Bluecoat Beechdale Academy

Belong, Believe, Achieve

Suspension Work Pack

Year 10

Maths

Mean, mode, median and range

Question 1: Work out the mode for the each of the following

(a) 5, 6, 6, 7, 8, 10

(b) 1, 1, 1, 4, 6, 8, 12

(c) 5, 5, 7, 7, 7, 8, 8, 9

(d) 5, 7, 3, 5, 8, 9, 10, 2

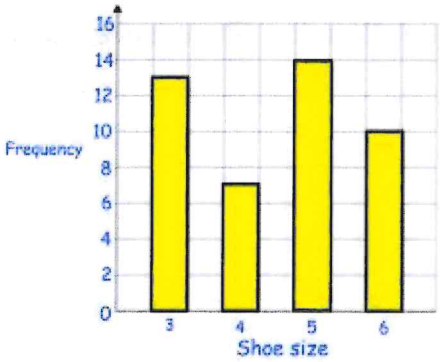
(e) 8, 3, 3, 4, 6, 8, 13, 3, 18

(f) 12, 14, 15, 17, 15

(g) 2.3, 2.6, 2.8, 2.7, 2.8, 2.7, 2.4, 2.3, 2.1, 2.3

(h) −2, −1, 5, 8, −2, 2, −1, 9, −1, 1, 2, −1

Question 2: The bar chart shows the shoe sizes of a group of students.



(a) How many students in total are there?

(b) What is the modal shoe size?

Question 3: Work out the mode for the each of the following

(a) 8, 1, 1, 7, 2, 1, 5, 9, 4, 1, 5, 5, 9, 6, 4, 3, 2, 3, 1, 1, 9, 8, 7, 3, 2, 4, 5, 1, 1, 9, 1

(b) 8, 9, 7, 3, 4, 7, 9, 3, 4, 5, 1, 2, 2, 1, 3, 0, 0, 8, 1, 4, 7, 8, 6, 6, 3, 3, 3, 1, 3, 3, 5

Question 4: The tally chart shows the favourite sport of the students in a class.

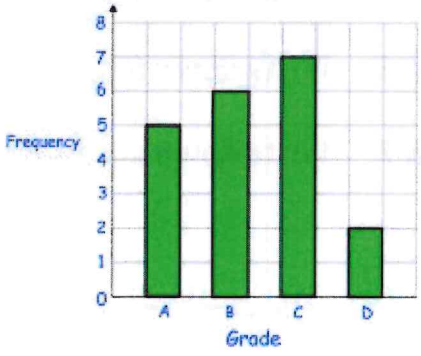
Sport	Tally
Rugby	IIII
Football	𝍸 𝍸 I
Hockey	𝍸 𝍸 II
Cricket	III

(a) What is the modal sport?

(b) How many students are in the class?

(c) How many more students liked football than rugby?

Question 5: Mrs Green gives her class a test. The results are shown in the bar chart below.



(a) What is the modal grade?

(b) How many students sat the test?

A grade C or above is a "pass."

(c) What fraction of the students passed the test?

Question 1: Work out the median for the each of the following

(a) 5, 1, 4, 6, 8

(b) 9, 1, 3, 6, 7, 8, 9

(c) 6, 4, 7, 1, 3, 8, 1, 10

(d) 7, 3, 8, 9, 6, 5

(e) 9, 8, 6, 6, 6, 7, 1, 2, 6, 8

(f) −4, 5, −7, −1, 2, 0, 9

(g) 20, 30, 10, 20, 40, 50, 60, 10, 80, 30

(h) 49, 34, 12, 10, 53, 20, 65, 34, 90, 100, 33

(i) 6.2, 6.8, 6.6, 7.2, 6.4, 7.4, 5.8

(j) 124, 53, 39, 230, 155, 180

Question 2: Shown are the ages and weights of 5 dogs.

	Fido	Lucky	Toto	Barney	Tess
Age	4	12	7	9	1
Weight	14kg	9kg	30kg	16kg	8kg

(a) Which dog has the median age?

(b) Which dog has the median weight?

Question 3: The height of some footballers are listed below:

1.81m, 1.78m, 1.88m, 1.79m, 1.86m, 1.85m, 1.78m, 1.93m

(a) Work out the median height

(b) What is the modal height?

Question 4: Write down five numbers with a median of 7

Question 5: Write down eight numbers with a median of 10

Question 6: Write down four different numbers with a median of 4.5

Question 7: Write down six different numbers with a median of 0

Question 1: Find the mean for each of the sets of data below

(a) 4, 9, 7, 10, 5 (b) 2, 8, 6, 3, 12, 7, 4 (c) 3, 2, 1, 3, 2, 2, 1, 3, 1, 2, 3, 2, 1

(d) 1, 8, 7, 5, 6, 4, 7, 6 (e) 20, 30, 24, 32 (f) 12, 8, 14, 5, 1, 3, 0, 8, 10, 11

(g) 9, −3, −6, 5, 0 (h) 1.4, 2.8, 2.4, 2.5, 2.8, 3.1, 1.1

Question 2: A basketball team plays 8 matches.
The number of points they score in each match are:

62, 68, 67, 79, 82, 50, 74, 62

(a) Work out the mean number of points scored

(b) Write down the modal number of points scored

(c) Write down the median number of points scored

Question 3: Mr Holland gives his class a test. The results are:
34%, 44%, 75%, 21%, 98%, 86%, 71%, 76%, 63%, 55%

(a) Work out the mean mark

(b) Work out the median mark

(c) How many students scored above the mean mark?

Question 5: The mean of four numbers is 10. Three of the numbers are 9, 11 and 7.
Work out the fourth number.

Question 6: The mean of six numbers is 5. Five of the numbers are 6, 6, 5, 3 and 1.
Work out the sixth number.

Question 7: The mean of five numbers is 8.2. Four of the numbers are 8, 10, 12 and 10.
Work out the fifth number.

Question 1: Find the range for each of the following

(a) 5, 9, 1, 5, 7, 4, 3 (b) 6, 7, 10, 8, 9, 9 (c) 21, 15, 19, 24, 30, 26

(d) 210, 250, 260, 180, 240 (e) 6.2, 7.3, 8.8, 1.5, 4.1 (f) 3, 1, 2, 1, 3, 4, 5, 0, 1

(g) −5, 1, 3, 6, −8, 1 (h) −6, −10, −2, −9 (i) 0, 7, 9, −21, 10, −4

(j) 7, 9, −2, 13, 9, 8, 20, −8, 1 (k) −10, −6, −15, −9, −8, −7, 8, −3

Question 2: The range for a list of numbers is 7. The smallest value is 4.
What is the largest value in the list?

Question 3: The range for a list of numbers is 8. The largest value is 13.
What is the smallest value in the list?

Question 4: The range for a list of numbers is 1. The largest value is 4.
What is the smallest value in the list?

Question 5: The range for a list of numbers is 27. The smallest value is 87.
What is the largest value in the list?

Question 6: The number of points that Randalstown Rugby Club scored in eight matches are 24, 17, 19, 35, 9, 43, 15, 30.

(a) Work out the range of the number of points scored.

(b) Work out the median of the number of points scored.

Question 7: The table shows the midday temperature over five days.
Each temperature is in degrees celsius.

Day	Monday	Tuesday	Wednesday	Thursday	Friday
Temperature	-4	1	-6	1	-2

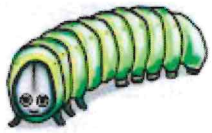
(a) Work out the range of the temperatures.

(b) Work out the mean temperature.

Question 1: The length of nine caterpillars are listed below

9cm 4cm 8cm 10cm 7cm 5cm 13cm 10cm 6cm

(a) Find the mode
(b) Find the median
(c) Find the mean
(d) Find the range



Question 2: James plays six games of darts.
His scores are 120, 71, 80, 14, 90, 117

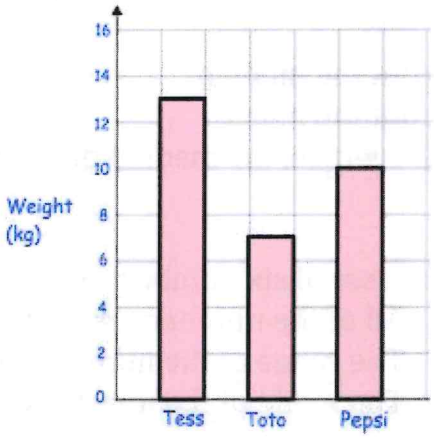
Should James use the mean or the median to give him the highest average score?

Question 3: Shown are the weights of 3 puppies.

(a) Work out range of the weights

(b) Work out the median weight

(c) Work out the mean weight



Question 4: The amount of water in some containers are:

2 litres, 330ml, 0.08 litres, 0.7 litres, 75ml, 5000ml, 0.15 litres

(a) Work out the median (b) Find the range

Question 5: The median height of 11 footballers is 1.85m.
Only one footballer has a height of 1.85m
How many footballers have a height under 1.85m?

Question 6: Write down seven numbers that have a range of 10 and a mean of 12.

Question 7: Write down six numbers that have a median of 8, a mean of 9 and a range of 13

Question 8: Five numbers have a range of 14.
Four of the numbers are 20, 22, 31 and 25.
Work out the two different possible values for the fifth number.

Question 9: Belfast Giants have played 5 matches and the mean number of goals scored is 3
When they play the 6th match, the mean increases to 4.

How many goals were scored in the 6th match?

Question 10: James is a car salesman.
He has a target of selling 5 cars a day from Monday to Friday.
Over Monday to Thursday, he has sold a mean of 6 cars a day.
How many cars must he sell on Friday to meet his target?

Question 11: A teacher surveys a group of students.
He asks how much pocket money they receive each week. They respond

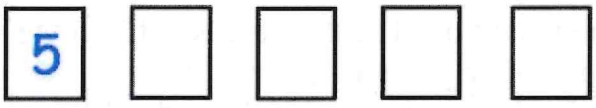
£5 £8 £4 £50 £6 £8 £7.50 £10 £8 £7

(a) Work out the median
(b) Work out the mean
(c) Which average, the median or the mean, is most suitable for this data?

Question 12: A set of six numbers have a median of 9.
All of the numbers are even.
The range of the numbers is 8.
The mode of the numbers is 6.

Write down a possible set of six numbers.

Question 13: Shown below are five cards which are arranged in order from smallest to largest



The range of the cards is 6.
The median of the cards is 7.
The mean of the cards is 8.

Work out the 4 missing numbers.

Estimating the mean

(a)

Length	Frequency	Midpoint	
$0 < L \leq 10$	6		
$10 < L \leq 20$	7		
$20 < L \leq 30$	5		
$30 < L \leq 40$	1		
$40 < L \leq 50$	1		

(b)

Cost	Frequency	Midpoint	
$0 < c \leq 4$	2		
$4 < c \leq 8$	3		
$8 < c \leq 12$	5		
$12 < c \leq 16$	12		
$16 < c \leq 20$	3		

(c)

Length	Frequency	Midpoint	
$0 < t \leq 5$	11		
$5 < t \leq 10$	37		
$10 < t \leq 15$	43		
$15 < t \leq 20$	9		

(d)

Mass	Frequency	Midpoint	
$50 < m \leq 55$	3		
$55 < m \leq 60$	5		
$60 < m \leq 65$	10		
$65 < m \leq 70$	12		
$70 < m \leq 75$	10		

Question 2: Work out an estimate of the mean for each of these frequency tables.

(a)

Duration (years)	Frequency
$0 \leq d < 10$	9
$10 \leq d < 20$	13
$20 \leq d < 30$	16
$30 \leq d < 40$	2

(b)

Length (cm)	Frequency
$0 \leq L < 30$	8
$30 \leq L < 60$	43
$60 \leq L < 90$	25
$90 \leq L < 120$	4

(c)

Mass	Frequency
$20 < m \leq 25$	12
$25 < m \leq 30$	24
$30 < m \leq 35$	17
$35 < m \leq 40$	15
$40 < m \leq 45$	4

(d)

Height	Frequency
$120 < h \leq 130$	51
$130 < h \leq 140$	120
$140 < h \leq 150$	66
$150 < h \leq 160$	59
$160 < h \leq 170$	4

Question 1: Sally is raising money for charity for a fun run.
The table below has been given to her from the website.

Sally says the average donation is £10.
By calculating the estimated mean, decide if you agree with Sally.

Donation	Frequency
$0 < d \leq 5$	44
$5 < d \leq 10$	35
$10 < d \leq 20$	16
$20 < d \leq 50$	3
$50 < d \leq 100$	2

Question 2: Nathan delivers pizzas.
The table below shows information about his delivery times.
The pizza company has a promotion that if the delivery time is over 30 minutes, the customer gets their meal for free

(a) Calculate an estimate for the mean delivery time

(b) What percentage of deliveries took over 30 minutes?

Nathan's manager thinks that the promotion should be changed to 40 minutes

(c) Do you agree? Explain your answer.

Delivery Time	Frequency
$0 < t \leq 10$	3
$10 < t \leq 20$	10
$20 < t \leq 30$	14
$30 < t \leq 40$	19
$40 < t \leq 50$	4

Question 3: The manager of a small company is calculating the mean salary for his workers.
He has calculated this to be £568,500 per year.
Can you spot any mistakes?

Salary	Frequency	Midpoint	fx
$0 < s \leq 15000$	2	7500	15000
$15000 < s \leq 30000$	15	22500	337500
$30000 < s \leq 45000$	6	37500	2250000
$45000 < s \leq 60000$	2	52500	105000
$60000 < s \leq 100000$	2	67500	135000
			2842500

Mean salary = 2842500 ÷ 5 = £568500

Science

Particle Model of Matter Revision Workbook

Contents

Top Revision Tips

- Find a quiet place to work (no TV, Xbox, Netflix ect...)
- Use your class book, revision guides, textbooks, Doddle, BBC Bitesize, Youtube, to make revision notes, flash cards & concept maps
- Summarise information using bullet points & diagrams
- Try to revise with another student, and explain concepts to each other
- Put up posters with key points around your home
- Look at & work through past papers from www.AQA.org.uk
- Take regular breaks & get enough sleep

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Highlight key words or phrases

To convert cm^3 to m^3
$cm^3 / 100000 = m^3$

cm^3	m^3
10	
50	
175	
550	
10000	

Density = Mass / Volume

Example
What is the density of a lump of metal with a mass of 100kg and a volume of $2m^2$?
- **Density = Mass / Volume**
- Density = 100 / 2
- Density = 50 kg/m^2

What is the density of a lump of metal with a mass of 35kg and a volume of $0.043m^2$?

What is the density of a lump of metal with a mass of 70kg and a volume of $0.5m^2$?

What is the density of a lump of metal with a mass of 1000kg and a volume of $15m^2$?

All matter contains particles. The difference between the different states of matter is how the particles are arranged:
- in a solid - particles are tightly packed in a regular structure
- in a liquid - particles are tightly packed but free to move past each other
- in a gas - particles are spread out and move randomly

There is little difference between the density of a liquid and its corresponding solid (eg water and ice). This is because the particles are tightly packed in both states. The same number of particles in a gas spread further apart than in the liquid or solid states. The same mass takes up a bigger volume - this means the gas is less dense.

Density also depends on the material. A piece of iron with the same dimensions as a piece of aluminium will be heavier because the atoms are more closely packed.

Scientists can measure how tightly packed the particles are by measuring the mass of a certain volume of the material, for example, one cubic centimetre.

A student is asked to identifying a substance from its density. Some of the equipment they were provided with is shown below:
- 30 cm ruler marked off in mm
- digital balance
- regular shaped objects.

Describe how they could carry out this investigation

Particle Model of Matter Revision

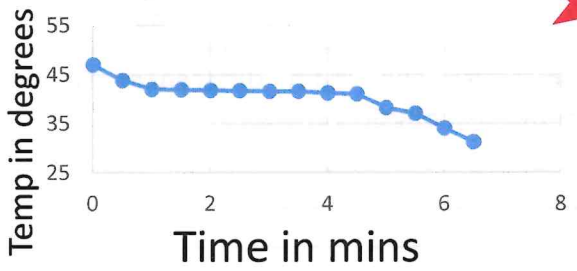
Solids

- has a high density as the particles are very close together
- cannot be compressed as there is very little empty space between particles
- has a fixed shape as the particles are held together tightly
- cannot diffuse as the particles are not able to move
- does not exert any pressure as the particles cannot move around.

Revision Tip

Don't just read your notes

If you just read you notes you'll take in about 5% of what you are reading! You need to do something with your notes in order for them to make any difference



Describe what a cooling curve shows:

_____

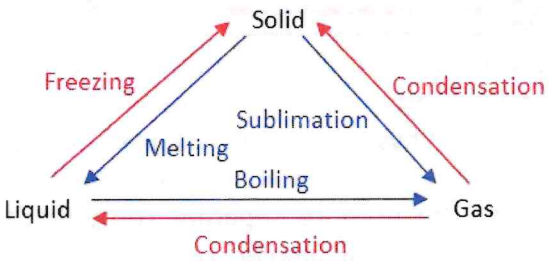
_____

Liquids

has a fairly high density as the particles are close together
cannot be compressed as there is very little empty space between particles
takes up the shape of its container as the particles can move
can diffuse as the particles are able to change places can exert some pressure
as the particles are able to move and hit the sides of the container.

Gas

- has a low density as the particles are far apart
- can be compressed as there is space between particles
- has no fixed shape as the particles move about rapidly in all directions
- can spread out as the particles are able to move in all directions



Describe how one state turns into another:

_____

_____

_____

_____

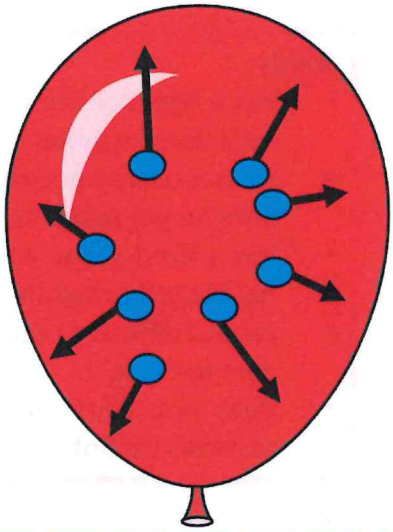
_____

Complete the diagrams below

Solid	Liquid	Gas

Particle Model of Matter Revision

Describe the movement of the particles of helium gas inside the balloon & it's effect on it's density



Chemical changes occur when a substance combines with another to form a new substance, called chemical synthesis or, alternatively, chemical decomposition into two or more different substances. These processes are called chemical reactions and, in general, are not reversible except by further chemical reactions.

Highlight key words or phrases

Physical changes are changes affecting the form of a chemical substance, but not its chemical composition. Physical changes are used to separate mixtures into their component compounds, but can not usually be used to separate compounds into chemical elements or simpler compounds.

Summarise the main differences between chemical & physical changes

Describe what temperature is:

Describe what heat is:

What Is the Internal Energy of a System

A system is a collection of parts that is in some way connected or works together. Systems can be a lot of things. The mechanics of a car is a system and so is the Sun. Systems are also used in thermodynamics to describe areas that allow heat to move freely. It's this latter definition that is most relevant when we're talking about internal energy. That's because internal energy is a term that is used commonly in thermodynamics. It's a way of describing all the energy contained within the particles that make up a system.

Particle Model of Matter Revision

Specific heat capacity

Temperature and heat are not the same thing:

- temperature is a measure of how hot something is
- heat is a measure of the thermal energy contained in an object.

Temperature is measured in °C, and heat is measured in J. When heat energy is transferred to an object, its temperature increase depends upon the:

- the mass of the object
- the substance the object is made from
- the amount energy transferred to the object.

For a particular object, the more heat energy transferred to it, the greater its temperature increase.

Describe the factors that affect how quickly the temperature of a substance increases, eg why does a half-full kettle heat up faster than a full kettle of water?

How much energy must be transferred to raise the temperature of 2 kg of water from 20°C to 30°C?

Calculating specific heat capacity

Here is the equation relating energy to specific heat capacity:

$E = m \times c \times \theta$

- E is the energy transferred in joules, J
- m is the mass of the substances in kg
- c is the specific heat capacity in J / kg °C
- θ ('theta') is the temperature change in degrees Celsius, °C

Plan a practical to investigate the rate of heating of various metals using a joulemeter to determine the energy input. If no joulemeter is available, use an ammeter, I, a voltmeter, V, and heat the material for a fixed amount of time, t. Calculate the energy transferred

Example

How much energy is needed to increase the temperature of 500 g of lead from 20ºC to 45ºC? The specific heat capacity of lead is 128 J/kg ºC.

- mass of lead = 500 ÷ 1000 = 0.5 kg
- temperature change = 45 – 20 = 25ºC
- energy needed = 0.5 × 128 × 25 = **1600 J** (1.6 kJ)

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Highlight key words or phrases

The specific latent heat of fusion, *l*, of a substance is the heat needed to change a mass of 1 kg the substance from a solid at its melting point into liquid at the same temperature.
The specific latent heat of vaporisation, *l*, of a substance is the heat needed to change the substance from a liquid at its boiling point into vapour at the same temperature.
Specific latent heat of fusion and specific latent heat of vaporisation both have the same symbol, *l*, and are measured in joules per kilogram. The heat energy E_h that is needed to change a mass m of liquid from at its boiling point into vapour at the same temperature is given by the following relationship.

$E_h = ml$
•E_h is the heat supplied in joules
•m is the mass in kilograms of liquid changing state
•*l* is the specific latent heat of vaporisation measured in joules per kilogram

Example
The heater in an electric kettle delivers 1.5 kW of power to 2 kg of water at its boiling point. The specific latent heat of vaporisation of water is 2.26 x 10^6J/kg. How much heat energy is delivered to the water in this time.
Heat supplied, E_h
= power x time
= 1.5 x 10^3 x 100
= 1.5 x 10^5 J

Calculate the energy transferred to the surroundings as 0.60 kg of stearic acid changed state from liquid to solid. The specific latent heat of fusion of stearic acid is 199 000 J / kg.

_____
_____
_____
_____

Draw a graph showing a general cooling curve of a substance

Highlight key words or phrases

In gases the particles move rapidly in all directions, frequently colliding with each other and the side of the container. With an increase in temperature, the particles gain kinetic energy and move faster. The actual average speed of the particles depends on their mass as well as the temperature – heavier particles move more slowly than lighter ones at the same temperature. The oxygen and nitrogen molecules in air at normal room temperature are moving rapidly at between 300 to 400 metres per second. Unlike collisions between macroscopic objects, collisions between particles are perfectly elastic with no loss of kinetic energy. This is very different to most other collisions where some kinetic energy is transformed into other forms such as heat and sound. It is the perfectly elastic nature of the collisions that enables the gas particles to continue rebounding after each collision with no loss of speed. Particles are still subject to gravity and hit the bottom of a container with greater force than the top, thus giving gases weight. If the vertical motion of gas molecules did not slow under gravity, the atmosphere would have long since escaped from the Earth.

Particle Model of Matter Revision

The molecules of a gas are in constant random motion. The temperature of the gas is related to the average kinetic energy of the molecules. The higher the temperature, the greater the average kinetic energy and so the faster the average speed of the molecules.

Draw a diagram below to show the movement of particles in a gas

Describe and explain how the motion of molecules in a gas changes as the gas is heated.

Highlight key words or phrases

The molecules are continually colliding with each other and with the walls of the container. When a molecule collides with the wall, they exert small force on the wall The pressure exerted by the gas is due to the sum of all these collision forces. The more particles that hit the walls, the higher the pressure.

If a gas is heated up, its particles move around more quickly. They hit the walls of their container harder and more often. This increases the pressure. Sometimes the pressure gets so great that the container bursts.

Gases can be compressed, because they just take up whatever space is available to them. This is because gases consist of molecules that have too little interactions between them to stick together. They just move along until they collide, either with a wall or with each other.

Gases can be compressed because there are large empty spaces between their molecules. They can be compressed to a certain limit of volume according to its compressibility factor, gases cannot be compressed beyond their limit because the molecules of a highly compressed gas , at a certain high pressure repel each other which will cause increase in their volume.

Molecular interactions in gases are too weak (almost negligible compared to liquids and solids), and because of this the molecules are far apart from each other. and this distance between molecules can be reduced by applying external force (or pressure) i. e. compression.

Explain how blowing up a balloon too much can cause it to pop in terms of gas pressure.

Particle Model of Matter Revision

Complete the 2 gas diagrams below

Uncompressed gas

Compressed gas

Explain why it is easy to compress a gas, but not solids or liquids

Pressure = Force / Area

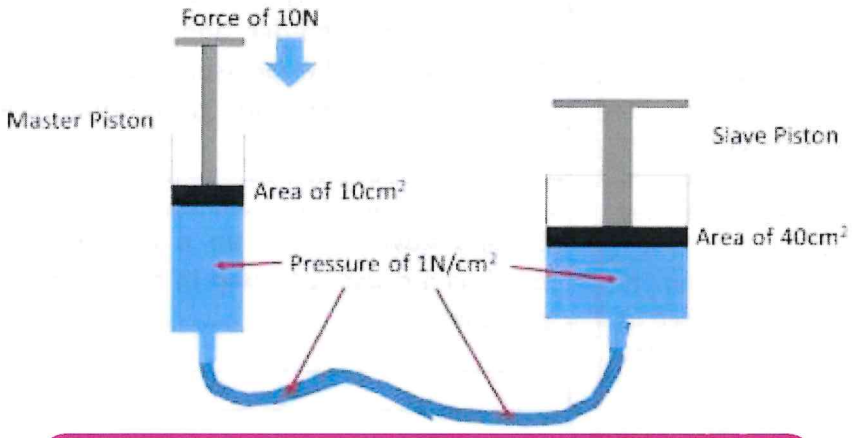
Example

What is the pressure when a force of 20N is applied to a $20m^2$ area?

Pressure = Force / Area

Pressure = 20N X $20m^2$

= $1N/m^2$



Force 1 / Area 1 = Force 2 / Area 2

Pressure 1 x Volume 1 = Pressure 2 x Volume 2

What is the pressure when a force of 75N is applied to a $3m^2$ area?

What is the pressure when a force of 30N is applied to a $20m^2$ area?

What is the pressure when a force of 10N is applied to a $2m^2$ area?

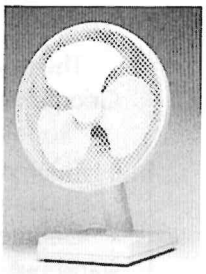
What is the pressure when a force of 45N is applied to a $5m^2$ area?

English

Information and Ideas

Q1 Read the text below.

> Dani approached the roller coaster with wide eyes. She had never been a big fan of rides, but her friend Amara had offered to give £20 to charity if Dani agreed to ride the biggest roller coaster in the park — a towering steel beast with four loops and six corkscrew turns. Her stomach churned at the thought.
>
> "You can do it, Dani," Amara said, squeezing her shoulder. "You might even enjoy it!"



Dani kept insisting she wasn't a big fan, but the rotating blades and constant whirring suggested otherwise.

Tick the **one** statement that is true.

a) Dani's friend Amara loves theme park rides. ☐

b) Dani is nervous about going on the roller coaster. ☐

c) It was Dani's idea to get sponsored to go on the ride. ☐

Q2 Underline the words and phrases which show that the writer has a negative view of the zoo.

> Last weekend we found ourselves with nothing to do on a warm, sunny day, so we decided on a trip to the zoo. The entrance to the zoo was via a rusty iron gate that looked in serious need of repair. We went into the ticket office, only to discover that the floor was filthy; as we looked closer, we realised there was revolting leftover food scattered everywhere. Inside, the animals looked malnourished and miserable in their enclosures, which all seemed dull and empty, with precious little space for them to run around. All in all, a pretty depressing place.

Q3 From lines 3-8 of the text below, write down **three** facts about the garden.

> "If the boiler hadn't broken, we'd have enough money to go to Hawaii by now," said Tim glumly, skirting a puddle of mud in order to peg the laundry onto the washing line.
>
> Alex frowned and sat down heavily on the bench, which took up almost all of the space in their tiny back garden.
>
> "I bet it's sunny there," she said wistfully, pulling her cardigan in closer.
>
> The wind was whistling a discordant chorus through the gaps in the fence, making the damp grass shiver. The gnarled, stunted apple tree in the corner emitted an ominously loud groan that made Tim jump.

1) .....

2) .....

3) .....

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Information and Ideas

Now you've got the theory sorted, it's time to put it into practice with these exam-style questions.

Q4 Read the following extract from a novel.

> The doorbell rang. Someone must have answered it, because moments later I heard George's nasal tones in the hallway.
> "So lovely to be here!" he cried, his voice carrying easily across the living room.
> "Did you invite him?" I hissed, staring desperately at Rosa.
> "I could hardly leave him out," she said coolly. "It would have been too obvious."
> George entered the room. His garish purple suit and elaborate hairstyle made him stand out sharply from the other guests. "George, darling," Rosa cooed. "You made it."
> "Rosa!" he said, presenting her with a bottle of cheap-looking wine. "And Pritha," he said to me with a smirk, extending a greasy hand adorned with several gaudy rings. "Good to see you."
> "You too," I said, forcing a smile and letting go of his hand quickly. "Drink?"
> "Oh, go on then," said George, "I'd love a nice whisky, if you have any?"
> "Nothing but the best for you, George," I replied through gritted teeth.

List **four** facts from the text about George.

Q5 Read the following extract from a review of a holiday park, then tick the **four** statements that are **true**.

> You would need a fortnight to try all the activities at Lowbridge Park. From abseiling to zorbing, the park offers a mind-boggling range of activities. I was only there for a long weekend, so I had to prioritise!
> I began with a pony trek. Although it drizzled the entire morning, it was a great way to explore the woodland. In the afternoon I debated between rock climbing and mountain biking. I settled on the former, primarily to stay out of the rain!
> The next day, the weather was much better, so my choice fell between canoeing and sailing. I settled for a canoe and headed out on the lake, which was simply stunning early in the morning, clear, calm and blue. The good weather lasted into the afternoon, which meant that I was lucky enough to go paragliding. What an exhilarating experience!
> The next morning, I decided to finish my weekend with a spot of archery. Alas, I'm no Robin Hood, but the instructor was patient and funny, and I did improve a little over the course of the morning.

1) The writer went mountain biking. ☐
2) On the second day, the writer got up early. ☐
3) The writer had time to try everything. ☐
4) The writer enjoyed the pony trek. ☐
5) The weather stayed sunny all weekend. ☐
6) You can abseil at Lowbridge Park. ☐
7) The writer liked the archery instructor. ☐
8) The writer went canoeing down a river. ☐

List four reasons why you love studying for GCSE English — umm...

Some questions will simply ask you to find information and ideas in a text. That doesn't sound like too tough a task, but remember that sometimes you'll need to read between the lines a bit — it won't always be dead obvious, I'm afraid.

Summarising and Linking

Q1 Read the text below.

> "We're going to be late, Rakesh," warned Rita, biting her thumbnail nervously.
> "We'll be fine!" insisted Rakesh from the depths of his wardrobe. After a moment he emerged, triumphantly holding his favourite leather jacket aloft.
> Rita glared pointedly at her watch, then at Rakesh, who grinned.
> "We'll be fine," he repeated, trying on the jacket and admiring his reflection in the full-length mirror.
> "It's bad enough that we have to go at all, and now we're going to show up late too," complained Rita. "This is all your fault. If it were up to me, we'd never have agreed to go. I hated that school."
> "Oh, cheer up, Rita — it's a reunion, not a funeral," said Rakesh. "It'll be fun!"

Circle whether each of the following statements refers to Rakesh or Rita, then write down a quote on the dotted line to support your choice.

a) The character who is reluctant to go to the reunion. (Rakesh / Rita)

.....

b) The character who cares most about time management. (Rakesh / Rita)

.....

c) The more confident character in the extract. (Rakesh / Rita)

.....

Q2 Summarise the two views given in the text below.

> Human beings have eaten meat for millions of years. Meat eaters argue that we have evolved with the ability to eat and digest meat, proving that it forms a natural part of the human diet. Furthermore, meat contains many vitamins and minerals, particularly iron, that are important for human function.
> However, vegetarians argue that, biologically, we have very little in common with other species of meat-eaters. For example, we lack the ability to kill an animal and take its meat without tools. Additionally, they argue that a high consumption of red meat contributes to a range of health problems in humans, such as cardiovascular disease and some cancers.

Meat Eaters: .....

.....

Vegetarians: .....

.....

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Summarising and Linking

Paper 2, question 2 tests your summarising and linking skills — have a go at the practice questions below.

Q3 Read the following extracts. Source A is a letter written in the 19th century, and Source B is an extract from a diary written in the 20th century.

Source A

Dearest Caroline,

Lady Jennings and I paid a visit to the slum dwellings today, with a view to helping the children there by investing our funds in a charitable orphanage. I was simply astonished to see the extent of the poverty in which these poor orphans currently live. Of course I had heard that the conditions were unpleasant, but nothing could have prepared me for the destitution I witnessed there. We must do all we can to help these poor, unfortunate souls — it is our duty as their fellow men.

Source B

Dear diary,

Today I've been helping out at an underfunded local orphanage, which was built for the children who lost their families in the influenza epidemic. It's been really sad to see so many children having to live in such basic conditions, although it's not really that surprising given the state of the area in general.

They need more support, but even if I had money to give, it shouldn't be my job to help them. Their government should be providing for them better.

Use details from **both** sources to write a summary of the differences between the writers in Source A and Source B.

Q4 Read the following extracts. Source A is from a housekeeping magazine written in the 19th century, and Source B is a newspaper article that was written in the 21st century.

Source A

The secret to our harmonious marriage lies in the willingness of my wife to be amenable to my needs.

My wife does not pester me, nor will she bore me with gossip or domestic trivialities. Instead, she will endeavour to be sweet and charming, always fulfilling my needs. If I wish to complain, she listens; if I seek quiet, she is silent. The home is her sphere, and she strives to make it a haven for me, in which I need not lift a finger.

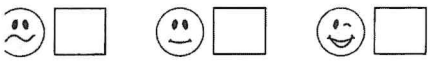
Source B

In the 21st century, a marriage is a partnership of equals. As both my wife and I work full time, we believe that it is essential for our domestic responsibilities to be shared evenly too. Whilst housework was once considered the domain of women, my wife spurns the idea that she should work full-time and take sole care of a home. In fact, whenever she hands me a mop or a chopping board, she reminds me sweetly that I am just as capable of cleaning and cooking as her.

Use details from **both** sources to write a summary of the differences between the behaviour of the wives.

Summarise the similarities between a raven and a writing desk...

Luckily, you won't be given any Mad Hatter-style riddles in the exam, but comparing texts is an important skill, especially in paper 2. For top marks, you need to infer differences between the texts rather than just list a lot of surface-level facts.

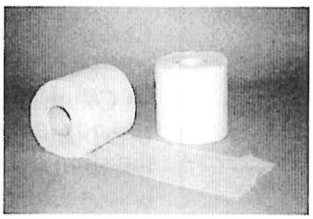


Audience and Purpose

Q1 For each sentence, circle the word which best describes its intended audience.

a) "Do you yearn for a simpler, more reliable way of managing your finances?" **children / adults**

b) "When buying a used car, try to get as much information from the dealer as you can." **experts / novices**



When buying a used toilet roll — don't.

Q2 Draw lines to match each text to its main purpose.

a) "Shop around for the best quote — some insurers are much more expensive than others."

b) "As the train moved south, first crawling, then increasing to a steady gallop, the scenery gradually changed from the flat and drab to the dramatic and beautiful."

c) "Who could disagree with the fact that children should eat healthily?"

To entertain

To persuade

To advise

Q3 Find **two** words or phrases that show this text is aimed at a younger audience, and explain how they show this.

Are you looking for a cool summer job?

We've got loads of temporary vacancies with no experience required!

All you need is some free time over the holidays, a positive attitude and plenty of energy. If you've got your own wheels that's even better!

With Spondon Summer Jobs you can:
- gain real-world work experience
- earn a few quid
- make new friends

Whatever you fancy, we can find you a job that suits you down to the ground! Interested? Fill out the application form on our website, or find us on social media.

Word or phrase: .....

Explanation: .....

.....

Word or phrase: .....

Explanation: .....

.....

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Audience and Purpose

Have a go at these exam-style questions. Keep in mind the extracts' audience and purpose as you're writing.

Q4 Read the following extract from a leaflet about an aquarium.

Oxton Aquarium is a whale of a time!

At Oxton Aquarium you can see lots of different sea creatures all in one place. You could be eyed up by an octopus, shaken by a shark or peered at by a pike! They're all here in a very special underwater world — and it's open every day in the school holidays.

Whether you come with your school, your family or your friends, you're bound to have a fantastic time.

"I've had the best day ever. Can we go round again?" — Adam Rodgers, age 9.

Oxton Aquarium is a fun and fishy day out that you'll never forget!

How does the writer use language to describe the aquarium?

Q5 Read the following extract from a newspaper opinion piece.

Is it really that time of year again? The decorations go up and suddenly the nation is whipped up into a frenzy, convinced that the only way to survive the coming holiday is to grab a trolley and raid the supermarket. We stock up as if an apocalypse is coming, buying up vast quantities of everything from over-priced tins of chocolate right down to the last bruised parsnip.

It's time we admitted that the whole process is utterly ridiculous. Don't get me wrong, I love Christmas. I love the decorations, the merriment and, most of all, the abundance of delicious food.

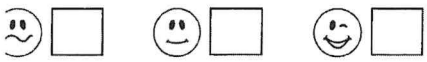
But what simply must end is the bizarre mentality that causes us to frantically race to the shops five minutes before closing time on Christmas Eve. We've all been there, haven't we? Running around like headless chickens, gripped by a sudden and deathly terror that we might not have stockpiled enough after-dinner mints to last the festivities.

Britain, we need to take a stand against festive stress. Christmas is a special time of year; it should be a time to sit back and take a break from the stresses of everyday life. So please, enjoy your holiday — and try to remember that the world won't end should you happen to forget the cranberry sauce.

How does the writer use language to describe people's preparations for Christmas?

I took a stand once — I needed something to put my sheet music on...

As it turns out, it's surprisingly difficult to make a living playing the nose flute, but that's beside the point. Audience and purpose are really important in your exam, so use the questions on these pages to really nail your understanding of them.



Informative and Entertaining Texts

Q1 Put an **I** next to the statements that are informative, and an **E** next to the entertaining ones.

a) "Steven Morrissey was born in Manchester on 22nd May 1959." ☐

b) "The gig was absolute mayhem. Swathes of bodies ebbed and flowed in a sea of delirium — enjoyment and a survival instinct competed for my attention." ☐

c) "The next event at Spark Bridge village hall is a performance by Jim Dodd and the Budgies, at 7.30 pm on December 12th." ☐

Q2 Underline **two** words or phrases in the text below which suggest that its purpose is to entertain. Then explain why these examples suggest this on the lines below.

> The woman was incredibly old. Her back was bent permanently by the sheer weight of the years she'd lived, and her skin was papery thin, revealing a labyrinth of thick blue veins that crisscrossed her trembling hands.
>
> She spoke quietly and kindly to the lost child, then, once he had stopped crying, gently guided him to sit down on a nearby bench. As they walked, the discordant clink and clank of her jewellery sang through the air.

.....

.....

.....

Q3 Read the text below, which is from the travel section of a newspaper.

> Public bathing may not be a familiar experience to a British tourist, but the tranquillity of the beautiful Gellért Baths is enough to convert even the most apprehensive of travellers. Here, bathers luxuriate across eight thermal pools, each of a different temperature. The hottest pool (an immersive 40 degrees) soothed my sightseeing-weary muscles as well as any massage I've ever received.

a) Write down **two** facts about the Gellért Baths that you can learn from this text.

Fact 1: .....

Fact 2: .....

b) Explain how the writer has presented **one** of these facts in an engaging way.

.....

.....

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Informative and Entertaining Texts

Focus on how language is used to inform or entertain the reader as you answer these exam-style questions.

Q4 Read the following extract from a short story.

> For her thirteenth birthday, Jasmine's parents had bought her a hockey stick. The thought process behind this baffling decision was a total mystery. They should have known better than anyone that she wasn't remotely interested in sport. Wasn't it obvious? She was nearing the point of needing to be surgically removed from her game console, and she had already mastered the art of the forged sick note. Lounging on the sofa was her passion — one to which she dedicated herself with all the staunch tenacity of an Olympic athlete. Going outside with her parents, meanwhile, was more daunting than an icy trek over an arctic precipice. She wasn't at all hopeful for a sudden transformation of her sofa-bound self into a hockey-stick wielding, goal-scoring demon. Those girls terrified her. She was Jasmine the gamer, a silent lone wolf. She was not, nor would she ever be, Jasmine the whooping and cheering team-player.

How does the writer use language here to describe Jasmine's personality?

Q5 Read the following text from a history magazine.

The Battle of Hastings was fought on October 14th 1066, on a field near Hastings in East Sussex. Led by William the Conqueror, it was the Normans' most important victory over the Anglo-Saxons.

William's army was a well-trained body of respected fighters. In contrast to Harold's army, which consisted mostly of foot soldiers, William's force had significant numbers of cavalry and archers — the cavalry sat proudly atop horses bred specially for their strength. At the helm of the Norman host stood a man with years of military experience.

Beginning at around nine o'clock in the morning, the battle was furious and bloody, and vast numbers of soldiers were brutally slain. At one stage, the English, led by King Harold II, were fooled into thinking they had won the battle, so they stormed towards their enemy, only to be mercilessly ambushed and trampled like insects.

How does the writer use language to describe the Battle of Hastings?

Entertaining texts — I thought phones weren't allowed in the exam...

Entertaining and informing are at opposite ends of the spectrum in lots of ways, but they can also be combined. It's really important to keep an eye out for texts with multiple purposes in the exam — they're often the ticket to a good answer.

Texts that Argue, Persuade or Advise

Q1 Draw lines to match each statement below to its purpose.

a) "The barbaric practice of bear-baiting must be stopped completely and immediately." — **To argue**

b) "If you want to make a difference, there are many organisations you can sign up to." — **To persuade**

c) "By joining our march and signing this petition, you will be helping to put an end to this disgraceful act of cruelty." — **To advise**

Q2 Read the following text.

Flamingos are the most fascinating birds in the world. Their beguiling beauty is unrivalled in the animal kingdom. Should such beauty go unsupported?

I'm starting a vital campaign to sponsor flamingos in zoos. By donating just a few pounds, you can help fund the establishment of breeding programmes for these most special of birds. The head keeper at my local zoo, Jane Sutton, says, "Flamingos really are wonderful animals. A dedicated breeding programme would be invaluable to their endurance as a species."

The table below shows the techniques used by the writer to persuade the reader. Fill in the table by picking out examples of each technique.

Technique	Example from text
rhetorical question	
opinion stated as fact	
expert opinion	
direct address to the reader	

Q3 Choose **one** word or phrase from the text below which shows that its purpose is to advise. Then explain how it helps the writer to achieve this purpose.

It's easy to get bogged down in all the choices when you're choosing a new mobile phone, but don't worry — there are plenty of people out there to help you. You could consider going into a phone shop to chat to an expert, or check out a handy online forum.

Example: .....

Explanation: .....

.....

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Texts that Argue, Persuade or Advise

Make sure you think about how the writer uses language to argue, persuade or advise in these questions.

Q4 Read the following extract from an advice leaflet about an election.

It's Decision Time — But Who Do I Vote For?

Unless you've been living under a rock for the past month, you'll probably have noticed that there's an election coming up. Deciding who to vote for can be a daunting task, but it's also an important one. Luckily, there's plenty of help out there.

Learn the Lingo

Firstly, you need to be well-informed on the principles and policies that each party stands for. If you start to feel overwhelmed by all the political lingo in their leaflets, don't panic — have a look online, where there are plenty of websites that break it down for you.

Choose a Capable Candidate

It's also a good idea to look into the candidates in your constituency. They represent you in parliament, so you'll want to vote for someone who has a strong voice, and who will stand up for what your area needs.

It's true — choosing who to vote for isn't easy. However, if you take the time to do a bit of research, you will be able to make the right decision for you.

How does the writer use language to describe how to decide who to vote for?

Q5 Read the following letter to the editor of the *Daily Muncaster* local newspaper.

Dear Sir,

I was frankly horrified to read your article about the new soft drink 'Swampy Water' being served in the tuck shop at Muncaster Primary School. This dangerous fad for drinking green, slimy water is clearly idiotic.

Firstly, young children may become confused and think it acceptable to drink real swamp water. I know from my time in the Territorial Army that this would be an ill-advised and perhaps even fatal decision. Secondly, 'Swampy Water' is packed full of unhealthy sugar and additives — how else would it acquire that lurid green tinge? Finally, the drink is eye-wateringly expensive, which means children don't have sufficient funds to purchase the normal, healthy snacks that any sane parent would endorse.

To conclude, it is my firm belief that 'Swampy Water' should be immediately removed from the tuck shop at Muncaster Primary School.

Yours faithfully,
Gerry Bowness

How does the writer use language to describe 'Swampy Water'?

I'm rooting for Teresa Green — her policies woodwork for us all...

Whether it's arguing, persuading or advising, a text's purpose has a big impact on the way the author writes. To get the most out of your revision, make sure you practise linking a text's purpose to the writer's use of language techniques.

Writer's Viewpoint and Attitude

Q1 Read these play reviews. Write down whether each attitude is **positive**, **negative** or **balanced**.

a) This playwright's recent offerings on the London stage had established high expectations, but his latest "masterpiece" falls far short of that hype. .....

b) I have never left a matinee performance and rushed straight to the box office to buy a ticket for that evening. Until now. .....

c) I can't say I was dazzled, but I certainly wasn't disappointed. A pleasant evening, if not one to write home about. .....

Q2 Draw lines to match the extracts below to the viewpoints they're expressing.

a) *"I'd be loath to send one of my own children to one, but the idea of abolishing mixed sex schools entirely is simply absurd."*

b) *"I've always considered mixed schools to be a barrier to educational progress. We should all stick with traditional segregation."*

c) *"Mixed schools are clearly superior, but parents should have a choice."*

d) *"The outdated concept of single-sex education has persisted for far too long. All education should be gender-blind."*

i) Prefers mixed schools and thinks single-sex schools should be abolished.

ii) Prefers mixed schools but thinks single-sex schools should still be an option.

iii) Dislikes mixed schools but thinks they should be offered as an option.

iv) Dislikes mixed schools and thinks all schools should be single-sex.

Q3 Summarise **one** thing that these two writers agree on, and **one** thing that they disagree on. Use evidence from the text to support your answer.

Source A Mobile phone disruptions in lessons are a nightmare for any teacher. Surely the best way to prevent this is simply to ban them from school entirely.

Source B I'm not about to suggest that students should be permitted to use mobiles during lessons, but I fail to see that any harm can be caused by allowing them during lunchtimes.

The writers agree that .....

.....

.....

The writers disagree that .....

.....

.....

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Writer's Viewpoint and Attitude

Q4 Read the following extracts. Source A is from a letter written in the 19th century, and Source B is from a newspaper article written in the 20th century.

Source A
Dear Miss Tinsham,
I read with concern your recent article on the new wave of art reaching British shores. With all due respect, I see it as nothing short of an abomination. It is created with a flagrant disregard for the conventions and traditions of classical art. These 'artists' seem not to have learnt from their predecessors, but instead insist on violating their canvasses with an assault of colour, which to view, in perfect honesty, is simply excruciating.

Source B
The London art scene has rarely been so exciting. We are seeing a real influx of artists who aren't afraid to throw off the iron shackles of 'traditional art' and champion self-expression. They're rule breakers, not intimidated by the giants of the past. They're revolutionaries, constantly looking forward, never back. Only by pushing the boundaries of modern art are we going to see any progression in the medium. When art conforms, it stagnates, and these new experimenters understand that.

Compare how the writers convey their different attitudes towards art.

Q5 Read the following extracts. Source A is an extract from a diary written in the 19th century, and Source B is from a speech written in the 21st century.

Source A
Dear Diary —
I've had quite a day today! Daddy and I took a trip to see the new steam train, which was being exhibited in James Square. It was fascinating — a clanking, grinding steel colossus, shiny as a new penny, with a great puff of steam that emerged from its funnel and curled into the summer sky. I've never seen the like — and to think, Daddy says one day they may be able to carry people from one end of the country to the other! I for one cannot wait.

Source B
Residents of Station Crescent! I know that you, like me, are plagued day-in, day-out with the sounds, smells and sights of the railway. Like me, many of you moved here at a time when three or four trains a day passed by, barely disturbing us at all. And like me, you've seen our area systematically invaded by a non-stop army of trains, impacting our quality of life — not to mention the price of our homes. The time has come to take a stand against the relentless growth of the railways.

Compare how the writers convey their different attitudes towards rail transport.

Compare how the students convey their different attitudes towards exams...
"Student A seems rather miffed that she's stuck indoors revising when she could be outdoors enjoying the sunshine. In contrast, Student B is getting really stuck into his revision material... no, wait, he's just fallen asleep on top of his book."

Literary Fiction and Literary Non-Fiction

Q1 Each of the sentences below use a technique that is common in literary fiction. Label each sentence with the number of the technique used.

a) The waves whispered to them; the sound of the surf seemed to say, "Come in come in". .....

b) Somewhere in the house, glass smashed. Cate froze. There were voices downstairs. Strange voices. Someone had broken in. .....

c) "Didn't you hear?" whispered Farah covertly. "They're going to make you break into the library." .....

1. short sentences for suspense	2. dialogue to move the plot along

3. personification to create an enticing atmosphere

Q2 **a)** Read the literary fiction text below. Underline the words and phrases which suggest the narrator is angry.

> As I stared at the letter, no longer absorbing the words on the page, I realised my hands were starting to shake. How dare they! After all I'd done for that family... their betrayal cut me like a knife. Without even realising it, I'd begun to tear the paper into pieces; ripping, shredding, mutilating the letter until I was left with a pile of limp paper-snowflakes. Then, just for good measure, I aimed a sharp kick at the pile, scattering it across the carpet.

b) Choose one of your answers to **a)** and explain how it shows that the narrator is angry.

.....

.....

Q3 Use the words in the box to complete the following sentences about literary non-fiction.

purpose	fact	argument	biographies	dialogue	entertain

Literary non-fiction texts are based on ..... . They include things like travel writing, diary entries and ..... . Their ..... is often to inform the reader or to make an ....., but they also ..... . They use features such as description and ..... .

My autobiography is very entertaining, I promise...

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Literary Fiction and Literary Non-Fiction

After trying these exam-style questions, tick a box below to show how well you think you've done.

Q4 Read the following extract from a novel.

> Annie went from room to room, shaking her head at the disarray. The house looked as if it had been burgled. In the living room, a bookcase had been thrown onto the floor, and paperbacks were scattered chaotically across the carpet. In the kitchen, the floor was a treacherous landscape of smashed crockery and broken glass.
>
> Annie frowned and headed cautiously up the stairs, following the crashing sounds into the master bedroom. Lucas stood with his back to her. His hair was a frantic mess, his movements manic as he pulled every item of clothing out of his wardrobe and launched them behind him. He was muttering frenetically under his breath.
>
> "Lucas," Annie said calmly. He span around, surprised by her presence. His wide eyes were wild, beads of sweat had appeared on his forehead and his cheeks were red.
>
> "I can't find it," he said. "I've looked everywhere. It's lost. They'll kill me."
>
> "Don't be ridiculous. They're not going to kick you out just because you've lost your key to the clubhouse," said Annie, her arms folded.
>
> "What would you know about it, Annie?" said Lucas, his eyes flashing in annoyance. "They're obsessed with not letting any outsiders in. If they find out I've lost it... I'm doomed. Finished. Condemned."

How does the writer use language here to describe Annie and Lucas?

Q5 Read the following texts about teaching. Source A is from a speech written in the 19th century. Source B is from an autobiography written in the 20th century.

Source A

A schoolmaster must view himself always as a military officer. He must demand respect from his troops, give no ground and yield no position. If he is not thorough, poor discipline and wayward behaviour will surely ensue. When a schoolmaster allows himself to be seen as a friend, all respect is lost. Imparting a meaningful and comprehensive academic education will become impossible. A schoolmaster without control is like a dog without bite.

Source B

As my sepia-toned school-days become steadily more indistinct, the stern face of Mr Wan remains as clear as day. Wan was a firm disciplinarian, and his strict laws meant that I spent much of my adolescent life languishing in detention. But despite the inevitable resentment I felt for him at the time, Mr Wan did give me a lasting education. Not, sadly, in his beloved Chemistry; but certainly in the priceless lesson of human decency. Though my teenage self was unable to see it, Wan listened to me.

Compare how the two writers convey their different attitudes to teaching.

You're writing a book? What a novel idea...

There's a lot to think about when you're reading a literary fiction or non-fiction text — so many literary devices... On the plus side, that gives you lots to write about. Besides, the more you practise identifying this stuff, the less torturous it gets.

Science