DNA can switch genes on and off, so variations in these areas of DNA may affect how genes are expressed.

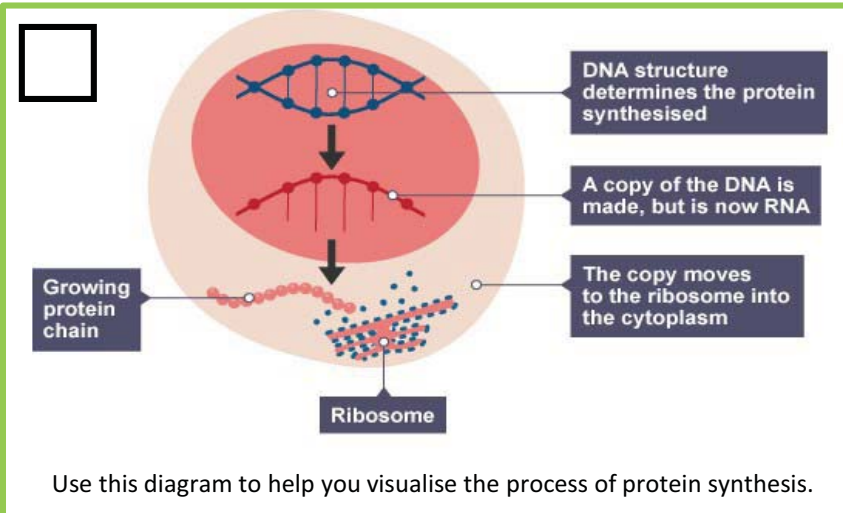
Mutations causing genetic variation may change the phenotype.

Characteristics controlled by a single gene include;

1. Fur colour in mice.
2. Red-green colour blindness in humans.
3. Polydactyly (having extra fingers or toes) is caused by a dominant allele.
4. Cystic fibrosis (a disorder of cell membranes) is caused by a recessive allele.

Most characteristics are a result of multiple genes interacting.

In humans 22 pairs of chromosomes control characteristics only, but one of the 23 pairs carries the genes that determine sex. • In females the sex chromosomes are the same (XX). • In males the chromosomes are different (XY).



## Punnett squares

1. Determine the parental genotype. Use the letters in the question.
2. Split the alleles for each parent and add them into your Punnett square around the edges.
3. Work out the new possible genetic combinations inside the Punnett square.
4. Also write the phenotype in each of the squares.
5. Circle the ones that show the phenotype the question asked about.
6. Work out the probability of getting the phenotype the question asked for. (Each part of the Punnett square is worth 25%.)

	B	b
b	Bb Brown eyes	bb Blue eyes
b	Bb Brown eyes	bb Blue eyes

Mother has blue eyes , bb  
Father has brown eyes , Bb

In this case the B allele is dominant.  
50% chance that the child has brown eyes.

Possible genotypes are BB, Bb and bb  
Possible phenotypes are brown eyes (BB or Bb) and blue eyes (bb)

# Topic 7a – Organic Chemistry

Alkane: General formula:  $C_nH_{2n+2}$ 

Alkene: General formula:  $C_nH_{2n}$ 

Key term	Definition	✓
Crude oil	A fossil fuel formed from ancient biomass. It is a mixture of different sized hydrocarbons.	
Biomass	Plankton, including algae which is buried under mud under the oceans and is converted into crude oil by heat and pressure over millions of years.	
Finite resource	A resource which is being used up faster than it is replaced.	
Hydrocarbon	A chemical compound containing ONLY hydrogen and carbon atoms	
Alkane	A SATURATED hydrocarbon containing only single covalent bonds between carbon atoms (C-C).	
Homologous series	Contains compounds with the same general formula, functional group and similar chemical properties.	
Fractional distillation	A method to separate a mixture of miscible liquids with different boiling points.	
Fraction	A mixture of molecules with a similar boiling point.	
Complete combustion	Fuels are burned in excess oxygen to form carbon dioxide and water	
Incomplete combustion	Fuels are burned in insufficient oxygen, so carbon monoxide and water are formed. CO is toxic.	
Cracking	Thermal decomposition of long hydrocarbons into a shorter alkane and alkenes.	
Alkene	An UNSATURATED hydrocarbon with a double carbon-carbon bond (C=C).	
Monomer	A small molecule which can join together to make a polymer.	
Polymer	A long chain molecule made by many monomer molecules joining together (polymerisation).	
Addition polymerisation	A reaction where alkene monomers form a polymer and no other products are formed. Alkene monomers → (Poly) alkene.	

Number of carbon atoms	Alkane name and formula	Alkene name and formula
1	Methane $CH_4$	
2	Ethane $C_2H_6$	Ethene $C_2H_4$
3	Propane $C_3H_8$	Propene $C_3H_6$
4	Butane $C_4H_{10}$	Butene $C_4H_8$

## Fractional distillation of crude oil

- Crude oil is heated at the base of a fractionating column.
- Most of the molecules vaporise and rise up the column.
- They cool as they rise due to a temperature gradient.
- Fractions condense when the temperature falls below the boiling point of the molecules.
- They are collected at different heights.

## Catalytic Cracking

- Long chain alkanes are heated to vaporise them.
- They are passed over a hot catalyst of aluminium oxide.

## Steam cracking

- Long chain alkanes are heated to vaporise them.
- They are mixed with steam and heated to high temperatures.

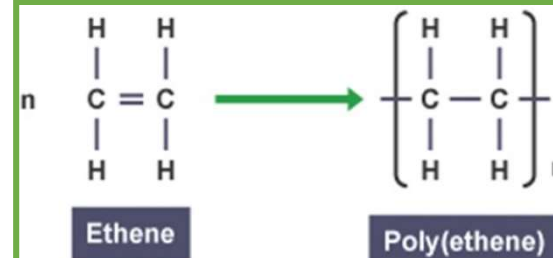
Property	Short chains	Long chains
Boiling point	Low	High
Volatility	Evaporate easily	Hard to evaporate
Flammability	Ignite easily	Hard to ignite
Viscosity	Low – flow easily	High – resistant to flow

Test for unsaturation. Mix with bromine water.

Alkene: If a C=C double bond is present, it will decolourise bromine water.

Alkane: If there is no double bond, the bromine water remains orange.

## Addition Polymerisation



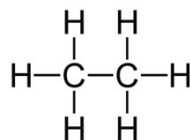
# Topic 7b – Organic Chemistry

Key term	Definition	✓
Functional group	Atom or group of atoms responsible for most of the chemical reactions of a compound.	
Addition Reaction	Reactions where atoms bond to each carbon atom in a C=C double bond to form a saturated molecule.	
Hydrogenation	Alkenes react with hydrogen using a nickel catalyst at 150°C to form alkanes.	
Hydration	Alkenes react with steam at high temperature and pressure with a phosphoric acid catalyst to form alcohols.	
Halogenation	Alkenes react with halogens at room temp. to form dihaloalkanes.	
Alcohols	A homologous series containing the functional group –OH	
Combustion	Fuels react with oxygen to form either CO <sub>2</sub> or CO or C, and H <sub>2</sub> O when burned.	
Mild oxidation	An oxidising agent can be used to convert an alcohol into a carboxylic acid.	
Carboxylic acid	A homologous series of compounds containing the functional group –COOH.	
Weak acid	Partially ionises in water to release H <sup>+</sup> ions.	
Ester	A homologous series of compounds containing the functional group –COO-. Formed by reacting an alcohol reacting with a carboxylic acid in the presence of a strong acid catalyst.	
Condensation polymerisation	Reaction where monomers join to form polymers and also a small molecule. E.g. H <sub>2</sub> O or HCl.	
Amino acid	Molecules containing both a carboxylic acid and amine functional group.	
Protein	Natural polymers made from amino acid monomers.	
DNA	A double helix made of 4 monomers (nucleotides) each consisting of a sugar, phosphate and a base (A, T, C or G).	
Starch and cellulose	Natural polymers made from glucose monomers	

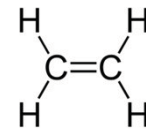
## Methods of producing ethanol

	Hydration of ethene Ethene + water → ethanol	Fermentation of sugar by yeast glucose → ethanol + carbon dioxide
Rate of reaction	Fast	Slow
Quality of product	Pure	Impure: requires distillation
Raw material	Crude oil	Sugar cane
Process	Continuous	Batch (stop-start)
Energy	High temperature	Low temperature

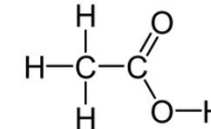
Alkane, ethane



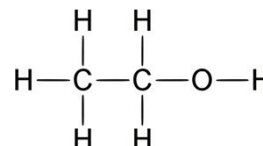
Alkene, ethene



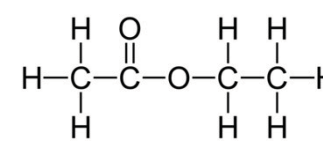
Carboxylic acid, ethanoic acid



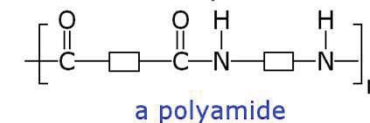
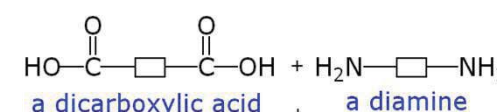
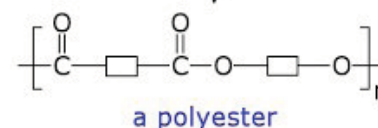
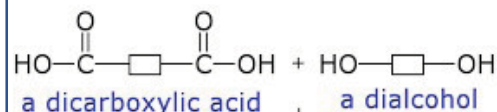
Alcohol, ethanol



Ester, ethyl ethanoate



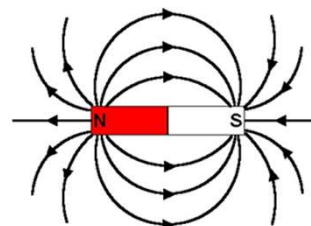
## Condensation polymerisation:



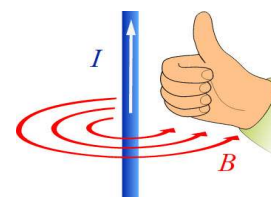


# Topic 7 – Magnetism and Electromagnetism

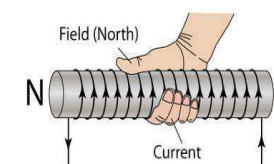
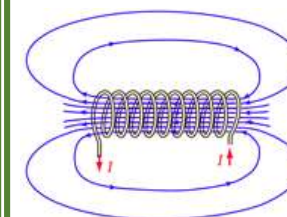
Keyword	Learn	✓
Permanent magnet	Produces its own magnetic field.	
Induced magnet	A material that becomes a magnet when placed in a magnetic field. When removed from the magnetic field it loses most/all of its magnetism quickly.	
Magnetic field	The region around a magnet where a force acts on another magnet or on a magnetic material. The direction of the magnetic field is given by the direction of the force that would act on another north pole placed at that point.	
Magnetic force	A non-contact force that is strongest at the poles of a magnet. Unlike poles (N-S) attract, like poles (N-N) (S-S) repel.	
Magnetic materials	The force due to a magnet always attracts a magnetic material (iron, steel, cobalt and nickel).	
Magnetic field line	The direction of a magnetic field line is from the north pole of a magnet to the south pole of the magnet.	
Current in a wire	The magnetic field is stronger closer to the wire and if the current is larger.	
Current in a solenoid	The magnetic field inside a solenoid is strong and uniform. The magnetic field around a solenoid has a similar shape to that of a bar magnet.	
Electromagnet	Is a solenoid with an iron core.	
B	Magnetic flux density measured in tesla, T.	
I	Electrical current measured in amperes, A	
Motor effect	When a conductor carrying a current is placed in a magnetic field the magnet producing the field and the conductor exert a force on each other.	
Generator effect	If an electrical conductor moves relative to a magnetic, a potential difference is induced across the ends of the conductor. If the conductor is part of a complete circuit, a current is induced in the conductor.	



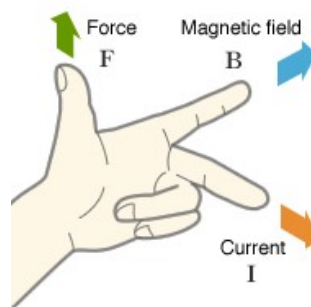
Learn to draw the shape of the field lines and direction of the arrows North to South. One arrow on each line.



Learn to draw the shape of the field lines. Use the right hand grip rule to find the direction of the magnetic field (B).



Learn to draw the shape of the field. The lines inside must be equally spaced apart. Use this right-hand rule to tell you the direction of the field **inside** the solenoid. The arrows on the outside go from North to South.



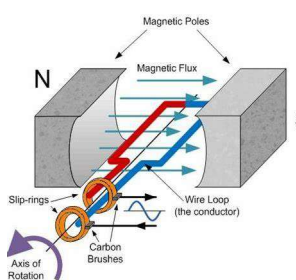
Fleming's Left Hand Rule

Learn what each finger represents

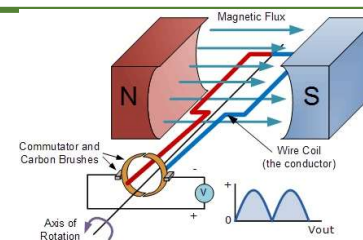
**F**irst finger = magnetic **F**ield

**s**e**C**ond finger = **C**urrent

**t**hu**M**b = **M**ovement or force.



Alternator = ac with two slip rings



Dynamo = dc with a split ring commutator

A motor looks similar to the dynamo except there will be a **battery** in the circuit.



$$F = BIL \text{ force(N) = magnetic flux density(T) x current(A) x length of wire in magnetic field(m)}$$







Terms	Definition – read, cover, write, review	Tick
Identity	is the qualities, beliefs, personality traits, appearance, and/or expressions that characterize a person or group.	
Distortion	the action of giving a misleading account or impression.	
Portraiture	is the recording of an individual's appearance and personality	
Mark making	describes the different lines, dots, marks, patterns, and textures we create in an artwork. It can be loose and gestural or controlled and neat.	
Tone	the relative lightness or darkness of a colour	
Proportion	refers to the dimensions of a composition and relationships between height, width and depth.	

Media/ materials	Definition – read, cover, write, review	Tick
Biro	a kind of ballpoint pen	
Fine liners	pens with plastic or fine fibre needle-point tips that generally use water-based ink but sometimes use oil-based.	
DPE	A printmaking process in which a design is drawn on a plate with a sharp, pointed needle-like instrument.	
Mono Print	a form of printmaking where the image can only be made once, unlike most printmaking which allows for multiple originals.	
Mixed Media	artworks composed from a combination of different media or materials.	
Pastels	These can come in both powder or oil based. Chalk pastels can be blended to create a soft appearance. Oil pastels are a cleaner medium than chalk pastels, but still softer and more blendable than either colored pencils or crayons.	
Watercolour paint	Watercolour is a translucent paint containing pigment and a binder, typically gum-arabic. The gum-arabic holds the paint together and ensures the paint will not flake. The paint has colour pigment suspended in water until the water dries and stains the surface. The paint brushes with fluidity and transparency and dries fairly quickly.	

- ☐ The width of the head, from ear to ear, generally measures the same length of five "eyes". This means that if we want to draw the eyes with accurate proportions, then we need to draw them so that they match this approximate measurement.
- ☐ The distance between the eyes is equal to the width of one eye.
- ☐ The corners of the mouth line up with the centres of the eyes.
- ☐ The top of ears line up slightly above the eyes, in line with the outer tips of the eyebrows.
- ☐ The bottom of the ears line up with the bottom of the nose.
- ☐ The width of the lips should be from the centre of the pupils downwards.
- ☐ (These measurements are purely a guide, each person is different and can have larger or smaller features.)

- ☐ How tone is applied to create form: **You must vary the pressure you apply to your pencil to create a range of tones, from light to dark.** Mark making can be used to create tones, texture and surfaces. A rubber can be used to create highlights.

Some examples of mark making can include:

Squiggles



Contour lines



Hatching



- ☐ How tone is applied to create form: **You must vary the pressure you apply to your pencil to create a range of tones, from light to dark.** Mark making can be used to create tones, texture and surfaces. A rubber can be used to create highlights. Different types of pencils. The spacing between your mark making will create a range of tones, along with layering.

Definitions		<input checked="" type="checkbox"/>	Methods of digital communication		<input checked="" type="checkbox"/>
Ethics	The moral principles that guide how a business operates.		1. Social media		
Ethical Objectives	A business' goals that relate to fair business practice or moral guidelines.		2. Websites		
Global Warming	The steady increase in the earth's temperature due to emissions and the build-up of greenhouse gases.		3. Email		
Sustainability	The process of operating without damaging the environment or depleting natural resources.		4. Mobile apps		
Scarce resources	When the raw materials that are available are not sufficient to meet needs.		5. Live chats		
Air pollution	The presence or intro of harmful substances into the air causing disease, allergies or damage to humans.		6. Video calls/zoom		
Noise pollution	A type and level of noise that is excessive and disturbing to people or animals.		Evaluation of E-commerce		<input checked="" type="checkbox"/>
Recycling	The conversion of waste into reusable material.		Positive		
E-commerce	Business transactions carried out electronically on the internet		1. websites where customers can buy their products		
M-Commerce	Business transactions are carried out electronically by mobile phone		2. reach a wider market compared to just having traditional shops		
Digital Communication	Involves sending and receiving information electronically.		Negative		
Social media	Online communication that allows you to interact with customers and share information		1. Greater competition as customers can buy products from anywhere around the world		
ICT	Information & communication technology includes the use of computers, phone networks & the internet		2. High costs associated with building websites & employing IT specialists.		
Dynamic market	Businesses face a constantly changing business environment		Why businesses need to adapt to changing technology		<input checked="" type="checkbox"/>
Evaluation of improved technology		<input checked="" type="checkbox"/>	1. Stay competitive		
Positive:			2. Customer expectations		
<ul style="list-style-type: none"> <li>○ Faster communication</li> <li>○ Computers are more efficient</li> <li>○ Improved manufacturing – technology is more accurate</li> </ul>			Environmental considerations		<input checked="" type="checkbox"/>
Negative:			1. Traffic congestion		
<ul style="list-style-type: none"> <li>○ High initial cost of technology</li> <li>○ Machinery often becomes out of date quickly</li> <li>○ increased training needed for staff to use new technology</li> </ul>			2. Recycling		
			3. Disposing of waste		
			4. Noise and air pollution		
			5. Global warming		
			6. Use of scarce resources		
Should businesses be environmentally friendly?		<input checked="" type="checkbox"/>	Ethical considerations		<input checked="" type="checkbox"/>
Positive:			1. Avoid exploiting workers by paying them low wages or forcing long working hours		
Consumers are now more aware of their impacts on the environment and so consider this when buying products			2. Paying a fair price to overseas suppliers for raw materials		
Negative:			3. Using appropriate methods for product development, e.g. not testing on animals		
Buying equipment & developing new processes to be environmentally friendly can be expensive					
Should businesses behave ethically?		<input checked="" type="checkbox"/>			
Benefits	Drawbacks				
1. Marketing as ethical helps gain sales	1. Ethical policies can be costly				
2. Acting ethically encourages investment	2. difficult to find ethical suppliers				

Definitions		<input checked="" type="checkbox"/>
Interest rates	The rate charged for borrowing money over a period of time, or the reward for saving money.	
Unemployment	The percentage of the population of working age that are unemployed but looking for a job.	
Consumer spending	The money spent by households on goods and services to satisfy their needs and wants.	
Globalisation	Operating on a worldwide scale; money, goods and services can be transferred across national borders.	
Exchange rates	The price of one currency based on another	
Exports	Goods/services sold to a customer in another country	
imports	Goods/services bought from a supplier in another country	
SPICED	Strong pound, imports cheaper, exports dearer	

Impact of interest rates		<input checked="" type="checkbox"/>
Impact of increased interest rates	<ol style="list-style-type: none"> <li>1. Savers – consumers are more likely to save their money as they receive a higher return, decreasing spending</li> <li>2. Loans – businesses and consumers will have less money to spend as the cost of their loans will increase.</li> </ol>	
Impact of decreased interest rates	<ol style="list-style-type: none"> <li>1. Savers – consumers are less likely to save their money as they receive a lower return, increasing spending</li> <li>2. Loans – businesses &amp; consumers will be encouraged to take out more loans and overdrafts as the cost of these will decrease.</li> </ol>	

Impact of high unemployment on businesses		<input checked="" type="checkbox"/>
Positive impacts	<ol style="list-style-type: none"> <li>1. Potential workers will be looking for jobs and so recruitment should be easier</li> <li>2. Wages can be reduced as lots of potential workers are available</li> <li>3. Grants given by the government to businesses setting up in areas of high unemployment</li> </ol>	
Negative impacts	<ol style="list-style-type: none"> <li>1. Individuals have less money to spend resulting in a lack of demand for products</li> <li>2. Workers may lose key skills if they have been unemployed for a long period of time and so the business will need to retrain them</li> </ol>	

Impact of changing income on businesses		<input checked="" type="checkbox"/>
Impact of increased incomes	<ol style="list-style-type: none"> <li>1. As incomes increase demand for products &amp; services increase as consumer spending increases</li> <li>2. Low cost businesses (e.g. Poundland) will suffer from decreased sales as individuals switch to more expensive alternatives</li> </ol>	
Impact of decreased incomes	<ol style="list-style-type: none"> <li>1. Individuals will spend the majority of their income on needs and so businesses selling wants will suffer from decreased demand</li> <li>2. Low cost businesses (e.g. Poundland) will benefit from increased sales as individuals reducing spending</li> </ol>	

Is globalisation a good thing for UK businesses?		<input checked="" type="checkbox"/>
Benefits	<ol style="list-style-type: none"> <li>1. Larger market to sell to – increased sales and profit</li> <li>2. Larger market to buy supplies – can access cheaper raw materials</li> <li>3. Easier to set up factories abroad reducing delivery costs &amp; avoiding import taxes</li> <li>4. Access to cheaper labour when setting up abroad</li> </ol>	
Drawbacks	<ol style="list-style-type: none"> <li>1. Higher wages in the UK mean UK business struggle to compete</li> <li>2. Bad publicity gained by businesses setting up abroad to exploit workers</li> <li>3. The cost of exchanging money into different currencies is significant</li> </ol>	

What is the impact of a changing currency on UK businesses?		<input checked="" type="checkbox"/>
If the pound becomes weaker:	<ol style="list-style-type: none"> <li>1. Ability to buy less currency (e.g. dollars) for the same price as before</li> <li>2. Raw materials imported are now more expensive so production costs increase</li> <li>3. Becomes more expensive for foreign businesses to sell products in the UK &amp; imports decrease</li> <li>4. UK exports become cheaper &amp; sales &amp; profit for these businesses increase</li> </ol>	
If the pound becomes stronger:	<ol style="list-style-type: none"> <li>1. Able to buy more currency (e.g. dollars) for the same price</li> <li>2. Raw materials imported from abroad are now cheaper reducing production costs</li> <li>3. Becomes cheaper for foreign businesses to sell products in the UK &amp; imports increase</li> <li>4. UK exports become more expensive &amp; sales &amp; profit for these businesses decrease</li> </ol>	

How can UK businesses compete internationally?	<input checked="" type="checkbox"/>
<ol style="list-style-type: none"> <li>1. Better designs</li> <li>2. Benefit from economies of scale</li> <li>3. Maintain lower prices than overseas competitors</li> <li>4. Produce better quality products</li> </ol>	

Exchange rates	<input checked="" type="checkbox"/>
If a business imports a product from abroad they have to pay for the item in the currency of the country it was made in which means you have to exchange pounds for another currency.	

### 1.3.2 Wired & Wireless Networks









Keyword	Definition / Example	✓
<b>Network protocol</b>	Defines rules for data transmission between devices on a network.	
<b>Network standard</b>	A set of agreed requirements for hardware and software that allows different manufacturers to make compatible products.	
<b>HTTP</b>	Hyper Text Transfer Protocol – used by web browsers to access websites and web servers.	
<b>HTTPS</b>	Hyper Text Transfer Protocol Secure – encrypts website data sent and received for security.	
<b>TCP</b>	Transmission Control Protocol – provides reliable, ordered, and error-checked delivery of data on a network.	
<b>IP</b>	Internet Protocol – directs packets to their destination across a network.	
<b>FTP</b>	File Transfer Protocol - used to transfer files between a client and server.	
<b>SMTP</b>	Simple Mail Transfer Protocol – used to send emails.	
<b>POP</b>	Post Office Protocol – used to retrieve email.	
<b>IMAP</b>	Internet Message Access Protocol – used to retrieve email and has more features than POP.	

### 1.6.1 Legal & Ethical

Keyword	Definition / Example	✓
<b>Censorship</b>	Controlling what information people can access.	
<b>Surveillance</b>	Monitoring what people are accessing on the internet.	
<b>Digital divide</b>	The inequality caused by unequal access to technology.	
<b>E-waste</b>	The electronic devices discarded every year.	
<b>Computer Misuse Act 1990</b>	Introduced to stop hacking and cybercrime.	
<b>Copyright, Designs and Patents Act 1988</b>	All intellectual property is automatically protected, so it's illegal to use, copy and distribute material without the correct permission.	
<b>Data Protection Act 2018</b>	Controls how your personal information is used by organisations, businesses or the government.	
<b>Software licensing</b>	A legal agreement stating how software can be used.	
<b>Open-source software</b>	The source code is made available.	
<b>Closed-source/ proprietary software</b>	Only compiled code is available.	




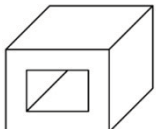
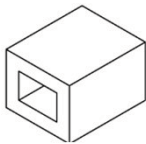
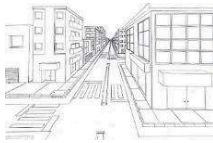
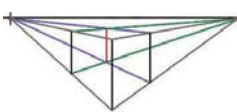


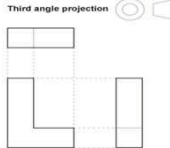
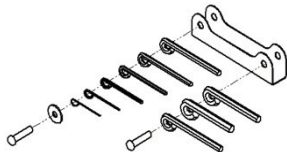
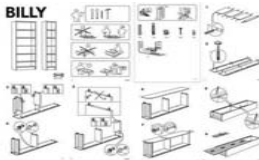
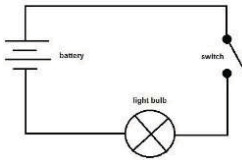
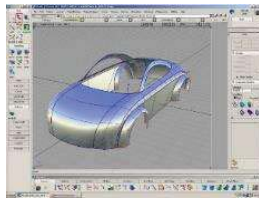
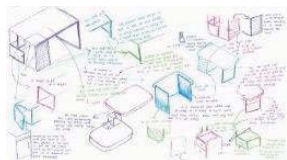
# GCSE Design Technology: CORE 1.15 Designers and companies

Tick	Name	Example	What are they known for?
	Alessi		Kitchenware products – which are fun and unique. A company with lots of different designers.
	Apple		Ground breaking designs which broke away from tradition. Have a loyal customer base. Design company.
	Heatherwick Studio		Around 200 designers, architects and makers have worked on products from perfume bottles to buildings – original and unique designs.
	Joe Casely-Hayford		Fashion designer. Known for original but wearable designs, using traditional English tailoring techniques.
	Pixar		Among the first to develop computer animated feature films. Design company.
	Raymond Loewy		Designer. Combined simplicity with functionality. Known for the 'teardrop' design for aerodynamics.
	Tesla, Inc.		Is the leader in producing electric cars which don't compromise on power or quality.
	Zaha Hadid		An architect who integrated geometric forms with expressive, sweeping fluid curves. Promoted architecture as a visual art form for aesthetic pleasure.

# GCSE Design Technology: CORE 1.16 Design strategies

Tick	Design strategy	Definition/explanation
	User centred design	User-centred design revolves around putting your users' needs at the centre of every decision that is made throughout the whole designing process.
	Systems thinking	Used by Product Designers and Engineers to help solve complex problems and find solutions, usually using a flowchart. It is used to think about the functions of products and how users interact with them.
	Collaboration	When a team of designers come together and generate design ideas.
	SCAMPER	<p>This is a technique used by designers to think of new ideas when developing them.</p> <p>The letters stand for:</p> <p>Substitute Combine Adapt Modify Put to another use Eliminate Reverse</p>

Tick	Method	Example	Explanation
	Freehand sketching		Very quick sketches drawn by hand. They are used as initial ideas as they are quick to do.
	Digital photography/media		Creates and develops designs. Tracing paper can be used to trace over ideas.
	Cut and paste techniques		Images are used to create and inspire their own ideas i.e. using a mood board.
	Oblique		A style of 3D drawing, drawn at 45°.
	Isometric		A style of 3D drawing, drawn at 30°.
	One point perspective		There is 1 vanishing point anywhere around the object which all points are drawn to.
	Two point perspective		There are 2 vanishing points either side of the object. Architects use this style when developing their ideas in 3D.

Tick	Method	Example	Explanation
	Orthographic projection		3 main sides; plan, front and side are drawn in line with each other.
	Exploded drawing		Draws the product disassembled, along the same axis. Usually drawn in isometric.
	Assembly drawings		A chronological set of drawings - used to show manufacturers how to make a product.
	Schematic diagrams		Electronics - circuit diagrams to show where components are placed.
	CAD (Computer Aided Design)		Computer images drawn of products using specialist software.
	Annotated sketches		Added to sketches to allow the designer to communicate their thinking i.e. materials etc.



# Food science

## Functions of ingredients

Ingredients provide a variety of functions in recipes.

## Carbohydrate, protein and fat

Carbohydrate, protein and fat all have a range of properties that make them useful in a variety of food products.

## Carbohydrates perform different functions in food.

They can:

- help to cause the colour change of bread, toast and bakery products (dextrinisation);
- contribute to the chewiness, colour and sweet flavour of caramel;
- thicken products such as sauces and custards (gelatinisation).

## Maillard reaction

Sugars will also caramelize when dry heat is applied to them. When sugars are mixed with other ingredients such as eggs and flour (which both contain protein) in baked products browning occurs this is called a Maillard reaction.

## Dextrinisation

When dry heat is applied to products such as when making bread it causes the product to brown. The starch in the flour is changed into a sugar (dextrin) and goes brown.

## Caramelisation

The colour of sugar changes from white to brown when heated. The sugar melts and becomes syrup. At 154c the sugar starts to change colour. The longer the sugar is heated the darker the colour of the caramel and the harder it will set once cooled.

Starches – Include Potatoes, Swede and sweet potatoes. Rice, Flour and corn flour which is made from ground maize kernels, unlike other flours it is virtually tasteless and blends to a smooth cream so can be added blended to thicken sauces, gravy etc.

## Gelatinisation

When starch is mixed with liquid and heated, such as a sauce the mixture will thicken.

Starch grains cannot dissolve in the liquid so they form a suspension. As the liquid is heated the starch grains swell (60c) and as more heat is applied the starch grains break open causing the mixture to thicken (80c)

## Proteins perform different functions in food products.

They:

- aerate foods, e.g. whisking egg whites;
- thicken sauces, e.g. egg custard;
- bind ingredients together, e.g. fishcakes;
- form structures, e.g. gluten formation in bread;
- gel, e.g. lime jelly.

## Gluten formation

Two proteins, gliadin and glutenin, found in wheat flour, form gluten when mixed with water. Gluten is strong, elastic and forms a 3D network in dough. In the production of bread, kneading helps untangle the gluten strands and align them. Gluten helps give structure to the bread and keeps in the gases that expand during cooking.

## Shortening

When fat is used in making rubbed-in mixtures the finished product will have a short crumbly texture. The fat coats the grains of flour making it waterproof and preventing the gluten in it developing, giving it a short crumbly texture.

## Acid Denaturation

When acids are used to change the shape and structure of protein foods, for example a marinade to tenderise meat or provide a soft texture e.g. when vinegar is added to meringue. The acid causes a change in a structure of a protein, the long chains of amino acids unfold. When applied to meat, for example, it softens the meat tissues.

## Coagulation

Coagulation -When the protein in a food sets. When moist or dry heat is applied to protein foods they coagulate and set, different protein foods coagulate in different ways. A visible example of this is egg white setting when poached or fried.

## Aeration

The process of trapping air in a mixture causing it to rise. When a fat and sugar are creamed together air is trapped. When the product is heated the air will expand, causing the mixture to rise.

## Fats performs different functions in food.

They help to:

- add 'shortness' or 'flakiness' to foods, e.g. shortbread, pastry;
- provide a range of textures and cooking mediums;
- glaze foods, e.g. butter on carrots;
- aerate mixtures, e.g. a creamed cake mix;
- add a range of flavours.

## Plasticity

The ability of a solid fat to soften over a range of temperatures. Not all fats melt at the same temperature. Some products are designed to have a lower melting point as this gives consumers a quality in a product that they want- For example a spread that can be spread on bread straight out of the fridge.

## Foam Formation-

A foam is produced when eggs are whisked. When eggs are whisked they produce a mixture of gas (air) and liquid (egg white) the gas produced is spread throughout the liquid and the foam is produced.

**Oxidisation-**When fruit and vegetables are cut open and the cells are exposed to air. A chemical reaction occurs when the cells of the fruit or vegetables are exposed to Oxygen. This can cause the fruit or vegetable to go brown (Enzymic Browning).

## Raising agents

Raising agents include anything that causes rising within foods, and are usually used in baked goods. Raising agents can be:

- **biological**, e.g. yeast; used in bread making to give lightness and causes it to rise. Given the right conditions, food, warmth, moisture and time it can break down food into carbon dioxide by a process known as fermentation. This Co2 is trapped within the gluten strands in the flour and causes the bread to rise.
- **chemical**, e.g. Baking Powder; Bicarbonate of Soda and Self raising flour, used to make baked goods rise, Soda reacts with acid causing Co2 to be produced, BP and SR Flour react with heat to do this.
- **Air-** Air is added through beating or folding or whisking. When heated it rises quickly.
- **Steam** Causes products that contain a lot of liquid i.e. batter and choux pastry to rise when steam is produced during baking.

## Functional ingredients

These are ingredients that are specifically included in food for additional health benefits. They include:

- probiotics – 'good' bacteria that may have a positive impact on human health;
- prebiotics – food ingredients that promote the growth of beneficial microorganisms in the gut;
- sterols/stanols – compounds that can lower cholesterol;
- healthy fats (e.g. omega-3);
- added vitamins and minerals (more than in the original food). I.e. Fortified cereals.

## Enzymic browning-

when fruit and vegetables e.g. potatoes or apples go brown. The food reacts with Oxygen resulting in a brown colour.

## Colloidal Structure

The term **Colloidal Structure** is used to describe what is formed when at least two ingredients are mixed together. It is these structures that often give the texture to the food products.

## Methods of cooking food

The methods of cooking are divided up into groups. These are based on the cooking medium used.

They are:

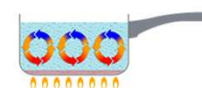
- moist/liquid methods, e.g. boiling;
- dry methods, e.g. grilling;
- fat-based, e.g. frying.

Selecting the most appropriate way of preparing and cooking certain foods is important to maintain or enhance their nutritional value.

- Vitamins can be lost due to oxidation during preparation or leaching into the cooking liquid.
- Fat-based methods of cooking increase the energy (calories) of the food.
- The use of different cooking methods affects the sensory qualities of the food.

## There are three ways that heat is transferred to food.

- **Conduction** – the exchange of heat by direct contact with foods on a surface.
- **Radiation** – energy in the form of rays.
- **Convection** – currents of hot air or hot liquid transfer the heat energy to the food.



**Emulsification-** The process of using an emulsifier such as egg yolk to prevent a mixture of oil and liquid from separating, i.e. mayonnaise. **Emulsifiers** attract oil and liquid and hold them together. For example, egg yolk contains Lecithin and is used in some salad dressings- mayonnaise and low-fat spreads to hold the oil and liquid together and prevent them from separating.

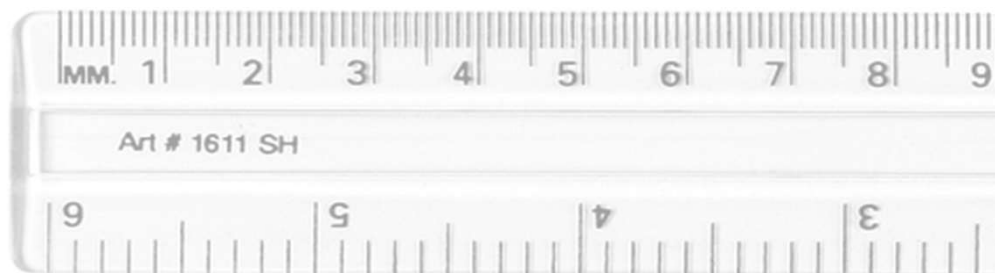
## Why is food prepared and cooked?

Food is prepared and cooked to:

- make the food more palatable – improves flavour, texture and appearance;
- reduce the bulk of the food; kill natural poisons in food.
- provide variety and interest to meals. Kill harmful bacteria



# Equipment

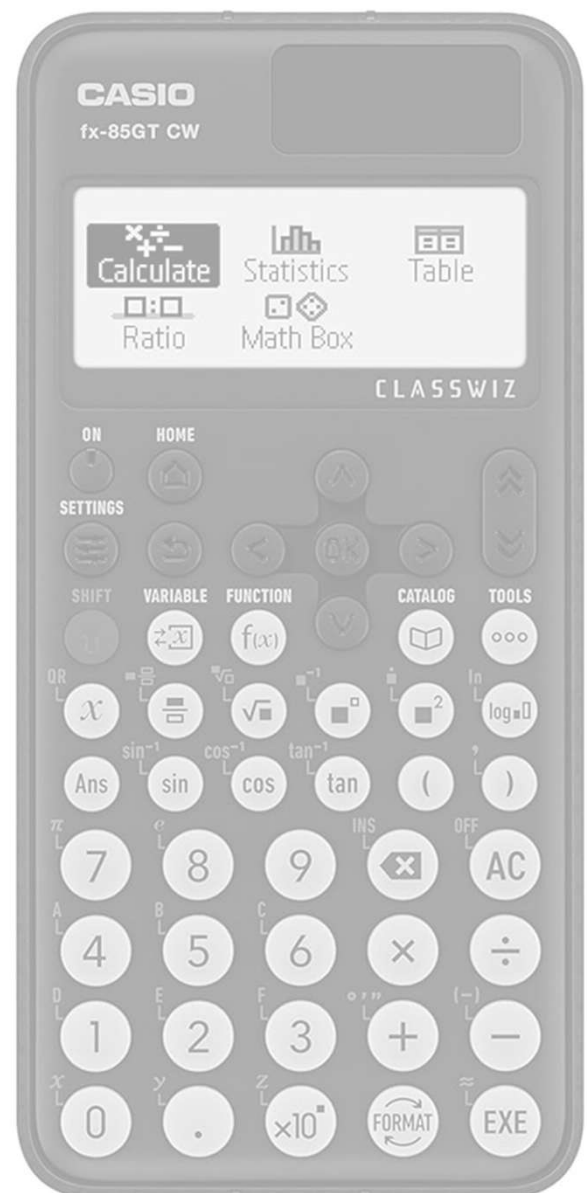
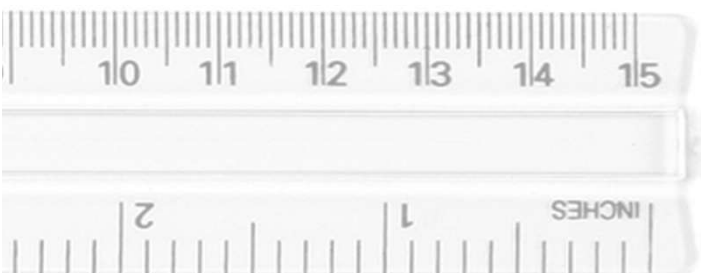
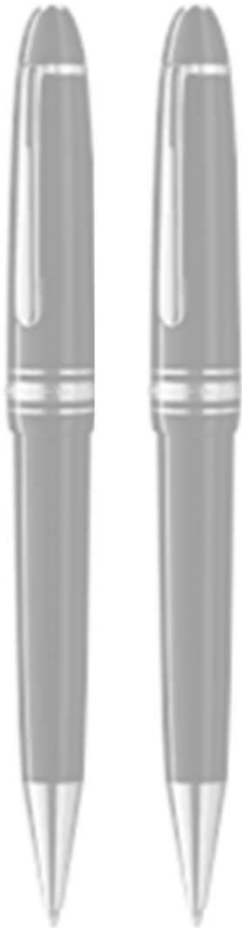




# Check



- ID card
- Green and purple pens
- Whiteboard pens
- Black/blue pens
- Glue stick
- Pencil
- Ruler
- Calculator





Où se trouve	Where is..
Où se trouve ta ville/ton village?	Where is your town/village?
Il/elle se trouve dans..	It is in..
Le nord/le nord-est/le nord-ouest /l'est	The north/north east/north-west/east
Le sud/le sud-est	The south/south-east
L'ouest/ le sud-ouest	The west/south west
de l'Angleterre/de la France	of England/ of France
en Angleterre/en France	In England/in France

to form negatives the ne ..pas goes around the conjugated verb.	
ne...pas	not any
ne ....jamais	never
ne...rien	nothing
ne...que	only
ne...aucun	not any, none
ne...personne	no-one
ne..ni..ni	neither...nor...
ne...plus	not any more

Vivre	To live
Je vis	I live
Tu vis	You live
Il/Elle/on vit	He/She lives
Nous vivons	We live
Vous vivez	You all live
Ils/Elles vivent	They live

Tu habites où? Where do you live?	
Tu habites dans une ville ou un village?	Do you live in a town or a village?
Y	there
Tu y habites depuis combien de temps?	How long have you lived there?
Ta ville/ton village est comment?	What is your town/village like?
Tu aimes y habiter? Pourquoi (pas)?	Do you like living there? Why (not)?

'y'
Means there. It goes before the conjugated verb

Les directions/directions	
Pour aller à /au/à la/aux	How do you get to the..
Continuez tout droit	Continue straight ahead
Tournez à gauche/à droite	Turn left/right
Traversez la place/le pont	Cross the square/bridge
Aux feux	At the traffic lights
Prenez la première/la deuxième rue à gauche/à droite...	Take the 1 <sup>st</sup> /2 <sup>nd</sup> road on the left/right
C'est loin d'ici?	Is it far from here?
C'est près d'ici?	Is it near here?
À côté de	next to
En face de	opposite
Devant	In front of
Derrière	behind
Entre	between

là où j'habite	
j'habite dans....	I live in...
un petit village/une grande ville/ à Londres	a small village/big town/in London
près de la capitale	near the capital
j'habite à/ en ...depuis...ans/mois	I have lived in....for...years/months
vivre à la campagne/en ville est (parfait pour moi)	living in the countryside/town is (perfect for me)
je n'aime pas y habiter	I don't like living there
j'adore y habiter	I love living there
j'aimerais mieux habiter en ville	I would prefer to live in town
on peut y trouver	you can find...there
une vieille ville	an old town
une ville industrielle	an industrial town
de nombreux bâtiments	many buildings
une des plus grandes villes	one of the largest towns
avec des belles maisons traditionnelles	with beautiful, traditional houses
peu de	few/not many
un bel endroit	a nice/beautiful place
trop de bruit	too much noise

The adjective 'old'	
Masc sing	vieux
Fem sing	vieille
Plural	vieux
	vieilles
*m sing starting with a vowel	vieil

Make sure you use the correct word for 'in'.

**dans** + point of compass    **dans** le sud-est

**à** + name of town/village    **à** Londres

**en** + feminine country    **en** France

**au** + masculine country    **au** Portugal



Pros and Cons	
Un avantage	An advantage
Un désavantage	A disadvantage
Un pour	A for (a benefit)
Un contre	An 'against'
D'un côté	On the one hand
D'un autre côté	On the other hand
Le pire, c'est..	The worst thing is..
Le mieux, c'est..	The best thing is..
Au contraire	On the contrary
Toutefois	However
Tandis que	Whereas
Selon moi	According to me
Selon mes parents	According to my parents

Au magasin – role play	
Vous cherchez quelque chose en particulier?	Are you looking for something in particular?
Je peux vous aider?	Can I help you?
Vous aimez cette chemise/cravate?	Do you like this shirt/tie?
Vous l'aimez?	do you like it?
il/elle coûte combien, svp?	How much does it cost please?
Je peux payer par carte?	Can I pay by card?
La caisse est là-bas	The till is over there
Je voudrais échanger ce Tee-shirt	I would like to exchange this T-shirt
Quel est le problème?	What is the problem?
Malheureusement,..	Unfortunately
Désolé(e), je n'en ai plus dans cette couleur	Sorry, I don't have any more of them in this colour
Avez-vous la même chose en (noir)?	Do you have the same thing in (black)?
Je peux l'essayer s'il vous plaît?	Can I try it on please?
Pas de problème	No problem

There are 4 words for this/these	
Masc sing	Ce
Fem sing	Cette
Plural	Ces
*m sing starting with a vowel	Cet Eg cet oeuf (this egg)


depuis
Depuis means since/for. In French, it is used with the present tense, which is very different to English

Au magasin- At the shop	
ce chapeau/pantalon	This hat/these trousers
cette chemise	This shirt
ces chaussettes	These socks
ces chaussures	These shoes
Pour la fête/l'anniversaire de...	For someone's party/birthday
J'ai trouvé/vu ça	I found/saw that
Il/elle a coûté	It cost
La prochaine fois	Next time
j'achèterai/je choisirai	I will buy/choose
j'essayerai/j'irai	I will try/go

Comment serait ta maison idéale?	
Moi, si j'avais le choix	If I had the choice
J'aimerais habiter dans..	I would like to live in...
Si j'étais riche, j'habiterais dans...	If I were rich, I would live in..
Un château ancien	An ancient castle
Un bel appartement tout neuf	A beautiful, brand new flat
J'aurais	I would have
Il y aurait...	There would be...

La maison de mes rêves – the house of my dreams	
propre et bien équipé	clean and well-equipped
un bon accès pour les personnes handicapées en fauteuil roulant	good access for disabled people in a wheelchair
ma propre chambre	my own bedroom
des grandes fenêtres, pour profiter de la lumière naturelle	big windows to make most of the natural light
de nombreuses pièces avec beaucoup d'espace	lots of rooms with a lot of space
un ascenseur	a lift
un escalier	a staircase
un joli jardin plein de fleurs et d'arbres	a pretty garden full of flowers and trees
Un voisin	A neighbour
avec qui je peux parler et rire	with whom I can talk and laugh
une télévision à grand écran	a large screen TV
une maison à plusieurs étages	a house with several floors
un cinéma privé pour voir les derniers films	a private cinema to see the latest films
dehors	outside



5.1 Population, economic activities and settlements are key elements of the human landscape.	5.2 The UK economy and society is increasingly linked and shaped by the wider world.	5.2 The UK economy and society is increasingly linked and shaped by the wider world.
<p><b>Urban core</b> characteristics are:</p> <ul style="list-style-type: none"><li>• high population density</li><li>• economically active single young people</li><li>• economic activities – retail, offices and headquarters</li><li>• a large number and variety of jobs</li><li>• cultural centre with libraries</li><li>• museums and theatres</li><li>• infrastructural hubs (for example, train stations)</li><li>• settlement type – conurbation, city, large town</li><li>• high and low-rise buildings</li><li>• higher property prices.</li></ul> 	<p><b>5.2a</b></p> <p>Migration has altered population geography in terms of numbers, distribution and age structure of different parts of the country.</p> <ul style="list-style-type: none"><li>• Post War Migrants: from Commonwealth countries like the Caribbean.</li><li>• 2004 EU Migrants: from Poland</li><li>• Post-Brexit: highly skilled migrants from around the world</li></ul> <p><b>National migration patterns</b> – retirement migration to Devon, Dorset and Cornwall</p> <ul style="list-style-type: none"><li>• Retirees are attracted due to the pull factors (scenery, warmer climate, slower pace of life, low crime).</li></ul> <p><b>Rural-urban migration</b></p> <ul style="list-style-type: none"><li>• Young adults leave the countryside (for example, Mid Wales) in search of further education and jobs in cities (for example, Birmingham). This is due to a lack of well-paid job opportunities and services in the countryside.</li></ul> <p><b>5.2b</b></p> <p>The decline in primary and secondary sectors through an international division of labour and global shift in manufacturing (for example, from UK to Eastern Europe/Asia) has led to <b>deindustrialisation</b> and a <b>spiral of decline</b> in many <b>peripheral</b> areas of the UK (like the North East).</p> <p>There has been a rise in tertiary (services) and quaternary (research and development) sectors, mainly in urban areas. This has led to a shift towards a new economy, which has evolved over time, resulting in an increase in the highly specialised quaternary sector – creating what is known as a knowledge economy.</p> <p>Jobs within this include: Law, Insurance, IT, Creative industries and Research and development.</p>	<p><b>5.2c</b></p> <p><b>Globalisation</b> - the way the world has become more interconnected</p> <p>There are <b>three</b> main elements of globalisation within the UK:</p> <ol style="list-style-type: none"><li>1. The Impact of Free-Trade Policies on the UK Economy<p>Agreements between countries to reduce or eliminate barriers to trade, such as tariffs and quotas. Main goal is to make it easier for countries to buy and sell goods and services to each other.</p></li><li>2. How Privatisation Has Encouraged FDI in the UK<p>Privatisation is the process of transferring the ownership of a business, service, or property from the public sector (government) to the private sector (individuals or businesses). This often involves the sale of government-owned companies to private investors.</p></li><li>3. The Role and Influence of TNCs in the UK Economy<p>Transnational Corporations (TNCs), are large companies that operate in multiple countries. TNCs have their headquarters in one country but have business operations, production facilities, or subsidiaries in other countries.</p></li></ol>

## Half Term 1

## Unsere Welt

## Year 11 German

Wir verbessern die Welt – We make the world better		
der Beruf	job/profession/occupation	
der Erfolg	success	
der Fortschritt	progress	
der Held/die Heldin	hero/heroine	
der Mensch	person	
der Schriftsteller	writer	
der Stadtplan	town plan	
der Zweck	purpose	
die Diskriminierung	discrimination	
die Erfahrung	experience	
die Geschwister	siblings/brothers and sisters	
das Buch	book	
das Leben	life	
das Projekt	project	
das Ziel	goal	

Wir verbessern die Welt – We make the world better		
entwickeln	to develop	
gründen	to found/start	
haben	to have	
informieren	to inform	
kämpfen (für)	to fight (for)/struggle	
machen	to make/do	
schreiben	to write	
behindert	disabled	
schwarz	black	
außerhalb/innerhalb	outside of/inside of	
wegen/trotz	because of/despise, in spite of	
gegen/über	against/over, about	
während	during	
wofür	for what	

Was ist dir wichtig? – What is important for you?		
wichtige Themen in der Welt	important topics in the world	
Ich habe Angst vor ...	I'm afraid of ...	
Ich bin mit ... zufrieden.	I'm happy/satisfied with ...	
Ich hoffe auf eine bessere Zukunft.	I hope for a better future.	
Ich mache mir Sorgen um ...	I worry about ...	
Ich spreche über ...	I talk about ...	
Ich arbeite an ...	I work on	
die Ausbildung/die Arbeit	education/work	
die Flüchtlinge/den Welthunger	refugees/world hunger	
das Gute/das Schlechte	good thing/bad thing	
das Wichtigste	most important thing	

Dialog ist wichtig! – Dialogue is important!		
Du hast gesagt, dass ...	You said that ...	
aber ich denke, dass ...	but I think that ...	
Das glaube ich nicht.	I do not think so.	
Das stimmt, aber ...	That's right, but/however ...	
Du hast Recht.	You are right.	
Ich bin der Meinung, dass ...	I am of the opinion that	
Das Gute ist, dass ...	The good thing is that ...	
Ich behaupte trotzdem, dass ...	Nevertheless, I maintain that ...	
Vor allem ...	Above all ...	
Viele Leute sagen, dass ...	A lot of people say that ...	
Einerseits ..., andererseits ...	on the one hand ... on the other hand ...	
Ich bin überzeugt, dass ...	I am convinced that ...	
Weder ..., noch ...	Neither ... nor ...	
Vielleicht, aber ich weiß nicht, ob ...	Perhaps, but I don't know if ...	
im Gegenteil	on the contrary	
außerdem	in addition, besides	
jedoch	however	
übrigens	by the way, what's more	

Modal verb structures		
are followed by an infinitive		
man muss	you have to	
man darf nicht	you must not	
man will	you want to	
man kann	you can	
man müsste	you would have to	
man sollte	you should	
man könnte	you could	
man würde	you would	

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"		



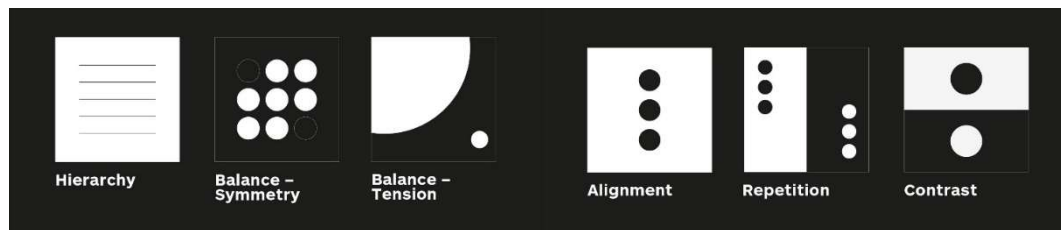
Umweltprobleme – environmental problems		
Meiner Meinung nach ...	In my opinion	
Laut einer Studie ...	According to a study	
der Plastikmüll	plastic waste	
der Verlust von Bäumen	loss of trees	
die Luftverschmutzung	air pollution	
die Wasserverschmutzung	water pollution	
das extreme Wetter	extreme weather	
die steigenden Temperaturen	rising temperatures	
die Kleinstadt	small town	
die Tierarten	animal species	
das Umweltproblem	environmental problem	
das Verkehrsmittel	means of transport	
das größte/wichtigste Problem ist .....	the biggest/most important problem is ....	
die größten/wichtigsten Probleme sind .....	the biggest/most important problems are ...	
teilnehmen an + acc	take part in	
tun	to do	
Ich stimme nicht zu	I do not agree	
Das stimmt (nicht)	That is (not) correct/right	
dagegen	against it / on the other hand	
schon	already	
für den Klimaschutz kämpfen	to fight for climate protection	
die Klimakrise	the climate crisis	
mit öffentlichen Verkehrsmitteln fahren	travel by public transport	
die Lärmverschmutzung	noise pollution	
den Plastikmüll vermeiden	to avoid plastic waste	
erneuerbare Energiequellen entwickeln	develop renewable energy sources	

Umweltprobleme mit “um ... zu” – environmental problems with in order to		
Man soll ...	You/One should	
erneuerbare Energiequellen entwickeln	develop renewable energy sources	
trennen/recyclen	to separate/to recycle	
um .... zu + infinitive	(in order) to ...	
um die Luftverschmutzung zu reduzieren	to reduce air pollution	
um die steigenden Temperaturen zu reduzieren	to reduce rising temperatures	
um Plastikmüll/ Müll zu vermeiden	to avoid plastic waste/rubbish	
um Energie zu sparen	to save energy	
um unsere Wälder zu retten	to save our forests	
um eine bessere Welt zu schaffen	to create a better world	

Wir können alle etwas machen – We can all do something		
Ich kaufe ...	I buy	
nachhaltige/ umweltfreundliche Produkte	sustainable/ environmentally friendly products	
billige/gebrauchte/ modische Kleidung	cheap/second-hand/ fashionable clothes	
Ich spare Energie/ Strom/Wasser	I save power/ electricity/water	
Ich recycle ...	I recycle	
Ich werfe ... weg (wegwerfen = separable)	I throw away	
Dosen/Papier/ (Plastik)Flaschen	tins, cans/paper/ (plastic) bottles	
Ich trinke aus ...	I drink from .....	
einer wiederverwendbaren (Wegwerf)Tasse	a reusable/ disposable cup	
Ich mache das Licht aus	I turn the light off	

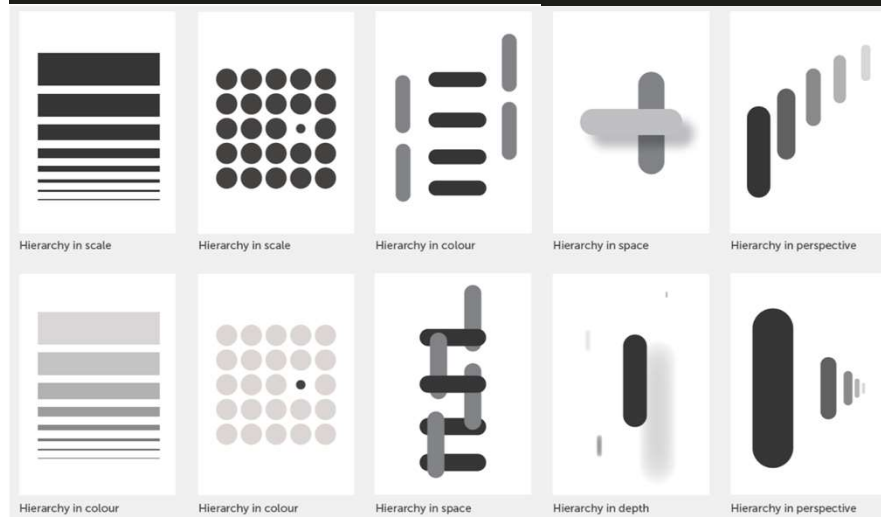
Was hast du neulich gemacht, um die Umwelt zu schützen? – What have you recently done to protect the environment?		
Ich habe den Müll getrennt.	I separated the rubbish.	
Ich habe an einem Schulstreik teilgenommen.	I took part in a school strike.	
Ich habe Energie gespart.	I saved energy.	
Ich habe nachhaltige Produkte gekauft.	I bought sustainable products.	
Ich habe Bäume gepflanzt.	I planted trees.	
Ich habe keine Plastikflaschen benutzt.	I didn't use any plastic bottles.	
Ich bin zu Fuß zur Schule gegangen.	I walked to school.	
Mein Vater hat ein elektrisches Auto gekauft.	My father bought an electric car.	
Ich habe recycelt.	I recycled.	

Wir wollen eine bessere Welt – We want a better world		
der Mensch/ das Kind	person/child	
der Naturschutz	protection of nature	
der Rassismus	racism	
der Welthunger	world hunger	
das Problem/ die Lösung	problem/ solution	
das Leben	life	
anfangen/beenden	to begin/to end	
entscheiden	to decide	
helfen/verbessern	to help/to improve	
organisieren	to organise	
weltweit	worldwide	
arm	poor	



**Balance** *In the context of graphic design, balance is of three types.*

- ☐ **Symmetrical** – This type of design is formed along a vertical axis and or horizontal axis, where the weight of the elements is evenly divided into both sides of the layout.
- ☐ **Asymmetrical** – This type of balance employs scale, contrast and colour to even out the flow of a layout. It is usually found in websites, where two sides of a webpage differ from each other but contain similar elements.
- ☐ **Radial**– Here, the elements of a design are placed in a circular pattern on the layout. This provides a sense of movement and dynamism to the eyes of the viewer.



Keyword	Definition	tick
<b>Typography</b>	Typography is the visual component of the written word, ". All visually displayed text, whether on paper, screen or billboard, involves typography.	
<b>Kerning</b>	Kerning refers to the space between two specific letters (or other characters: numbers, punctuation, etc.) and the process of adjusting that space improves legibility.	
<b>Tracking</b>	Tracking is similar to kerning in that it refers to the spacing between letters or characters. However, instead of focusing on the spacing between individual letters (kerning), tracking measures space between groups of letters.	

Keyword	Principles of Design – read, cover, write, review	tick
Balance	This refers to the distribution of the graphic design elements, such as shapes, text boxes and images, of a design evenly throughout a certain layout. Designers can choose between a balanced (stable) design or off-balanced (dynamic) layout.	
Emphasis	Refers to a design's focal point and the importance of each element within it	
Alignment	Having a strong point of alignment within design allows our eyes to seamlessly flow through the visual message. Aligning elements with one another so that every item has a visual connection with something else on the page, tightens a design and eliminates the haphazard, messy effect which comes from random placement of elements.	
Contrast	The contrast principle of design generates space and distinction between elements, and is the most effective way to create emphasis and impact with your design.	
Repetition	Repetition strengthens a design by tying together otherwise separate parts, and as a result, creates associations.	
Proportion	The visual size and weight of parts in composition and their correlation is referred to as proportion.	
Movement	Controlling the elements in a composition such that the eye is led from one to the next and the information is transmitted appropriately to your audience is known as a movement.	
Negative space	The empty space around the parts in your composition/layout is known as negative space. It is also known as white space.	
Hierarchy	Hierarchy creates organisation, typographic hierarchy is an essential part of any design or layout and even if you're not familiar with the term, you'll be sure to have seen hierarchy in action on any website, newspaper or magazine.	



# Bournemouth School: History Department: Knowledge Organiser: Year 11: Autumn 1: 1700-1900



Key terms/definitions (4 SPaG marks on this unit for spelling and punctuating with consistent accuracy, controlled use of grammar, and use of a wide range of specialist terms)					Timeline of key events:				✓
Term	Definition			✓	<p><b>Early 1700s:</b> Highway robbery widespread</p> <p><b>1723:</b> Black Act: hunting deer, hare or rabbits and/or having a blackened face in a hunting are is made a capital crime</p> <p><b>1736:</b> Witchcraft laws repealed</p> <p><b>1748:</b> Duke of Richmond asked to help tackle smuggling gangs: by this stage 103 people are ‘wanted’ as smugglers</p> <p><b>1750:</b> Population of England and Wales: 9.5 million people</p> <p><b>1777:</b> John Howard publishes ‘<i>The State of Prisons in England and Wales</i>’</p> <p><b>1789:</b> French Revolution</p> <p><b>1820s and 1830s:</b> Abolition of the Bloody Code</p> <p><b>1823:</b> Peel’s Gaols Act</p> <p><b>1829:</b> Metropolitan Police Act</p> <p><b>1833:</b> Tolpuddle Martyrs transported to Australia</p> <p><b>1833:</b> Peak year of transportation to Australia: 36 ships and 6,779 prisoners sent in this year</p> <p><b>1840s:</b> Railways have become a major form of travel</p> <p><b>1841:</b> Only murder/treason remain capital crimes</p> <p><b>1842-77:</b> 90 new prisons built in Britain, starting with Pentonville (separate system)</p> <p><b>1850:</b> 70% of the population could read and write</p> <p><b>1856:</b> It becomes compulsory for all towns and counties to set up police forces</p> <p><b>1878:</b> Criminal Investigation Department set up</p> <p><b>1880:</b> Law passed saying that all children at school until 13</p> <p><b>1900:</b> Population of England and Wales reaches 41.5 million people: 95% of these people could read and write</p>				✓
Reformation	Period of drastic change in religion e.g. England becoming Protestant								
Highway robbery	Crime usually committed on horseback attacking travellers								
Stagecoaches	Horse-drawn coaches stopping at intervals to allow rest								
Poaching	Illegal hunting of animals								
Capital crime	A crime punishable by death								
Gamekeepers	People paid to patrol private land to protect animals from poachers								
Black market	Illegal buying and selling of goods								
Smuggling	Bringing goods into the country illegally/not paying tax on legal goods								
Customs officers	Officials ensuring nothing illegal imported/taxes paid on legal items								
Tolpuddle Martyrs	Six farm labourers sentenced to transportation and seven years hard labour in Australia for the crime of ‘taking a secret oath’.								
Transportation	Sending convicted criminals overseas								
Industrial Revolution	Period of scientific and technological development from 18 <sup>th</sup> century								
Fielding Brothers	Introduced horse patrols/Bow Street Runners to improve policing								
Robert Peel	Home Secretary (from 1822), introduced the Gaols Act (1823), and also set up the Metropolitan Police Force (1829)								
Bloody Code	Harsh laws increasing death penalty: abolished in 1820s/1830s								
John Howard	Proposed changes to prisons, with healthier accommodation/diet								
Elizabeth Fry	Highlighted poor prison conditions, influenced Peel’s Gaols Act								
Pentonville	First new prison set up in 1842, aiming to reform prisoners								
Separate system	Used in Pentonville: kept prisoners away from each other								
Silent system	Harsh prison system adopted during the 1860s								
Hard board	Hard wooden bunks to sleep on: used in the ‘silent system’								
Hard fare	Adequate but monotonous food offered in the ‘silent system’								
Hard labour	Deliberately pointless work set in ‘silent system’ - e.g. turning crank								
Key factors affecting Crime/Punishment	✓	Purpose of punishments	✓	Crimes	✓	Enforcement/trials	✓	Punishments	✓
- Poverty and Wealth, - Attitudes in society, - Institutions: Church, - Institutions: Government, - Individuals, - Science and technology, - Travel, - Towns.		- <u>Retribution</u> (revenge), - <u>Deterrence</u> (warn others not to commit the same crime), - <u>Reform</u> (improve behaviour), - <u>Removal</u> (keep criminals off streets), - <u>Compensation</u> (victim or society paid back for the trouble caused by criminal).		- Highway robbery, - Poaching (1723 Black Act), - Smuggling, - End of Witchcraft, - Unionisation (Tolpuddle Martyrs).		- Decline in community enforcement, - Rise in professional law enforcement, - Fielding Brothers: Highway robbery patrol, - Creation of the Metropolitan Police Force.		- End of the Bloody Code (1820s/30s), - Transportation: to Australia, - End of transportation: 1857, - Prisons, - Reform to prisons (e.g. Howard/Fry).	





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Term	Definition			✓					
Welfare State	System of government support for poorest/most vulnerable				1901: Fingerprints and chemical analysis of blood samples used by police to identify suspects				
Absolute poverty	Lacking basics (e.g. food/shelter) to survive for any length of time				1902: Abolition of crank/treadmill within prisons				
Car crime	Driving offences and/or theft of or from vehicles				1916: World War I conscription introduced				
Computer crime	Mainly theft or online fraud: e.g. banking/illegally copying music				1920: First female police officers				
Hate crimes	Crime: victims targeted for their race, sexual orientation, religion				1922: Abolition of solitary confinement within prisons				
Terrorism	Violence/intimidation in pursuit of political goals				1932: First Approved Schools set up for offenders under 15				
Fraud	Deliberate act of deception resulting in personal gain				1933: First open prison built				
Opportunistic thief	Thief acting on the spur of the moment when opportunity arises				1935: Driving test introduced				
Conscientious Objector	Refuses to work in the armed forces for moral or religious reasons				1939: World War II conscription introduced				
Coward/cad	Lacking in courage/behaves dishonourably				1947: 14 weeks training introduced for police recruits				
Tribunal	Panel of people brought together to settle some type of dispute				1948: Attendance centres introduced (non-custodial centres for offenders aged 10-21)				
Pepper spray/CS gas	Sprays used by police which irritate the eyes/burn throat				1948: UN Declaration of Human Rights				
CPOs	Crime Prevention Officers: they advise people on security				1953: Derek Bentley hanged				
Neighbourhood Watch	Organisation set up to prevent crime in local communities				1965: Death penalty in the UK abolished for all crimes except treason in times of war and piracy				
DNA matching	Using genetic information to help trace victims and criminals				1969: Parliament voted to permanently abolish capital punishment				
Custody	Being locked up or incarcerated				1974: Police National Computer created to combine databases including fingerprints/vehicles/missing persons				
Ofsted	Organisation: inspects quality of education in schools/prisons				1982: Neighbourhood Watch began				
Non-custodial	Alternative punishment to being locked up in prison				1982: Borstals abolished				
Curfew	Time when people must be at home, not on streets or elsewhere				1988: First UK conviction using DNA samples				
Tagging	Electronic marker attached to a criminal to monitor whereabouts				2007: New law introduced covering 'hate crimes'				
Absconding	Leaving or escaping a location to avoid arrest				2014: Ofsted judged over half of prisons as inadequate or requiring improvement				
Probation officers	Manage offenders to protect public/reduce chance of re-offending								
Juvenile delinquents	Young person who habitually commits criminal acts/offences								
Human Rights	Basic rights/freedoms which belong to every person								
Sanctity of Life	Belief that all life is sacred and must be protected								
Nature of crime	✓	Purpose of punishments	✓	Key factors affecting Crime and Punishment	✓	Changes in policing:	✓	Factors leading to changes in prisons:	✓
- Crimes against the person (e.g. murder/assault), - <u>Crimes against property</u> (e.g. theft, robbery, poaching, smuggling), - <u>Crimes against authority</u> (e.g. heresy, treason, illegal protest).		- <u>Retribution</u> (revenge), - <u>Deterrence</u> (warn others not to commit the same crime), - <u>Reform</u> (improve behaviour), - <u>Removal</u> (keep criminals off streets), - <u>Compensation</u> (victim or society paid back for the trouble caused by criminal).		- Poverty and Wealth, - Attitudes in society, - Institutions: the Church, - Institutions: Government, - Individuals, - Science and technology, - Travel, - Towns.		- Numbers/organisation, - Training/recruitment, - Transport, - Equipment, - Crime detection tools, - Record-keeping, - Main duties.		- Decrease in fear of crime, - Changing perception about causes of crime, - Arrest was a better deterrent than prison, - Increase in focus on reforming prisoners through education.	



### Background

Henry Purcell 1659-1695 English composer of the Reformation period. Worked at Westminster Cathedral as well as composing for stage and for Royalty

Oedipus—play by John Dryden and Nathaniel Lee about Oedipus

Incidental music—music written to go with a play, but where the play is not primarily musical. Often used for transitions etc

Baroque pitch—before A=440 was introduced, pitch was more variable and generally lower. Playing at this pitch on reproduction or period instruments is known as Baroque pitch. Approx one semitone lower than standard pitch.

Lament—song with sorrowful mood. Often slow and in the minor key

### Rhythm

Constant quavers—when a part moves only in quavers e.g. the ground bass

Quadruple metre—4/4—4 crotchets in each bar

## Year 11 Autumn Term 1

### AoS 2 Vocal Music

#### Purcell – Music For A While

Tempo is not indicated due to the historical period—a slow tempo would be appropriate

#### Texture

Basso continuo—literally continuous bass line. Accompaniment played by a melodic bass instrument, often a cello, and a chordal instrument such as harpsichord, lute or organ

Arpeggiation - when a chord is played by spreading the notes playing (usually) from bottom to top.

Melody dominant homophony—texture with one clear melody and an independent accompaniment.

Counterpoint—literally tune against tune—2 rhythmically independent melodies playing at the same time

#### Structure

Ground bass—a repeating bass line pattern played throughout the piece

Da Capo aria—ABA or ternary form. Da Capo means again from the beginning.

### Melody

Syllabic—vocal setting with one note per syllable.

Melisma—vocal setting where more than one note per syllable is used

Word painting—depicting a word in music to imitate its meaning.

Range—the interval between the highest and lowest notes in any given part.

Trill—rapid alternation of written note and the note above

Grace note—an additional note or notes played or sung before the main melodic note.

Mordent—ornament where the main note is played followed rapidly by the one above and then the main note.

Slide—when a performer doesn't move cleanly from one pitch to another, instead sliding through all frequencies in between the two pitches

Sequence—melodic device where a short section is immediately played again at a higher or lower pitch. Used in the ground bass.



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.



False relation – a type of dissonance where two versions of the same note are used in quick succession e.g. in b1 the F# in the bass is followed by an F natural in the right hand of the harpsichord

Dominant—5th degree of scale

Tonic—1st degree of scale

Passing note—a stepwise note between two harmony notes a 3rd apart

### Instrumentation

Soprano—high pitched female voice

Countertenor—male voice which sings in the alto range

Harpsichord -keyboard instrument in which the strings are plucked. Has no ability to sustain notes or to vary the dynamics. Plays basso continuo in this piece

Bass viol—large bowed and fretted string instrument similar in range to a cello. Plays the ground bass and the basso continuo in this piece.

### Tonality

A minor—minor key starting on A

Modulation—changing key. This piece modulates to Em (b14 and b 27), G (b16), C (b21), A (b28)

Perfect cadences - chord progression V-I. Used to cement modulations

### Harmony

Figured bass—system of notating chords for the continuo instruments. Numbers are written underneath the bassline to indicate the intervals to be played above the bass note.

Ground bass—bass line which repeats throughout the whole piece and over which the rest of the music is composed.

Suspension—prepared dissonance. Prolonging a note to create a dissonance with the next chord before resolving the dissonance.

Tierce di Picardy—ending a minor key piece with a major chord

Diatonic—chords which only use notes from the key

Functional—chords which help to define the key



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Keyword	Learn	✓
Revision	Repeatedly, over a long period of time, actively engaging with the knowledge, skills and understanding	
Mental health	A measure of our ability to cope with, deal with, or manage our emotional responses	
Depression	Is a low mood that can last a long time or keep returning, affecting your everyday life. Get urgent help now for mental health.	
Stress	Something everyone feels at times, especially when dealing with change or life challenges, such as money worries, work issues or relationship problems.	
Destigmatise	Remove the negative associations from (something once regarded as shameful or disgraceful); cause to be no longer seen as a stigma	
Empathy	The ability to emotionally understand what other people feel, see things from their point of view, and imagine yourself in their place.	
Conversation starters	Things you might say to get men and boys to talk about their mental health	

#### Useful websites:

<https://www.childline.org.uk/info-advice/your-feelings/>  
<https://uk.movember.com/mens-health/mental-health>  
[https://conversations.movember.com/en/?utm\\_medium=movement&utm\\_source=internal&utm\\_campaign=movember-conversations-link](https://conversations.movember.com/en/?utm_medium=movement&utm_source=internal&utm_campaign=movember-conversations-link)  
<https://www.mind.org.uk/>  
<https://www.nhs.uk/mental-health/>

#### Personal Development is

**Personal** – to do with ourselves

**Relationships** – how we relate to others and how they relate to us

**Sex** – how we interact and relate to others in a sexual sense

**Health** – about looking after our bodies, mentally and physically

**Careers** – how we plan and develop our careers

**Economics** – all about managing our money (the E also stands for education too)



#### Signs and consequences of depression

Prolonged low mood

Loss of interest in pleasure activities

Feelings of worthlessness or guilt

Withdrawal from social activities

Feelings of fatigue or loss of energy

Weight loss or gain or change in appetite

Difficulty concentrating, making good decisions

Difficulty sleeping

Recurring thoughts of death or suicide

Self-harm or attempted suicide

#### Starting conversations about mental health

**Men and boys** are reluctant to seek help with mental health issues.

**Talking is important.** It is the starting point to getting support and destigmatises mental illness.

#### PD Classroom Rules

**Openness:** Be open and honest. However, do not discuss others' personal/private lives – try to use examples.

**Keep the conversation in the room:** You should feel safe discussing issues and be confident that your contributions will not be shared outside this room. If your teacher has concerns that someone is at risk of harm they have a duty to refer.

**Non-judgmental approach:** It is okay for us to disagree with another person's point of view but do not judge, make fun of, or put anybody down. – 'challenge the opinion, not the person'.

**Right to pass:** Taking part is important.

However, you have the right to pass on answering a question and you will not put anyone 'on the spot'.

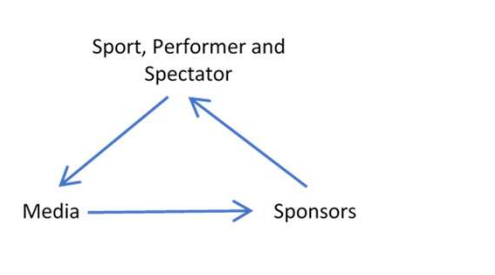
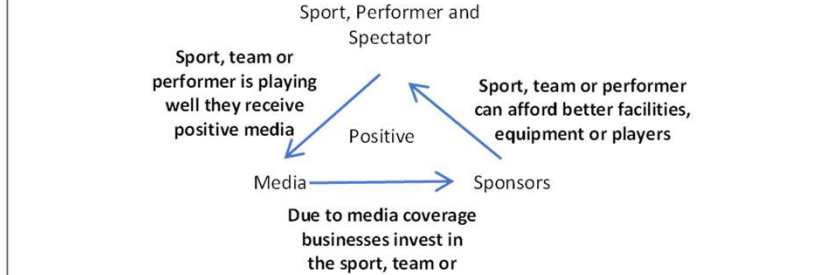
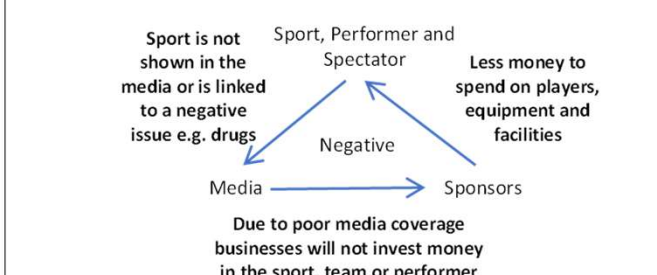
**Make no assumptions:** Do not make assumptions about people's values, attitudes, behaviours, identity, life experiences or feelings. Listen to other people's views respectfully and expect to be listened to.

**Use appropriate language:** Use the correct terms rather than slang terms – they can be offensive.

**Ask questions:** You are encouraged to ask questions. However, do not ask personal questions or say anything to embarrass someone.

### 3.2.2.2 Commercialisation of physical activity and sport

#### The Golden Triangle: The financial relationship between Sport, Performer and Spectator

			
<b>Media</b> <ul style="list-style-type: none"><li>Radio, newspapers, magazines, books, internet; major impact through television and social media.</li></ul>	<b>Sponsorship –</b> <ul style="list-style-type: none"><li>Usually a company which provides support to an event, activity, person or organisation, usually in the form of Financial, Equipment/Clothing and Facilities.</li></ul>	<b>Sport/team/performer</b> <ul style="list-style-type: none"><li>Shown through media.</li><li>More money to spend on players / equipment / facilities, resulting in performances increasing in standard.</li></ul>	<b>Spectators</b> <ul style="list-style-type: none"><li>Buy merchandise / sponsors equipment or product and media products.</li></ul>
<b>Five Ways Technology is used</b>	<b>The Effects of Commercialisation</b>		
<p>Making Decisions, Enhance Performance, Analysing Performance</p> <p><u>Impact of Technology on Spectators</u></p> <ul style="list-style-type: none"><li>- Creates excitement for the audience whilst they wait on decisions so it is a positive Audience can join in / interactive element by cheering / clapping / creates atmosphere</li><li>- Can frustrate spectators who do not like waiting or feel the entertainment has been interrupted</li><li>- Prevents unruly behaviour / hooliganism as the decision has been made by technology / less controversial</li><li>- Makes the event last longer / more value for money ☹️ Less likely to criticise officials</li><li>- Performers recover quicker so spectators get to see their favourites more often</li><li>- Spectators can get involved in the analysis of their favourite performers, e.g. statistics / performance analysis</li></ul> <p><u>Impact of Technology on Performers</u></p> <ul style="list-style-type: none"><li>- Greater care and support through the use of technology / prolonged career</li><li>- Quicker recovery rate means less time on the treatment table / more time performing</li><li>- Better understanding about their performance</li><li>- Over reliance on technology to understand performance / recovery is a negative</li><li>- Less frustrated with the official as the decision has been reviewed / proved / fairer outcome for the performers</li><li>- Reliance on technology to keep up with other competitors can cost money</li><li>- Easier to analyse competitors</li></ul> <p><u>Impact of Technology on Officials</u></p> <ul style="list-style-type: none"><li>- Help make the correct decisions and ensure fairness.</li><li>- Take the pressure off having to make a decision and can ease the tension of players and spectators.</li><li>- Takes away a part of the referees job and can undermine decisions made.</li></ul> <p><u>Impact of technology on the Sport</u></p> <ul style="list-style-type: none"><li>- Introduction of technology into the sport itself can make it more interesting and attract a larger audience and in turn bigger sponsorship deals.</li></ul>	<p><u>How Commercialisation affects the Performer</u></p> <p><u>Positive</u></p> <ul style="list-style-type: none"><li>- Allows athletes to earn income as a full-time job.</li><li>- Performers gain maximum exposure to promote their personal brand.</li><li>- Can lead to additional roles post playing career within the sport.</li><li>- Relieves financial worries</li><li>- Can afford / get higher quality equipment so performance will improve</li><li>- Facilities, for example could be provided free of charge so can train more effectively / often</li></ul> <p><u>Negative</u></p> <ul style="list-style-type: none"><li>- Increased amount of pressure</li><li>- Encourages deviant behaviour due to the pressure of success. This could result in performers cheating to win.</li><li>- Generally, favours <u>male</u> over <u>female</u> and <u>able bodied</u> over <u>disabled</u>.</li><li>- Performers may have to advertise a product that they do not like.</li><li>- The performer has additional commitments that might detract from training / sponsors may make demands / loss of control;</li><li>- May have to use equipment from the sponsor that might not be the best;</li><li>- Any negative publicity may result in a loss of sponsorship</li></ul>	<p><u>How Commercialisation affects the Sport</u></p> <p><u>Positive</u></p> <ul style="list-style-type: none"><li>- Raises the profile of the sport due to increased exposure. This will result in more people wanting to participate.</li><li>- Change in formats to make them more exciting.</li><li>- Provides an increased level of funding / income to improve resources, coaching, equipment and facilities.</li><li>- Gives the sport financial security for a period of time.</li><li>- Attracts the best players in the world to that sport.</li><li>- Improvement in coaching opportunities;</li><li>- Standards of play / performance improves;</li></ul> <p>Create more role models.</p> <p><u>Negative</u></p> <ul style="list-style-type: none"><li>- Commercialisation tends to support the popular sports leaving the 'lesser' sports to lose out.</li><li>- If sports are not in the media they do not attract sponsors resulting in less people taking part in the sport</li><li>- The influence of TV has caused an increase in adverts and TV timings and lost some of sports traditions.</li><li>- Media influences when games are played.</li><li>- Lower attendances at events as it is seen on TV.</li><li>- Negative publicity on a sport e.g. cycling and drugs, means they will struggle for sponsors. This will also lead to less people wanting to play the sport.</li></ul>	<p><u>How Commercialisation affects the Spectators</u></p> <p><u>Positive</u></p> <ul style="list-style-type: none"><li>- Offers a wider choice of sports available to watch;</li><li>- Better facilities / stadiums to watch the sports.</li><li>- Viewing experience has been enhanced due to investment into technology and audience participation e.g. large TV screens at games</li><li>- More exciting games due to more money being placed into a sport.</li><li>- Due to new rules, more exciting games e.g. 20 / 20 cricket.</li><li>- More information given allowing in spectators being more knowledgeable.</li><li>- More role models for them to see.</li></ul> <p><u>Negative</u></p> <ul style="list-style-type: none"><li>- Encourages spectating not participating.</li><li>- Can become very expensive for fans/spectators. E.g. ticket prices, pay for view events, merchandise.</li><li>- Matches can be played at times / places inconvenient for some people.</li><li>- Can affect viewing experience due to increased TV breaks and time outs.</li><li>- Media coverage can promote events leading to problems accommodating all of those who wish to attend e.g. difficult to get tickets for FA Cup Final or Wimbledon finals.</li><li>- Media coverage can decrease the number of people attending because they can watch it in comfort at home/ e.g. large number of live football.matches on TV on Sunday and Mondays, or more televised rugby union.</li></ul>



### Keywords:

- ❑ **Afterlife:** Life after death; the belief that existence continues after physical death.
- ❑ **Environmental Sustainability:** Ensuring that the demands placed on natural resources can be met without reducing capacity to allow all people and other species to live well now and in the future.
- ❑ **Euthanasia:** Sometimes referred to as 'mercy killing'. The act of killing or permitting the death of a person who is suffering from a terminal illness.
- ❑ **Evolution:** The process by which different living creatures are believed to have developed from earlier less complex forms during the history of the earth.
- ❑ **Abortion:** When a pregnancy is deliberately ended so that it does not result in the birth of a child.
- ❑ **Quality of Life:** The extent to which life is meaningful and pleasurable.
- ❑ **Sanctity of Life:** The belief that life is precious or sacred. For many religious believers, only human life holds this special status.
- ❑ **Soul:** The spiritual aspect of a being; that which connects someone to God. It is often regarded as non-physical and lives on after death.

### Christianity and the Sanctity of life

- ❑ †Life is created by God, protected by God and valued by God.
- ❑ †God is interested and involved in each human's life.
- ❑ †God created each individual person and made them unique in their own right.
- ❑ †God created humankind in His own image

### Judaism and the Sanctity of Life

- ❑ ☆Life is precious and a gift from God.
- ❑ ☆All humans are important.
- ❑ ☆Life is precious and cannot be thrown away.
- ❑ ☆Adam was created to teach us the significance; importance and sanctity of each individual.
- ❑ ☆Pikuach Nefesh- "Preservation of human life overrides most Jewish laws"

### Issues of Life and Death issues:

#### Christian Creation Story:

- ❑ †There are two creation stories in the Bible - Genesis 1 and Genesis 2.
- ❑ †Genesis 1 describes how God created the world in six days and rested on the seventh.
- ❑ †Day 1: light & dark; Day 2: sea & sky; Day 3: sun; moon & stars; Day 4: land & plants; Day 5: fish & birds; Day 6: animals & humans.
- ❑ †There are 2 main interpretations of this account:
- ❑ †**Literal** - it's a holy text from God and creation happened exactly as described in the Bible.
- ❑ †**Non- literalist**- the Bible should be seen as a parable or symbolic story. The meaning is the same, even if it is not historically accurate.
- ❑ †Many evangelical Christians are **creationists** - they reject the theories of the Big Bang and evolution because they contradict the literal interpretation of the Bible.
- ❑ †**Young Earth Creationism:** the world was created by God in 6 days, less than 10 000 years ago. **Old Earth Creationism:** God must have created the world but it took place millions of years ago. The 7 days of creation refer to long periods of time.
- ❑ Some Non- literalist Christians say that you can accept the Big Bang and evolution.
- ❑ **Theistic guided evolution:** life came about through evolution but this process was guided by the intervention of God.
- ❑ **Natural evolution:** evolution is the natural process by which life emerged but God put these laws of nature into place before the universe existed

### Humanism and the Sanctity of Life:

- ❑ ♦The value of life does not come from God.
- ❑ ♦We only have this life and it ends when we die.
- ❑ ♦Life has special importance because it is our only one.
- ❑ ♦Life is not sacred but worthy of respect.
- ❑ ♦The central purpose of life is happiness: ours & others

### 3.Jewish views on creation

- ❑ ☆God is the source and purpose of all life.
- ❑ ☆Genesis gives 2 accounts of the creation of the world.
- ❑ ☆Most Orthodox Jews believe they are true accounts of the origin of the world. They were revealed to Moses by God.
- ❑ ☆Reform Jews question whether Moses was the actual author of Genesis - it might have been different people at different times.
- ❑ ☆Some Orthodox Jews see Genesis as historical fact and find it difficult to accept modern scientific theories.
- ❑ ☆Other Jews, such as Reform, accept scientific theories such as the Big Bang theory & evolution, with God being the sustainer and provider. God started the universe through the Big Bang.

### Humanist views on creation

- ❑ We understand the world through science - religion does not give a reliable account.
- ❑ There are no good reasons for believing in God and is plenty of evidence
- ❑ Evolution helps us to understand the way species are related to each other.

### Science vs Religion†

- ❑ Charles Darwin was the first person to show that life has arisen through the slow natural process of evolution. He used his studies from the Galapagos Islands to prove his work.
- ❑ His theory became known as the 'survival of the fittest' as useful characteristics were passed on from one generation to the next.
- ❑ In 1965 the Big Bang theory became the accepted explanation for the origin of the universe.
- ❑ Whilst many religious believers accept Darwin, some see it as an attack on their beliefs as it undermines God, the Bible and removes the need for a soul.
- ❑ Some religious believers reject the Big Bang Theory as it removes the idea that God created the earth and humans for a purpose.
- ❑ However, some see the two working together, as there is no scientific explanation for what caused the Big Bang.
- ❑ Many religious believers say that the world was designed by God as it is so beautiful & well-ordered.
- ❑ Intelligent design is a theory put forward by some, as they believe the world is too ordered for it to have happened by chance.

Los problemas medioambientales		
El cambio climático	Climate change	
La sequía	Drought	
El calentamiento global	Global warming	
Las inundaciones	Flooding / floods	
La contaminación	Pollution	
La deforestación	Deforestation	
El efecto invernadero	The greenhouse effect	

Prepositional pronouns		
Prepositional pronouns are pronouns used after prepositions such as <i>a, de, en, para</i> and <i>sin</i> .		
(para) mí	(for) me	
(para) ti	(for) you	
(para) él	(for) him	
(para) ella	(for) her	
(para) nosotros/as	(for) us	
(para) vosotros/as	(for) you all (Spain)	
(para) ellos	(for) them (masc./mixed)	
(para) ellas	(for) them (fem.)	
conmigo	with me	
contigo	with you	

Impersonal verbs (followed by infinitive)		
vale la pena	it's worth it / it's worth (doing something)	
hace falta	it's necessary (to)	

The imperative		
The imperative in Spanish is used to give commands and instructions. To form the imperative for 'tú', take off the 's' from the normal 'tú' form of the verb. This is the same as the he / she / it form of the verb		
¡Respetar la igualdad!	Respect equality!	
¡Votar por un futuro mejor!	Vote for a better future!	
¡Luchar contra el racismo!	Fight against racism!	
¡Proteger el futuro del planeta!	Protect the future of the planet!	
¡Luchar por la libertad de expresión!	Fight for freedom of expression!	
¡Evitar la violencia!	Avoid violence!	
Haz	Do	
Ve	Go	
Ten	Have	

En la comunidad		
Para ayudar en mi comunidad	To help in my community	
Para ayuda en la sociedad...	To help in society...	
compro ropa de segunda mano	I buy second-hand clothes	
compro productos de comercio justo	I buy fair trade products	
doy / llevo comida a los bancos de alimentos	I give / take food to food banks	
participo / ayudo en proyectos sociales	I take part in / help with social projects	
hago campañas	I campaign	
para apoyar a las personas sin hogar	to support homeless people	
fui a una manifestación	I went to a protest	
participé en un proyecto de conservación	I participated in a conservation project	

The present continuous		
The present continuous is used to say what someone is doing (e.g. in a photo). It is made up of: <b>Está / están (he / she is... / they are...)</b> + <b>ando</b> (for ar verbs) / <b>iendo</b> (for er / ir verbs)		
e.g. está jugando están comiendo		
está hablando	he / she is speaking	
están hablando	they are speaking	
está comiendo	he / she is eating	
están comiendo	they are eating	

The imperfect continuous		
Use <b>the imperfect continuous tense</b> to describe what people were doing. It translates as 'was/were ...ing'.		
<i>Estaba corriendo</i> en el parque cuando comenzó a llover. <b>I was running</b> in the park when it started to rain.		
To form this tense, use the imperfect of <b>estar</b> and the <b>present participle</b> .		
Remove the <b>-ar/-er/-ir</b> from the <b>infinitive</b> and add: <b>-ando</b> to <b>-ar</b> verbs <b>-iendo</b> to <b>-er / -ir</b> verbs.		
¿Qué estabas haciendo?	What were you doing?	
estaba durmiendo	I / he / she was sleeping	
estaba ayudando	I / he / she was helping	
estaba viendo	I / he / she was watching	
estábamos paseando	we were walking	
estábamos jugando	we were playing	
estaban escuchando	they were listening	
estaba lloviendo	it was raining	

## 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

### -ar,er & ir verb endings - future

-é		-emos	
-ás		-éis	
-á		-án	

### Irregular verbs in the simple future

tendré		I will have	
tendrás		You will have	
haré		I will do / make	
harás		You will do / make	
podré		I will be able to	
podrá		He / she will be able to	

## Pros & cons

Por un lado	On one hand	
Por otro lado	On the other hand	
Una ventaja es que	An advantage is that	
Otra ventaja es que	Another advantage is that	
Una desventaja es que	A disadvantage is that	
Otra desventaja es que	Another disadvantage is that	
Lo bueno es que	The good thing is that	
Lo malo es que	The bad thing is that	
Lo que más me gusta es	What I like the most is	
Lo que menos me gusta es	What I like the least is	
Sin embargo	However	
No obstante	However	

## The passive

The **passive** is used to say what is/was/will be done to something or someone. To form it, use the correct **person and tense of ser** followed by the **past participle**, which must **agree with the noun**.

The examples below are with the past participle 'afectado/a/os/as'.

Present		
es afectado/a	is affected	
son afectados/as	are affected	
Preterite		
fue afectado/a	was affected	
fueron afectados/as	were affected	
Future		
será afectado/a	will be affected	
serán afectados/as	will be affected	

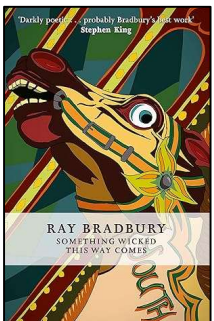
## ¿Qué haces para cuidar el medioambiente?

Para cuidar el medioambiente en mi casa...	To look after the environment at home...
apago la luz para ahorrar energía	I turn off the light to save energy
separamos la basura	We separate the rubbish
voy en bici o a pie a menudo	I often go by bike or on foot
reciclamos el papel, las botellas de plástico y el vidrio	We recycle paper, plastic bottles and glass
me ducho, en vez de bañarme	I shower, instead of bathing
para ahorrar agua	to save water
utilizo el transporte público	I use public transport
no tiramos los alimentos a la basura	We don't throw food away
no usamos bolsas de plástico	We don't use plastic bags
tratamos de (no)	We try (not) to
intentamos no	We try (not) to

## ¿Qué has hecho para cuidar el medioambiente?

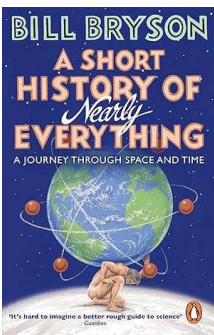
Reciclé / reciclamos	I / we recycled
Separé / separamos la basura	I / we separated the rubbish
No usé botellas de plástico	I didn't use plastic bottles
No tiré los alimentos a la basura	I didn't throw food away
Intenté limitar el uso de...	I tried to limit the use of...
Fui en bici / a pie	I went by bike / on foot
Me lavé	I washed myself
Me duché en vez de bañarme	I showered instead of having a bath
Utilicé el transporte público	I used public transport
Apagué las luces	I turned off the lights
Saqué la basura	I took out the rubbish
Empecé a... (+ infinitive)	I started to (+ infinitive)





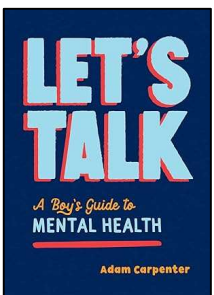
## Something Wicked This Way Comes by Ray Bradbury

What if someone discovers your secret dream; that one great wish you would give anything for? 'Something Wicked This Way Comes' is the story of two boys who encounter the sinister wonders of Cooger and Dark's Pandemonium Shadow Show.



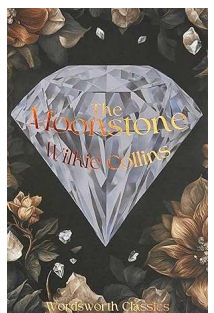
## A Short History of Nearly Everything by Bill Bryson

Bill Bryson's quest to understand everything that has happened from the Big Bang to the rise of civilization - how we got from there, being nothing at all, to here, being us. His challenge is to take subjects that normally bore the pants off most of us, and see if there isn't some way to render them comprehensible to people who have never thought they could be interested in science.



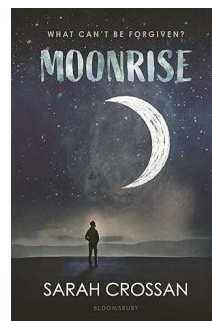
## Let's Talk by Adam Carpenter

'Let's Talk' provides the tools to get you talking about how you're feeling. Within this insightful guide you will find activities to figure out what help you might need, advice on where to get help, and case studies to show how others have voiced their feelings and found help. You can feel better and this book will show you how.



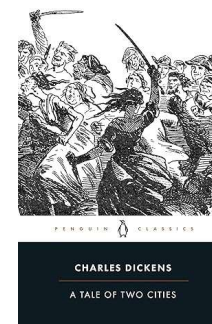
## The Moonstone by Wilkie Collins

The Moonstone, a priceless Indian diamond which had come to England as spoils of war, is given to Rachel Verrinder on her 18th birthday. That night, the stone is stolen. The phlegmatic Sergeant Cuff is called in, and with the help of the loquacious steward, Betteredge, the mystery is solved.



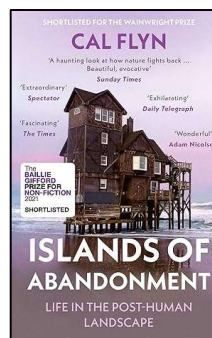
## Moonrise by Sarah Crossan

Joe hasn't seen his brother for ten years, and it's for the most brutal of reasons. Ed is on death row. But now Ed's execution date has been set, and Joe is determined to spend those last weeks with him, no matter what other people think.



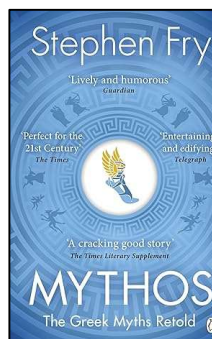
## A Tale of Two Cities by Charles Dickens

This novel traces the private lives of a group of people caught up in the cataclysm of the French Revolution and the Terror. Dickens based his historical detail on Carlyle's "The French Revolution", and his own observations and investigations during his numerous visits to Paris.



## Islands of Abandonment by Cal Flynn

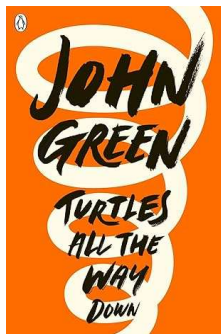
This is a book about abandoned places: ghost towns and exclusion zones, no man's lands and fortress islands - and what happens when nature is allowed to reclaim its place. A book that explores the extraordinary places where humans no longer live - or survive in tiny, precarious numbers - to give us a possible glimpse of what happens when mankind's impact on nature is forced to stop.



## Mythos by Stephen Fry

Stephen Fry retells the Greek myths, drawing out the humanity, triumph, tragedy and humour inherent to the timeless stories in a culmination of his life-long passion for them.





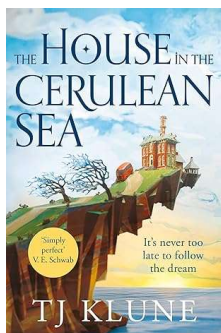
### Turtles All the Way Down by John Green

Aza's life is filled with complications. Living with anxiety and OCD is enough but when Daisy, her Best and Most Fearless Friend, brings her on a mission to find a fugitive billionaire things are about to get even more complicated.



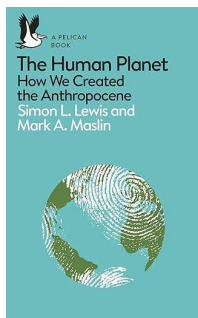
### Carrie by Stephen King

Carrie White is no ordinary girl. Carrie White has the gift of telekinesis. To be invited to Prom Night by Tommy Ross is a dream come true for Carrie - the first step towards social acceptance by her high school colleagues. But events will take a decidedly macabre turn on that horrifying and endless night as she is forced to exercise her terrible gift on the town that mocks and loathes her...



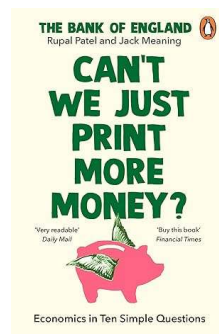
### The House in the Cerulean Sea by TJ Klune

Linus Baker is sent to assess a magical orphanage, filled with dangerous children. They could bring about the end of everything - or be the family he'd always wanted.



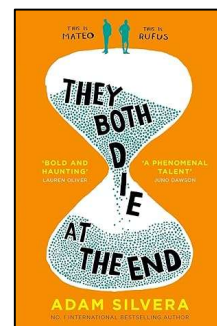
### The Human Planet by Simon L. Lewis and Mark A. Maslin

Our actions have driven Earth into a new geological epoch, the Anthropocene. For the first time in our home planet's 4.5-billion-year history a single species is dictating Earth's future. In "The Human Planet" Simon Lewis and Mark Maslin show what the new epoch means for the future of humanity, the planet and life itself.



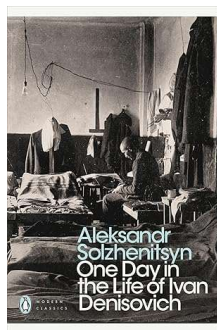
### Can't We Just print More Money by Rupal Patel and Jack Meaning

Why are all my clothes made in Asia? How do I get a pay-rise? And what even is money? Join Britain's most venerable financial institution for a rip-roaring crash-course on economics. From financial crises to Freddo prices, it will help you make sense of your job, your life and maybe your world.



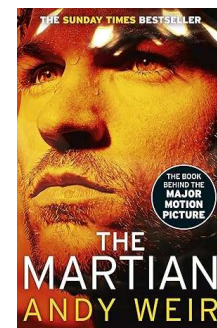
### They Both Die at the End by Adam Silvera

Mateo and Rufus are total strangers, but, for different reasons, they're both looking to make a new friend on their End Day. The good news: there's an app for that. It's called the Last Friend, and through it, Rufus and Mateo are about to meet up for one last great adventure - to live a lifetime in a single day.



### One Day in the Life of Ivan Denisovich by Aleksandr Solzhenitsyn

This brutal, shattering glimpse of the fate of millions of Russians under Stalin shook Russia and shocked the world when it first appeared. Discover the importance of a piece of bread or an extra bowl of soup, the incredible luxury of a book, the ingenious possibilities of a nail, a piece of string or a single match in a world where survival is all.



### The Martian by Andy Weir

Six days ago, astronaut Mark Watney became one of the first people to walk on Mars. Now, he's sure he'll be the first person to die there. But Mark isn't ready to give up yet. Will his resourcefulness be enough to overcome the impossible odds against him?





## Timetable

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