WOOTTON PARK

FOUNDATION FOR GROWTH

'Ipsum quod faciendum est diutius'

Knowledge Maps

GCSE Core Subjects- Term 1

Trilogy Science

Name	
Tutor Group	

	Term: 1	

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'Ipsum quod faciendum est diutius durant'

Reading 2 Non-Fiction Texts

15 min

- One 19th century text
- One modern text

Read exam questions first and highlight key words.
What are both texts about? What facts and opinions can you identify?
At the top of each extract write the **type of text** (article, letter, ect.), **audience** and **purpose**.

Q1 Tests your *understanding* of the unseen text.

5 min

Answer this question as you read the text for the 1st time

- Select 4 TRUE statements from the list of 8
- **Always tick 4 boxes** – if you aren't sure, at least have a guess!
- **Check your answer** by reading the section of the text you are directed to – the facts might be obvious or you may have to infer meaning

Q3 – 12 marks

15 min

Language analysis – focus on 1 text

3 paragraphs following this structure:

- The writer has used technique + critical verb + effect (linked to question)
- Quote(s)
- Single word analysis

Top Tips:

- Select sophisticated techniques e.g. juxtaposition & sibilance
- Identify ***a range*** of language features – do not only pick out verbs for example.

Metaphor, simile, personification, alliteration, onomatopoeia, semantic field, sibilance, hyperbole, verbs, adjectives, adverbs, ect.

Q4 – 16 marks Analysing different perspectives in 2 texts

20

1. **Highlight the key words in the question** – it is asking you to compare each writer's attitude to what?
2. **Read text A and B and highlight quotes that reveal the writer's attitude/opinion/view on the topic** – remember, quotes with language techniques are best and you should label these
3. **Plan your response using this table:**

Point about writer's different thoughts / opinions / experiences	Source A Quote	Language feature	Source B Quote	Language feature

3 Paragraphs following this structure:

The writer of source A views ____ as + quote + *The writer has used* technique + critical verb + effect (linked to point)

*comparative connective **the writer of source B thinks ____ is** + quote + *The writer has used* technique + critical verb + effect (linked to point)

Q2 – 8 marks Summarising the differences between 2 texts

10

1. **Highlight the key words in the question** – what is it asking you to compare?
2. **Read text A and B and highlight quotes that are relevant to the question** *e.g. if the question asks you to compare 2 characters, highlight where the character is described.*

2 Paragraphs following this structure:

Point about Source A (linked to question) Quote Inference	Point about Source B (linked to question) Quote Inference
Comparative sentence – how is this **different** to Source B?	Comparative sentence – how is this **different** to Source A?

Critical Verbs

Suggests
Symbolises
Highlights
Portrays
Emphasises
Demonstrates
Evokes
Illustrates
Infers
Implies
Connotes
Alludes to
Arouses

*Comparative connectives

- In comparison
- Juxtaposing this
- On the other hand
- In contrast
- However
- In opposition to this
- Whereas

	Term: 1	Topic: English Language Paper 2 Section B (Writing)

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English Language Paper 2 Section B
Writing to present a Viewpoint

In Section B of the English Language Paper 2, you will be asked to write a discursive based piece. This is worth 50% of marks for the paper and will last for 45 minutes.

AO5 Content and Organisation

Level 4	**24 23 22 21 20 19**	**Content** **Organisation**
Level 3	**18 17 16 15 14 13**	**Content** range of appropriate linguistic devices **Organisation**
Level 2	**12 11 10 9 8 7**	**Content** register **Organisation**
Level 1	**6 5 4 3 2 1**	**Content** **Organisation**

AO6 Technical Accuracy

Level 4	**16 15 14 13**	
Level 3	**12 11 10 9**	
Level 2	**8 7 6 5**	
Level 1	**4 3 2 1**	

Websites:

GCSE Bitesize:
https://www.bbc.com/bitesize/guides/zy47xsg/revision/1

AQA:
https://www.aqa.org.uk/subjects/english/gcse/english-language-8700

Subject: Maths – 10E (Foundation)	Term: 1	Topic: Unit 9 & 10

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Overview
In this term, learners will be studying up to two units which will include the topics of powers and roots and quadratics.

Key Terms:

Unit 9:
Co-ordinate
Axis
Gradient
Substitute
Y-intercept
Linear

Unit 10:
Vectors
Centre of enlargement
Origin
Line of reflection
Centre of rotation
Clockwise
Anti-clockwise
Scale factor

Key skills:

9 Graphs
Prior knowledge check
9.1 Coordinates
9.2 Linear graphs
9.3 Gradient
9.4 $y = mx + c$
9.5 Real-life graphs
9.6 Distance–time graphs
9.7 More real-life graphs

10 Transformations
Prior knowledge check
10.1 Translation
10.2 Reflection
10.3 Rotation
10.4 Enlargement
10.5 Describing enlargements
10.6 Combining transformations

Unit 9:

Key point 1
On the line with equation $y = 1$ the y-coordinate is always 1. The line is **parallel** to the x-axis.
On the line with equation $x = 3$ the x-coordinate is always 3. The line is parallel to the y-axis.

Exam-style question

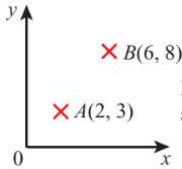


Diagram **NOT** accurately drawn

The point A has coordinates (2, 3).
The point B has coordinates (6, 8).
M is the midpoint of the line AB.
Find the coordinates of M. **(2 marks)**

June 2014, Q1, 1MA0/2H

Exam-style question

a Complete the table of values for $y = 2x + 2$

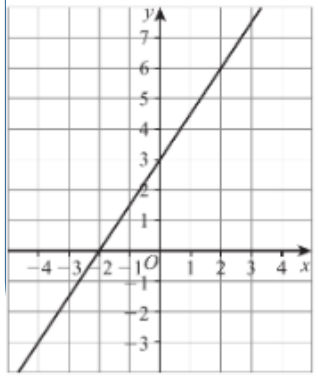
x	−2	−1	0	1	2	3	4
y	−2				6		

Q4g communication hint
Labelling a graph means writing the equation of the graph next to the line.

Key point 3
The steepness of a graph is called the **gradient**.
To find the gradient work out how many units the graph goes up for each unit it goes across.

Key point 4
positive gradient
negative gradient

Exam-style question
Find the gradient of the straight line drawn on this grid.



Q12 communication hint
Velocity means speed in a particular direction.

Q8a hint $x = 2$, $y = 1$ and $m = 3$.
Use $y = mx + c$ to work out c.
$1 = 3 \times 2 + c$, so $c = -5$
The equation is $y = \square x + \square$

March 2013, Q22c,

Key point 5
A **linear equation** produces a straight line graph. The equation of a straight line is $y = mx + c$, where m is the gradient and c is the y-intercept.

Key point 6
A **distance–time graph** represents a journey. The vertical axis represents the distance from the starting point. The horizontal axis represents the time taken.

Average speed = $\frac{\text{distance travelled}}{\text{time taken}}$

Key point 8
A **rate of change graph** shows how a quantity changes over time.
On a **velocity–time graph** the gradient represents the acceleration.

Subject: Maths – 10DAB and C (H)	Term: 1	Topic: Unit 9 & 10

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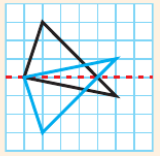
Websites and further reading

- Pearson Active Learn: http://pearsonactivelearn.com
- Maths Watch: http://mathswatch.co.uk/
- BBC Bitesize: http://www.bbc.co.uk/education/subjects/zqhs34j
- Numeracy and Foundation level practice questions and answers: https://corbettmaths.com/5-a-day/gcse1/
- Maths quiz: http://www.educationquizzes.com/ks3/maths/
- KS3 online tests: http://www.romsey.hants.sch.uk/maths/ks3onlinetests.htm

Q4c hint 'Describe fully' means write down the scale factor *and* the coordinates of the centre of enlargement.

Q6 hint
The new vertices are on the opposite side of the mirror line. For example:



Unit 10:

Key point 1

You can use a **column vector** to describe a translation.
The top number describes the movement to the left or right, and the bottom number describes the movement up or down. For example:

$\begin{pmatrix}3\\2\end{pmatrix}$ means 3 right, 2 up $\qquad$ $\begin{pmatrix}-4\\-5\end{pmatrix}$ means 4 left, 5 down.

Key point 2

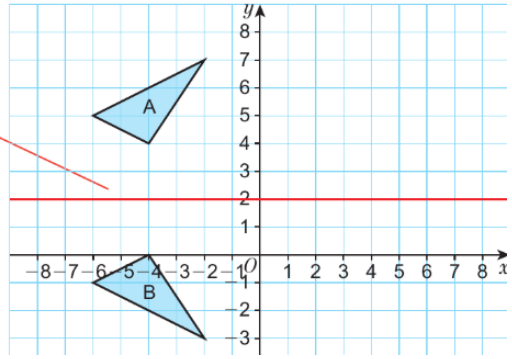
To describe a reflection on a coordinate grid you need to give the equation of the **mirror line**.

Example 2

Describe fully the transformation that maps shape A onto shape B.

Find the mirror line halfway between the vertices of the image (B) and the original (A).

Write down the type of transformation (reflection) and the equation of the mirror line.



Reflection in the line $y = 2$.

Example 5

Write the scale factor of this enlargement.

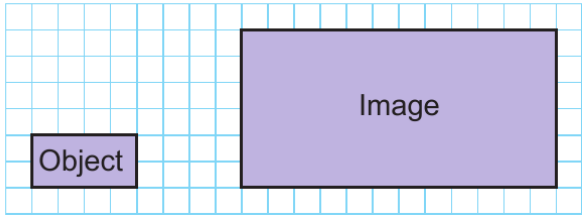
The bottom of the image is 12 squares long.

The bottom of the object is 4 squares long.

Scale factor $= \frac{12}{4} = 3$

Choose the same side on the image and object and count the number of squares.

Write $\frac{\text{length on image}}{\text{length on object}}$ and simplify.



Key point 3

You rotate a shape by turning it around a point called the **centre of rotation**.

Key point 4

To enlarge a shape you multiply all the side lengths by the same number.
The number that the side lengths are multiplied by is called the **scale factor**.

Key point 5

When you enlarge a shape using a **centre of enlargement**, you multiply the distance from the centre to each vertex by the scale factor.

Subject: Maths – 10DAB and C (H)	Term: 1	Topic: Unit 9 & 10

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Overview

In this term, learners will be studying up to two units which will include the topics of powers and roots and quadratics.

Key Terms:

Unit 9:
Simplify
Like-Terms
Expand
Expression
Factorise
Identity
Equation
Inequality
Indices
Simultaneous
Surds

Unit 2:
Mutually exclusive
Union
Intersect
Venn diagrams
Independent
Dependent
Replacement
Non-replacement

Key skills:

9 Equations and inequalities
- Prior knowledge check
- 9.1 Solving quadratic equations 1
- 9.2 Solving quadratic equations 2
- 9.3 Completing the square
- 9.4 Solving simple simultaneous equations
- 9.5 More simultaneous equations
- 9.6 Solving linear and quadratic simultaneous equations
- 9.7 Solving linear inequalities

10 Probability
- Prior knowledge check
- 10.1 Combined events
- 10.2 Mutually exclusive events
- 10.3 Experimental probability
- 10.4 Independent events and tree diagrams
- 10.5 Conditional probability
- 10.6 Venn diagrams and set notation

Unit 9:

Key point 1

Solving a quadratic equation means finding values for the unknown that fit.

Exam-style question

Solve, by factorising, the equation $8x^2 - 2x - 21 = 0$

Solve $x^2 + 2x - 8 = 0$

$(x + 4)(x - 2) = 0$ — Factorise

So either $x + 4 = 0$ or $x - 2 = 0$ — The product of the factors is 0 so one or both factors equals 0

$x = -4$ or $x = 2$ — Solve the linear equations.

Key point 3

You can use the **quadratic formula**

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

to find the solutions to a quadratic equation $ax^2 + bx + c = 0$

Key point 2

The **roots** of a quadratic function are its solutions when it is equal to zero.

Key point 5

$x^2 + bx + c$ can be written in the form $\left(x + \frac{b}{2}\right)^2 - \left(\frac{b}{2}\right)^2 + c$.

This is called **completing the square**.

Solve the simultaneous equations

$x + y = 6$

$3x - y = 10$

① $x + y = 6$

② $3x - y = 10$

①+② $4x + 0 = 16$ — The terms in y have opposite signs, so add the equations to eliminate the terms in y.

$x = 4$ — Divide both sides by 4

$4 + y = 6$ — Substitute $x = 4$ into equation ①

$y = 2$

Check: $3 \times 4 - 2 = 10$ ✓ — Now check that your solutions work in equation ②

Key point 4

Expressions such as $(x + 2)^2$, $(x - 1)^2$ and $(x + \frac{1}{2})^2$ are called **perfect squares**.

$3x > 6 - x + 2$ — Add 2 to both sides.

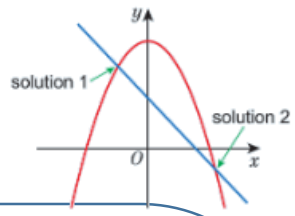
$4x > 8$ — Add x to both sides.

$x > 2$ — Divide both sides by 4.

In set notation: $\{x : x > 2\}$ — This tells us that there is a set of values of x, not just one value.

Key point 8

A pair of quadratic and linear simultaneous equations can have two possible solutions.



Subject: Maths – 10DAB and C (H)	Term: 1	Topic: Unit 9 & 10

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Websites and further reading

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- Numeracy and Foundation level practice questions and answers: https://corbettmaths.com/5-a-day/gcse1/
- Maths quiz: http://www.educationquizzes.com/ks3/maths/
- KS3 online tests: http://www.romsey.hants.sch.uk/maths/ks3onlinetests.htm

Unit 10:

Key point 1

$$\text{Probability} = \frac{\text{number of successful outcomes}}{\text{total number of possible outcomes}}$$

Key point 5

For 3 or more mutually exclusive events, P(A or B or C or…) = P(A) + P(B) + P(C) + …

The probabilities of an exhaustive set of mutually exclusive events sum to 1.

Example 4

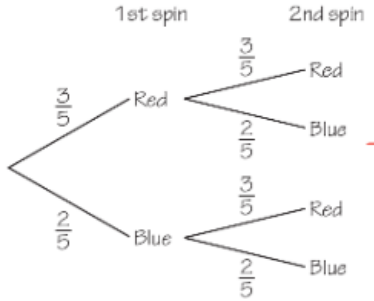
This fair five-sided spinner is spun twice.

a Draw a tree diagram to show the probabilities.

b What is the probability of both spins landing on red?

c What is the probability of landing on one red and one blue?

a



Write the probability on each branch of the diagram.

b $P(R, R) = \frac{3}{5} \times \frac{3}{5} = \frac{9}{25}$

Go along the branches for Red, Red. The 1st and 2nd spins are independent, so multiply the probabilities.

c $P(R, B) = \frac{3}{5} \times \frac{2}{5} = \frac{6}{25}$

$P(B, R) = \frac{2}{5} \times \frac{3}{5} = \frac{6}{25}$

Go along the branches for Red, Blue and Blue, Red.

$P(R, B \text{ or } B, R) = \frac{6}{25} + \frac{6}{25} = \frac{12}{25}$

The outcomes Red, Blue and Blue, Red are mutually exclusive, so add the probabilities of their outcomes.

Key point 3

Two events are **mutually exclusive** if they cannot happen at the same time. For example, when you roll an ordinary dice, you cannot get a 3 and an even number at the same time.

When events are mutually exclusive you can add their probabilities.

For mutually exclusive events P(A or B) = P(A) + P(B)

Key point 7

In a probability experiment a trial is repeated many times and the outcomes recorded.

The relative frequency of an outcome is called the **experimental probability**.

$$\text{Experimental probability of an outcome} = \frac{\text{frequency of outcome}}{\text{total number of trials}}$$

Key point 11

Two events are **independent** if one event does not affect the probability of the other.

For example, flipping heads with a coin has no effect on rolling an even number with a dice, so they are independent events.

To find the probability of two independent events, multiply their probabilities.

P(A and B) = P(A) × P(B)

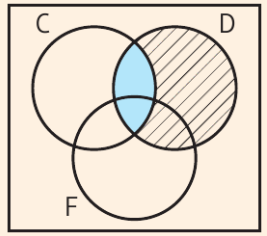
Key point 8

Theoretical probability is calculated without doing an experiment.

Q4c i communication hint

P(two tails) means the probability of getting two tails.

Q8b ii hint $P(C \cap D \mid D)$ means the probability of a cat and dog owner given that pet owner owns a dog.



Subject: Science	Term: 1	Topic: Year 10 Trilogy – Infection and response

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Topics Covered

Biology – Infection and response

Code	Topic
B5.1	Health and disease
B5.2	Pathogens and disease
B5.3	Preventing infections
B5.4	Viral diseases
B5.5	Bacterial diseases
B5.6	Diseases caused by fungi and protists
B5.7	Human defence responses
B6.1	Vaccination
B6.2	Antibiotics and painkillers
B6.3	Discovering drugs
B6.4	Developing drugs

Do not forget you can revise using Kerboodle. Use the Digital book section and find the green book titled Biology for GCSE combined Science: Trilogy. You could also use:

- BBC Bite size
- Primrose Kitten YouTube videos
- Free science lesson videos

5.1 Health and disease

Communicable (infectious) diseases are caused by **pathogens** such as bacteria and viruses that can be passed from one person to another.

Non-communicable diseases cannot be transmitted from one person to another.

Three other things that can affect health:

- Diet
- Stress
- Life situations (i.e. where you live, gender, financial status, ethnicity, levels of free health care, number of children, local waste disposal etc.

5.2 pathogens and disease

Communicable (infectious) diseases are infectious diseases. Microorganisms that cause disease are called pathogens. Pathogens can be bacteria, viruses, protists or fungi.

Bacteria – once inside your body will divide rapidly by splitting in two (called **binary fission**). They may produce toxins (poisons) that affect your body and make you feel ill. Some directly damage your cells.

Viruses – once inside you body take over the cells of your body. They live and reproduce inside the cells, damaging and destroying them.

How do pathogens spread?

- By air (including droplet infection
- Direct contact
- By water

5.3 Preventing infections

Ignaz Semmelweis was a doctor in the mid-1850s. During this time many women in hospital died from childbed fever a few days after giving birth. Semmelweis noticed that his medical students went straight from dissecting a dead body to delivering a baby without washing their hands. The women delivered by medical students and doctors rather than midwives were much more likely to die. Semmelweis wondered if they were carrying the cause of disease from the corpses to their patients. He noticed that another doctor dies from symptoms identical to childbed fever after cutting himself while working on a body. This convinced Semmelweis that the fever was caused by some kind of infectious agent. He therefore insisted that his medical students wash their hands before delivering babies. Immediately, fewer mothers died from the fever.

Other discoveries in mid- to late- 19th century:

- Louis Pasteur showed that microorganisms caused disease. He developed **vaccines** against diseases such an anthrax and rabies.
- Joseph Lister started to use antiseptic chemicals to destroy pathogens before they caused infection in operating theatres.
- As microscopes improved, it became possible to see pathogens more clearly. This helped convince people that they were really there.

Preventing the spread:

- Hand washing
- Using disinfectants
- Keeping raw meat separate from cooked food
- Covering your mouth

Subject: Science	Term: 1	Topic: Year 10 Trilogy – Infection and response

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5.4 Viral diseases

Viruses can infect and damage all types of cell. Below are some examples you need to know:

- **Measles**

The main symptoms are a fever and a red skin rash. It is spread by inhalation of droplets from coughs and sneezes and is very infectious. It can cause blindness and brain damage. There is no treatment. It is now vary rare in the UK due to vaccination programmes.

- **HIV/AIDS**

Many people do not realise that are infected with HIV, because the virus only causes a mild, flu-like illness to begin with. HIV attacks the immune cells and after the initial mild illness it remains hidden inside the immune system until it is so badly damaged that is can no longer deal with infections or certain cancers. It is spread by direct sexual contact and the exchange of body fluids such as blood. This is no cure or vaccine. The spread of the disease can be prevented by using condoms, not sharing needles, screening blood and bottle feeding babies.

- **Tobacco mosaic virus**

It is the first virus to ever be isolated. It affects tomatoes and tobacco plants. It causes discolouration of leaves and affects the growth of the plant. It is spread by contact between diseased plants and insects can act as vectors (carriers). There is no treatment. Spread can be reduced by good field hygiene and pest control.

5.5 Diseases caused by fungi and protists

Fungal diseases in animals can be fatal and are usually very rare but there are often antifungal drugs. In plants, however, fungal diseases are common and affects huge amounts of crops.

- **Rose black spot -** This fungal disease affects rose black spot and it causes purple or black spots to develop on the leaves. This weakens the leaves as the spots reduces photosynthesis. The spores are spread and carried in the wind. Chemical fungicides can help treat roses but it cannot be cured or completely prevented.

Protist (a type of single-celled organism) cause a range of diseases. They are rare but the diseases they case are often serious and damaging. One of the most commonly known is Malaria.

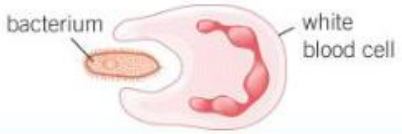
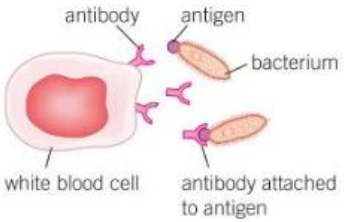
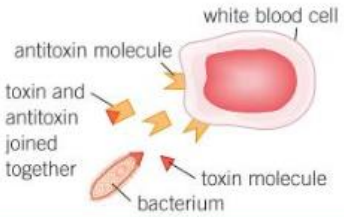
- **Malaria** – This disease is caused by parasites that feed on other living organisms. The disease affects the liver and can damage red blood cells. It causes recurrent episodes of fever and shaking when the protists burst out of the blood cells. If it is diagnosed quickly it can be treated using drugs but these are not common. We can control spread by using insecticide-impregnated nets, insecticides to kill mosquitos and travellers taking antimalarial drugs.

5.6 Human defence responses

Your body has many ways to defend itself against disease. You skin is one of the main ways: it acts as a barrier and produces antimicrobial secretions to destroy pathogenic bacteria.

Both the respiratory and digestive systems are lined with hairs and produce mucus to trap pathogens and the hairs move the pathogens out.

We also have white blood cells:

Role of white blood cell	How it protects you against disease
Ingesting microorganisms 	Some white blood cells ingest (take in) pathogens, digesting and destroying them so they cannot make you ill.
Producing antibodies 	Some white blood cells produce special chemicals called antibodies. These target particular bacteria or viruses and destroy them. You need a unique antibody for each type of pathogen. When your white blood cells have produced antibodies once against a particular pathogen, they can be made very quickly if that pathogen gets into the body again. This stops you getting the disease twice.
Producing antitoxins 	Some white blood cells produce antitoxins. These counteract (cancel out) the toxins released by pathogens.

Subject: Science	Term: 1	Topic: Year 10 Trilogy – Infection and response

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6.1 Vaccination

Immunisation involves giving someone a vaccine made of a dead or inactivated form of a disease-causing microorganism. By introducing a dead pathogen into the body the white blood cells produce the antibodies needed to fight the pathogen and prevent you from getting ill. Then, if you ever get the same pathogen in the body, your white blood cells can respond rapidly.

6.2 Antibiotics and painkillers

Painkillers like paracetamol are good at relieving headaches or sore throats but they have no affect on the viruses that have entered your tissues and made you feel ill.

Antibiotics are drugs that kill and destroy the bacteria present in our bodies. Unfortunately antibiotics cannot kill viral pathogens and when taken incorrectly bacteria is becoming more and more resistant.

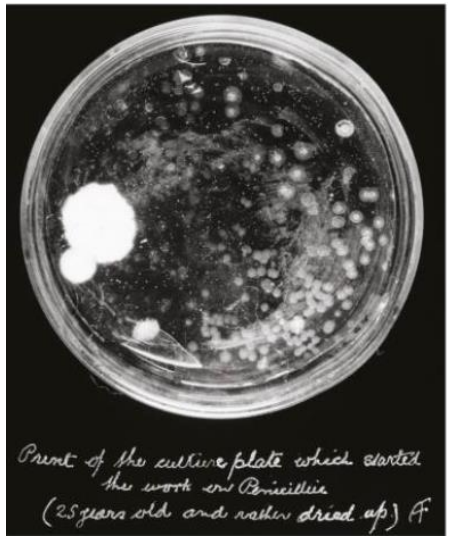
Figure 3 *Penicillin was the first antibiotic. Now there are many different ones that kill different types of bacterium. Here, several different antibiotics are being tested on an agar plate.*

6.3 Discovering drugs

Traditionally drugs were extracted from plant or microorganisms such as moulds. Now we adapt chemicals from organisms to make more effective drugs.

Digitalis is a drug extracted from foxgloves, and the drug digoxin is another and can be used to strengthen the heartbeat. Aspirin originates from a compounds found in the bark of willow trees.

Discovering penicillin – Alexander Fleming was growing bacteria in 1928. He was careless, often leaving lids off culture plate. The culture plates grew mould on them and he noticed a clear ring in the jelly around some of the spots of mould and realised something had killed the bacteria covering the gel. He called the substance that killed the bacteria 'penicillin'. 10 years after the discover, Ernst Chain and Howard Florey tried to extract penicillin, and they suceeded.



6.4 Developing drugs

A good medicine is: effective, safe, stable and successfully taken into and removed from your body. When a new drug it developed it must be thoroughly tested and this can take up to 12 years and costs around £1700 million. First the new drug is tested in a lab to find out if they are toxic and if they do their job. They are then tested on animal which gives us information about possible dose size and side effects. Up until now the drug has undergone **preclinical testing.** If a drug passes this round they move on to **clinical trials**. This is when we test the drugs on healthy volunteers and patients. First a low dose is given on volunteers to check for side effects and then it is tried on a small number of patients to see if it treats the disease. Then bigger clinical trials take place. Within these trials is a **double blind trial.** This is where the drug and a **placebo** (something that does not contain the drug) is given to random patients without them or the doctor knowing who had the real drugs. After the trial it is then revealed to see if the drug really works.

Subject: Science	Term: 1	Topic: Year 10 Trilogy – Chemical calculations

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Topics Covered

Chemistry – Chemical calculations

Code	Topic
C4.1	Relative mases and moles
C4.2	Equations and calculations
C4.3	From masses to balancing equations
C4.4	Expressing concentrations

Do not forget you can revise using Kerboodle. Use the Digital book section and find the red book titled Chemistry for GCSE combined Science: Trilogy.

You could also use:

- BBC Bite size
- Primrose Kitten YouTube videos
- Free science lesson videos

Calculating moles:

Number of moles = mass (g) / A_r

Number of moles = mass (g) / M_r

Q: How many moles of helium atoms are there in 0.02g of helium? **A**: Moles = Mass / A_r = 0.02 / 4 = 0.005 moles	**Q:** How many moles of sulphuric acid are there in 19.6g of sulphuric acid (H_2SO_4)? **A**: M_r of H_2SO_4 = (2x1) + 32 + (4x16) Moles = Mass / M_r = 19.6 / 98 = 0.2 moles

4.1 Relative masses and moles

Instead of using actual masses of atoms, we use relative masses (compared with Carbon which has a mass of exactly 12).

Relative atomic mass (A_r) – The average mass of an atom of an element compared to Carbon-12.

Relative formula mass (M_r) – The total of the relative atomic masses of a substance (added up in the ratio shown in the chemical).

Examples:

H_2O (A_r Hydrogen =1, A_r Oxygen =16) M_r = (2 x 1) + 16 = 18	**Al_2O_3** (A_r Aluminium =27, A_r Oxygen =16) M_r = (2 x 27) + (3 x 16) = 102

Mole – The amount of substance in the relative atomic or formula mass of a substance in grams.

Avogadro constant – The number of atoms, or ions in a mole of any substance (6.02 x 10^{23} per mol)

4.2 Equations and calculations

Chemical equations tell us how reactants combine to form products.

Balanced equations tell us the number of atoms of each elements present in the reactants and products. These number of atoms in the reactants and products must be the same.

Example: $H_2 + Cl_2 \rightarrow HCl$ Not balanced

$H_2 + Cl_2 \rightarrow 2HCl$ Balanced

We can use balanced symbol equations to calculate the masses of reactants and products in a chemical reaction.

Worked example 2

Sodium hydroxide reacts with chlorine gas to make bleach. This reaction happens when chlorine gas is bubbled through a solution of sodium hydroxide. The balanced symbol equation for the reaction is:

$$2NaOH + Cl_2 \rightarrow NaOCl + NaCl + H_2O$$

sodium hydroxide, chlorine, bleach, salt, water

If you have a solution containing 100.0 g of sodium hydroxide, what mass of chlorine gas do you need to convert it to bleach?

Solution

A_r values: hydrogen = 1, oxygen = 16, sodium = 23, chlorine = 35.5

Mass of 1 mole of	
NaOH	Cl_2
= 23 + 16 + 1 = 40 g	= 35.5 × 2 = 71 g

The table shows that 1 mole of sodium hydroxide has a mass of 40 g.

So 100.0 g of sodium hydroxide is $\frac{100}{40}$ = 2.5 moles.

The balanced symbol equation tells you that for every 2 moles of sodium hydroxide you need 1 mole of chlorine to react with it.

So you need $\frac{2.5}{2}$ = 1.25 moles of chlorine.

The table shows that 1 mole of chlorine has a mass of 71 g.

So you will need 1.25 × 71 = 88.75 g of chlorine to react with 100.0 g of sodium hydroxide.

The answer 88.75 g is given to 4 significant figures. This is to be consistent with the data supplied in the question, as you started with 100.0 g of sodium hydroxide.

The number of significant figures to which the relative atomic masses are quoted does not need to be taken into account in chemical calculations.

Subject: Science	Term: 1	Topic: Year 10 Trilogy – Chemical calculations

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4.3 From masses to balancing equations

You can deduce balanced equations from the masses of substances involved in a chemical reaction.

Worked example 1

Sodium nitrate, $NaNO_3$, decomposes on heating to give sodium nitrite, $NaNO_2$, and oxygen gas, O_2.

When 8.5 g of sodium nitrate is heated in a test tube until its mass is constant, 6.9 g of sodium nitrite is produced.

a What mass of oxygen must have been given off in the reaction?

b Find the ratio of reactants and products involved in the reaction, and show how these can be used to produce the balanced symbol equation for the decomposition of sodium nitrate:

(A_r values: Na = 23, N = 14, O = 16)

Solution

a You know that the total mass of reactants = total mass of products (from the Law of conservation of mass). So if the mass of oxygen is x g:

sodium nitrate → sodium nitrite + oxygen

8.5 g = 6.9 g + x g

(8.5 – 6.9) g = x g

1.6 g = mass of oxygen

b From the masses given in the question and our answer to part **a**, you can work out the numbers of moles of each reactant and product:

First of all, you will need to calculate the relative formula masses M_r of the reactants and products using the A_r values provided:

M_r of $NaNO_3$ = [23 + 14 + (16 × 3)] = 85

M_r of $NaNO_2$ = 69

M_r of O_2 = 32

Then use the equation from Topic C4.1 to convert masses to moles:

number of moles = $\frac{\text{mass}}{M_r}$

moles of $NaNO_3$ = $\frac{8.5}{85}$ = 0.1 mol

moles of $NaNO_2$ = $\frac{6.9}{69}$ = 0.1 mol

moles of O_2 = $\frac{1.6}{32}$ = 0.05 mol

Then find the simplest whole-number ratio of the numbers of moles of $NaNO_3 : NaNO_2 : O_2$

moles of $NaNO_3 : NaNO_2 : O_2$

0.1 : 0.1 : 0.05

Dividing the ratio by the smallest number gives:

2 : 2 : 1

So the balanced equation is:

$$2NaNO_3 \rightarrow 2NaNO_2 + O_2$$

The reactant that gets used up first in a reaction is called the limiting reactant. This is the reactant that is NOT in excess.

This then means, the amounts of products formed in a chemical reaction are determined by the limiting reactants.

Worked example 2

If you have 4.8 g of magnesium ribbon reacting in a solution of dilute hydrochloric acid containing 7.3 g of HCl, which reactant is the limiting reactant?

(A_r values: Mg = 24, H = 1, Cl = 35.5)

Solution

The balanced equation for the reaction is:

$$Mg(s) + 2HCl(aq) \rightarrow MgCl_2(aq) + H_2(g)$$

You are only interested in the reactants in this question.

number of moles = $\frac{\text{mass}}{A_r}$ or $\frac{\text{mass}}{M_r}$

You start with 4.8 g of Mg, which is $\frac{4.8}{24}$ moles = 0.2 mol

and 7.3 g of HCl, which is $\frac{7.3}{(1 + 35.5)}$ moles = $\frac{7.3}{36.5}$ = 0.2 mol

From the balanced equation, you see that 1 mole of Mg will react with 2 moles of HCl.

Therefore 0.2 mol of Mg will need 0.4 mol of HCl to react completely.

In this case, we have not got 0.4 mol of HCl – we only have 0.2 mol – so the dilute hydrochloric acid is the limiting reactant (and the magnesium is in excess).

4.4 Expressing concentrations

The concentration of a solution can be calculated using the equation below. You may need to concert volumes from cm^3 to dm^3 (dividing by 1000).

$$concentration \left(\frac{g}{dm^3}\right) = \frac{amount\ of\ solute\ (g)}{volume\ of\ solution\ (dm^3)}$$

To calculate the mass of solute in a certain volume of solution of known concentration:

1. Calculate the mass (g) of the solute in 1dm^3 (1000 cm^3) of solution.
2. Calculate the mass (g) of solute in 1cm^3 of solution.
3. Calculate the mass (g) of solute there is in the given volume of the solution.

A more concentrated solution has more solute in the same volume of solution than a less concentrated solution

Subject: Science	Term: 1	Topic: Year 10 Trilogy – Particle model of matter

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Topics Covered

Physics – Molecules and matter

Code	Topic
P6.1	Density
P6.2	States of matter
P6.3	Changes of state
P6.4	Internal energy
P6.5	Specific latent heat
P6.6	Gas pressure and temperature

Do not forget you can revise using Kerboodle. Use the Digital book section and find the blue book titled Physics for GCSE combined Science: Trilogy. You could also use:

- BBC Bite size
- Primrose Kitten YouTube videos
- Free science lesson videos

Key equations:

$$\boldsymbol{Density, \rho} = \frac{\boldsymbol{mass, m}\ (kilograms, kg)}{\boldsymbol{volume, V}\ (metres^3, m^3)}$$

$$\boldsymbol{Specific\ latent\ heat}, (\frac{J}{kg}) = \frac{energy, E\ (\boldsymbol{joules, J})}{mass, m\ (\boldsymbol{kilogram, kg})}$$

6.1 Density

The density of substance is defined as its mass per unit volume. It has the unit of kilogram per cubic metre, kg/m^3

$$\boldsymbol{Density, \rho} = \frac{\boldsymbol{mass, m}\ (kilograms, kg)}{\boldsymbol{volume, V}\ (metres^3, m^3)}$$

Worked example

A wooden post has a volume of $0.025\ m^3$ and a mass of 20 kg. Calculate its density in kg/m^3.

Solution

$$\text{density} = \frac{\text{mass}}{\text{volume}} = \frac{20\ kg}{0.025\ m^3} = 800\ kg/m^3$$

Measuring the density of a solid object

To measure the mass of the object you use an electronic balance.

To find the volume of a regular solid, measure its dimensions using the most appropriate ruler and then use the equation above.

Measuring the density of a liquid

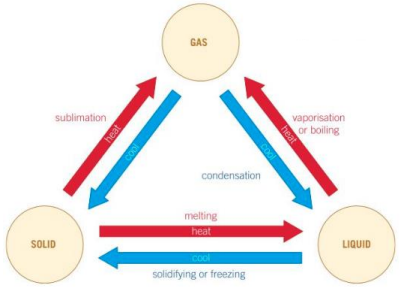
Use a measuring cylinder to measure the volume of a liquid.

Measure the mass of an empty beaker using a balance. Remove the beaker from the balance and pour the liquid from the measuring cylinder into the beaker. Use the balance again to measure the total mass of the beaker and the liquid. You can calculate the mass of the liquid by subtracting the mass of the empty beaker from the total mass of the beaker and the liquid.

6.2 States of matter

State	Flow	Shape	Volume	Density
solid	no	fixed	fixed	much higher than a gas
liquid	yes	fits container shape	fixed	much higher than a gas
gas	yes	fills container	can be changed	lower than a solid or a liquid

A substance can change from on state to another, changes of state are examples of **physical changes** because no new substances are produced.



Conservation of mass is when the mass of the substance is conserved when it changes state.

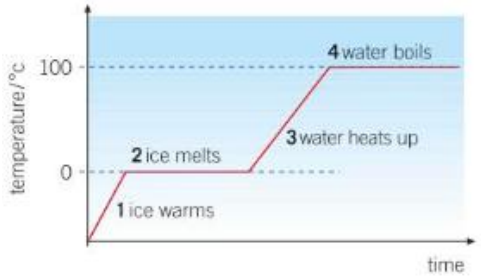
Kinetic theory of matter is the idea of how and why particles move in different states of matter.

6.3 Changes of state

Melting and **boiling points** are the temperatures at which a substance turns from a solid to a liquid, then liquid to gas.

Freezing and **condensing points** are the temperatures at which a substance turns from liquid to solid and gas to liquid.

Changing state is all to do with particles in a state gaining or losing energy.



Subject: Science	Term: 1	Topic: Year 10 Trilogy – Particle model of matter

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6.4 Internal energy

The energy stored by the particles of a substance is called the substance's **internal energy**. This is the energy of the particles that is caused by their individual motion and positions. Internal energy of the particles is the sum of:

- The kinetic energy they have due to their individual motions relative to each other, and
- The potential energy they have due to their individual positions relative to each other

Comparing the particles in solids, liquids and gases

In a solid, particles are arranged in a 3D structure

- Strong forces of attraction
- Each particle vibrates in a fixed position
- When heated the particles' energy stores increase and they vibrate more. Enough heat causes melting and the molecules break away.

In a liquid, the forces of attraction are weaker so

- The forces of attraction are strong enough to stop the particles moving away from each other completely at the surface.
- When a liquid is heated some particles gain enough energy to break away from the surface.

In a gas, the forces of attraction are so weak they are insignificant

- The particles move at high speeds in random directions

Figure 2 *Molecules in water*

6.5 Specific latent heat

Specific latent heat of fusion L_F, of a substance is the energy needed to change the state of 1 kg of a substance from a solid to a liquid.

$$\textbf{Specific latent heat of fusion}, L_F\ (\frac{J}{kg}) = \frac{energy, E\ (\textbf{joules}, J)}{mass, m\ (\textbf{kilogram}, kg)}$$

Specific latent heat of vaporisation L_V, of a substance is the energy needed to change the state of 1 kg of a substance from a liquid to vapour

$$\textbf{Specific latent heat of vaporisation}, L_V\ (\frac{J}{kg}) = \frac{energy, E\ (\textbf{joules}, J)}{mass, m\ (\textbf{kilogram}, kg)}$$

6.6 Gas pressure and temperature

Increasing the temperature of any sealed gas container increases the pressure of the gas inside it. This is because:

- The energy transferred to the gas when its heated increases the kinetic energy of its molecules. So the average kinetic energy of the gas molecules increases when the temperature of the gas is increased
- The average speed of the molecules increase when the kinetic energy increases, and the molecules on average hit the container surfaces with more force and more often. So the pressure of the gas increases.

Specific latent heat of vaporisation of water

Use a low-voltage heater (Figure 2) to bring water in an insulated beaker to the boil. The joulemeter reading and the top pan balance reading are then measured and then remeasured after a certain time (e.g., 5 minutes).

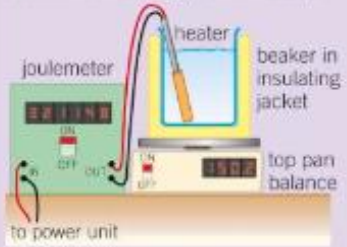

Figure 2 *Measuring the specific latent heat of vaporisation of water*

In this time:

- the energy supplied E = the difference between the joulemeter readings.
- the mass of water boiled away, m = the difference between the readings of the top pan balance.
- the specific latent heat of vaporisation of water is $L_v = \frac{E}{m}$.

Safety: This experiment will be demonstrated by your teacher. You should wear eye protection and stand behind a safety screen. Your teacher will need to take care with the hot immersion heater.

Subject: Geography Year 10 (GCSE AQA)	Term: 1	Topic: Paper 1, Coasts, River and Tectonic Hazards

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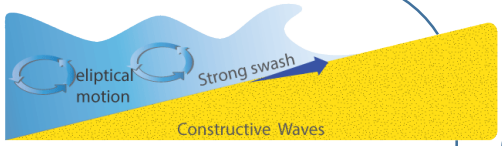
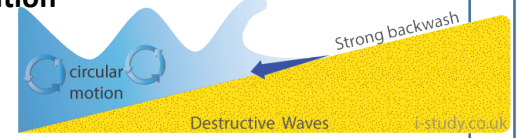
Question 3 - Paper 1 - Coasts





1. **Wave and beach formation**
- Destructive waves
- Constructive waves

2. Landforms from erosion, transportation and deposition
- Types of erosion
- Types of weathering
- Types of mass movements
- Types of transportation
- Longshore Drift
- Landform formation

3. Coastal Management
- Soft engineering
- Hard engineering
- Managed retreat
- Case Studies – Christchurch, Holderness Coast

Question 1- Paper 1 – Tectonic Hazards

1. **Causes of earthquakes and volcanoes**
- Plate Tectonics theory
- Distribution of earthquakes and volcanoes
- Process of plate boundaries

2. The effects and responses to tectonic hazards
- Primary effects
- Secondary effects
- Immediate and long term responses
- Case studies – rich and poor contrast of wealth on effects and responses

3. Management of tectonic hazards
- Reasons people live in hazardous locations
- Monitoring, prediction, protection and planning to reduce risk

Question 4 - Paper 1 - Rivers

1. **Long profile of a river**
- Upper course – landforms and processes
- Middle course – landforms and processes
- Lower course – landforms and processes
- Case study River Tees – source to mouth
- Long profile source to mouth
- Erosion types
- Transportation types
- Deposition causes and features

2. **Flooding and hydrographs**
- Causes of flooding
- Hydrographs
- Management of flood events
- Case studies – Flood management

Websites and further reading:

http://www.bbc.co.uk/schools/gcsebitesize/history/tch_wjec/usa19101929/2riseandfall1.shtml
https://www.bbc.com/bitesize/topics/zq2mn39/resources/1
AQA (1-9) Revision Guide America Opportunity and Inequality
AQA (1-9) Student book America Opportunity and Inequality
https://www.history.com/topics/great-depression/new-deal

Key vocabulary to define and learn:

Destructive wave, Constructive wave, swash, backwash, cave, arch, stack, stump, erosion, weathering, mass movement, coastal management, rivers, v-shaped valley, source, mouth, transportation, flooding, hydrograph, tectonic plates, earthquakes, volcanoes, destructive plate, constructive place, conservative plate, causes, effects, responses, LIC, HIC, 3Ps

Subject: History Year 10 (GCSE AQA)	Term: 1 and 2	Topic: Migration, Empires and the People

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Part 1: Conquered and Conquerors

Invasion
- Vikings and Anglo Saxons
- Reasons for Viking invasion
- Creation of the Danelaw
- Alfred and Wessex
- King Cnut
- Emma of Normandy
- North Sea Empire

A Norman Kingdom and Angevin Empire
- Relationship between England and France
- Henry II
- Invasion of Ireland
- Losses under King John

The Birth of English Identity
- Hundred Years War
- Impact of Hundreds Year War on England's development

Part 2: Looking West

Sugar and the Caribbean
- Piracy and Plunder
- The development of the Slave Trade
- John Hawkins
- Settlements in Barbados and West Indies
- Economic Impact
- Social Impact

Colonisation in North America
- Causes and Consequences of British colonisation
- Raleigh
- Jamestown
- Contact and relations with indigenous peoples
- Commodities
- Pilgrim Fathers
- Indentured servants
- The War of Independence
- Loss of American Colonies

Migrants to and from Britain
- Huguenot migration
- Highland clearances
- The Ulster Plantations

Part 3: Expansion and Empire

Expansion in India
- Causes and impact of British control
- East India Company
- Robert Clive
- Warren Hastings
- Indian Rebellion (1857)
- Social and Cultural impact of Empire on Britain and India
- Political and Economic impact of Empire on Britain and India

Expansion in Africa
- Causes and impact of British involvement
- Trade and Missionary Activity
- South Africa
- Egypt
- The Scramble for Africa
- Cecil Rhodes
- The Boer War (1899-1902)
- Imperial propaganda

Migrants to, from and within Britain
- Irish migration to Britain
- Jewish migration to Britain
- Transportation
- Migration to and within the Empire
- Migration of Asians to Africa
- Migration from rural to urban settings

Part 4: Britain in Twentieth Century

The End of the British Empire
- Impact of the First World War
- Impact of the Second World War
- Impact of Suez
- Nationalism and independence in India
- Nationalism and independence in Africa
- Gandhi
- Nkrumrah
- Kenyatta

The Legacy of the British Empire
- Windrush and Caribbean migrants
- Claudia Jones
- Migration from Asia and Africa
- Role of Amin in Uganda
- The Commonwealth
- The Falklands War

Britain's relationship with Europe
- Impact of Second World War
- Economic, social and cultural interaction
- The end of the cold war
- Membership of European Union
- European and non-European migration

Key vocabulary to define and learn:

Anarchy Autonomy British Caste Colony Constitutional Government Coup Danelaw Decolonisation Dissenters Emancipation Eugenics Guerrilla Home Rule Impeachment Imperial Indentured Servants Independence Loyalists Mandate System Manifest Destiny Martial Law Missionaries Multiculturalism Penal Colony Pogrom Reactionary Referendum Repatriation Single Market Subjugate Transportation Unification White Invincibility Windrush

Subject: Spanish	Terms: 1&2	

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'Ipsum quod faciendum est diutius durant'

Key Content 1 – Los deportes y el tiempo libre *(Sports and free time)*

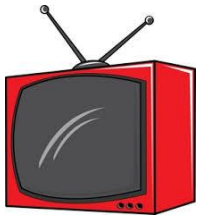
Understanding sports and free time activities.

Using the verbs 'jugar', 'hacer' and 'practicar'.

Talking about sport as part of a healthy lifestyle.

Using frequency and saying when you do something.

Key Content 2 – La tele y el cine *(TV and cinema)*



Saying what you like to watch on TV.

Reviewing TV/films.

Using three (or more) tenses together.

Comparing Spanish & British TV and Film

Saying how you prefer to watch films.

Key Content 3 – Suelo hacer... *(I usually...)*

Using infinitive structures.
Talking about pocket money
Talking about routine.

Key Content 4 – ¿Cómo eras de pequeño? *(What were you like when you were little?)*

Understanding present and imperfect used together.

Saying what you used to like to do in terms of sports.

Comparing present and past lifestyles

Key Content 5 – Temas del momento *(Trends of the moment)*

Talking about current fashions and trends

Discussing idiom and words with several meanings

Discussing social media, theatre, and different types of entertainment

Using the perfect tense and understanding how past tenses interact.

Comparing cultures and using authentic materials

Activities

Creating a free time diary

Writing a film/tv review

Creating a tv guide

Describing a role model and building a profile

Drafting an exercise programme

Websites and further reading:

Search on www.quizlet.com for 'Viva GCSE, M4' or 'tiempo libre'/ 'deportes'
Use the 4th module in your textbook and on www.pearsonactivelearn.com
Use www.spanishrevision.co.uk and practise tenses and sports tasks
Use www.languagesonline.org and complete grammar tasks

Key Content 6 – ¡Modelos a seguir!

(Role Models!)

Talking about nationality.
Talking about who inspires you.
Describing others.
Explaining and justifying opinions.
Talking about dates.

Key Vocabulary & Skills

Over the first two terms we will look at part of Theme 1 from the GCSE. We will continue the GCSE course. Some of the vocab and structures will be familiar from Y7-10. This is Module 4 in the orange VIVA AQA GCSE Book. **You have access to F & H levels online.**

We will review: Free time activities; present, preterite and future tenses; sports

We will learn: Complex past tenses; how past tenses interact; how to extend answers on familiar topics; radical changing verbs

We will apply GCSE skills of: Writing and speaking using several tenses together; reading and listening applying inference skills

La paga	Pocket money		
Mis padres me dan…	*My parents give me…*	saldo para el móvil	*credit for my phone*
Mi madre / padre me da…	*My mum / dad gives me…*	ropa / joyas / maquillaje	*clothes / jewellery / make-up*
…euros a la semana / al mes	*…euros a week / a month*	zapatillas de marca	*designer trainers*
Gasto mi paga en…	*I spend my pocket money on…*	videojuegos / revistas	*computer games / magazines*
También compro…	*I also buy…*		

Mis ratos libres	My free time		
las actividades de ocio	*leisure activities*	hacer deporte	*do sport*
Tengo muchos pasatiempos.	*I have lots of hobbies.*	ir al cine	*go to the cinema*
A la hora de comer…	*At lunchtime…*	leer libros / revistas / periódicos	*read books / magazines / newspapers*
Cuando tengo tiempo…	*When I have time…*	salir con amigos	*go out with friends*
Después del insti…	*After school…*	usar el ordenador	*use the computer*
Los fines de semana…	*At weekends…*	ver la tele	*watch TV*
Mientras desayuno / como…	*Whilst I have breakfast / lunch…*	Es divertido / relajante / sano	*It's fun / relaxing / healthy*
juego al billar / futbolín	*I play billiards / table football*	Soy creativo/a / perezoso/a / sociable	*I'm creative / lazy / sociable*
monto en bici / monopatín	*I ride my bike / I skateboard*	Soy adicto/a a…	*I'm addicted to…*
quedo con mis amigos	*I meet up with friends*	me ayuda a relajarme	*it helps me to relax*
voy de compras	*I go shopping*	me ayuda a olvidarme de todo	*it helps me to forget everything*
mi pasión es la música / la lectura	*my passion is music / reading*	me hace reír	*it makes me laugh*
Suelo…	*I tend to / I usually …*	necesito comunicarme / relacionarme con otra gente	*I need to have contact with other people*
descansar	*rest*		
escuchar música / la radio	*listen to music / the radio*		

La música	Music		
Me gusta el soul / el rap / el dance / el hip-hop / el pop / el rock / el jazz / la música clásica / electrónica	*I like soul / rap / dance/ hip-hop / pop / rock / jazz / classical / electronic music*	la batería / la flauta / la guitarra / la trompeta	*the drums / the flute / the guitar / the trumpet*
asistir a un concierto	*to attend a concert*	mi cantante preferido/a es…	*my favourite singer is…*
cantar (una canción)	*to sing (a song)*	un espectáculo	*a show*
tocar el teclado / el piano /	*to play the keyboard / the piano /*	una gira (mundial)	*a (world) tour*

El deporte	Sport
Soy / Era…	*I am / I used to be…*
(bastante / muy) deportista	*(quite / very) sporty*
miembro de un club / un equipo	*a member of a club / a team*
aficionado/a / hincha de…	*a fan of…*
un(a) fanático/a de…	*a … fanatic*
juego al…	*I play…*
jugué al…	*I played…*
jugaba al…	*I used to play…*
bádminton / baloncesto	*badminton / basketball*
béisbol / balonmano	*baseball / handball*
críquet / fútbol	*cricket / football*
hockey / ping-pong	*hockey / table tennis*
rugby / tenis / voleibol	*rugby / tennis / volleyball*
hago…	*I do…*
hice…	*I did…*
hacía…	*I used to do…*
baile / boxeo / ciclismo	*dancing / boxing / cycling*
deportes acuáticos	*water sports*
equitación / escalada	*horseriding / climbing*
gimnasia / judo	*gymnastics / judo*
kárate / natación	*karate / swimming*
patinaje sobre hielo	*ice skating*
piragüismo / remo	*canoeing / rowing*
submarinismo	*diving*
tiro con arco	*archery*
voy…	*I go…*
fui…	*I went…*
iba…	*I used to go…*
a clases de…	*to … classes*
de pesca	*fishing*
ya no (juego)…	*(I) no longer (play)…*
todavía (hago)…	*(I) still (do)…*
batir un récord	*to break a record*
correr	*to run*
entrenar	*to train*
jugar un partido contra…	*to play a match against…*
marcar un gol	*to score a goal*
montar a caballo	*to go horseriding*
participar en un torneo	*to participate in a tournament*
patinar	*to skate*
mi jugador(a) preferido/a es…	*my favourite player is…*
su punto culminante fue cuando…	*the highlight (of his/her career) was when…*
el campeón / la campeona	*the champion*
la temporada	*the season*

La tele	TV
(No) Soy teleadicto/a.	*I'm (not) a TV addict.*
Mi programa favorito es…	*My favourite programme is…*
un concurso	*a game / quiz show*
un programa de deportes	*a sports programme*
un reality	*a reality TV show*
un documental	*a documentary*
un culebrón / una telenovela	*a soap*
una comedia	*a comedy*
una serie policíaca	*a crime series*
el telediario / las noticias	*the news*
Me gustan las comedias.	*I like comedies.*
Es / Son…	*It is / They are…*
aburrido/a/os/as	*boring*
adictivo/a/os/as	*addictive*
divertido/a/os/as	*fun*
entretenido/a/os/as	*entertaining*
tonto/a/os/as	*silly*
informativo/a/os/as	*informative*
malo/a/os/as	*bad*
emocionante(s)	*exciting*
interesante(s)	*interesting*

Las películas	Films		
un misterio	*a mystery*	una película de animación	*an animated film*
una película de amor	*a love film*	una película de ciencia ficción	*a sci-fi film*
una película de terror	*a horror film*	una película de fantasía	*a fantasy film*
una película de acción	*an action film*	una película extranjera	*a foreign film*
una película de aventuras	*an adventure film*		

Nacionalidades	Nationalities		
americano/a	*American*	alemán/alemana	*German*
argentino/a	*Argentinian*	danés/danesa	*Danish*
británico/a	*British*	español(a)	*Spanish*
chino/a	*Chinese*	francés/francesa	*French*
griego/a	*Greek*	holandés/holandesa	*Dutch*
italiano/a	*Italian*	inglés/inglesa	*English*
mexicano/a	*Mexican*	irlandés/irlandesa	*Irish*
sueco/a	*Swedish*	japonés/japonesa	*Japanese*

Temas del momento	Trending topics		
he compartido…	*I have shared…*	cuenta la historia de…	*it tells the story of…*
he comprado…	*I have bought…*	trata de…	*it's about…*
he jugado…	*I have played…*	combina el misterio con la acción	*it combines mystery with action*
he leído…	*I have read…*	el argumento es fuerte / débil	*the plot is strong / weak*
he oído…	*I have heard…*	la banda sonora es buena / mala	*the soundtrack is good / bad*
he roto…	*I have broken…*	los actores…	*the actors…*
he subido…	*I have uploaded…*	los efectos especiales…	*the special effects…*
¿Has probado…?	*Have you tried…?*	los gráficos…	*the graphics…*
mi hermano ha descargado…	*my brother has downloaded…*	los personajes…	*the characters…*
se ha estrenado…	*…has been released.*	las animaciones…	*the animations…*
la nueva canción	*the new song*	las canciones…	*the songs…*
el último libro	*the latest book*	son guapos/as / guay	*are good looking / cool*
Ya lo/la/los/las he visto.	*I have already seen it/them.*	son estupendos/as / impresionantes	*are great / impressive*
No lo/la/los/las he visto todavía.	*I haven't seen it/them yet.*	son originales / repetitivos/as	*are original / repetitive*
acabo de ver / jugar a…	*I have just seen / played…*		

Ir al cine, al teatro, etc. / *Going to the cinema, theatre, etc.*

¿Qué vamos a hacer…	*What are we going to do…*
esta tarde?	*this afternoon / evening?*
esta noche?	*tonight?*
mañana / el viernes?	*tomorrow / on Friday?*
¿Tienes ganas de ir…	*Do you fancy going…*
a un concierto / un festival?	*to a concert / a festival?*
a un espectáculo de baile?	*to a dance show?*
al cine / al teatro / al circo?	*to the cinema / theatre / circus?*
¿Qué ponen?	*What's on?*
Es una película / obra de…	*It's a … film / play*
¿A qué hora empieza / termina?	*What time does it start / finish?*
Empieza / Termina a las…	*It starts / finishes at…*
Dos entradas para…, por favor.	*Two tickets for …, please.*
para la sesión de las…	*for the … showing / performance*
No quedan entradas.	*There are no tickets left.*
¿Hay un descuento para estudiantes?	*Is there a discount for students?*
Aquí tiene mi carné de estudiante.	*Here is my student card.*

¿En el cine o en casa? / *At the cinema or at home?*

(No) Me gusta ir al cine porque…	*I (don't) like going to the cinema because…*
Prefiero ver las pelis en casa porque…	*I prefer watching films at home because…*
el ambiente es mejor	*the atmosphere is better*
hay demasiadas personas	*there are too many people*
la imagen es mejor en la gran pantalla	*the picture is better on the big screen*
las entradas son muy caras	*the tickets are very expensive*
las palomitas están ricas	*the popcorn is tasty*
los asientos no son cómodos	*the seats aren't comfortable*
los otros espectadores me molestan	*the other spectators annoy me*
ponen tráilers para las nuevas pelis	*they show trailers for new films*
si vas al baño te pierdes una parte	*if you go to the toilet you miss part of it*
tienes que hacer cola	*you have to queue*
una corrida de toros	*a bull fight*
en directo	*live*

Los modelos a seguir / *Role models*

Admiro a…	*I admire…*
Mi inspiración / ídolo es…	*My inspiration / idol is…*
…es un buen / mal modelo a seguir	*…is a good / bad role model*
Un buen modelo a seguir es alguien que…	*A good role model is someone who…*
apoya a organizaciones benéficas	*supports charities*
recauda fondos para…	*raises money for…*
tiene mucho talento / éxito	*is very talented / successful*
trabaja en defensa de los animales	*works in defence of animals*
usa su fama para ayudar a los demás	*uses his / her fame to help others*
se emborrachan	*they get drunk*
se comportan mal	*they behave badly*
se meten en problemas con la policía	*they get into trouble with the police*
es amable / cariñoso/a / fuerte	*he/she is nice / affectionate / strong*
lucha por / contra…	*he/she fights for / against…*
la pobreza / la homofobia	*poverty / homophobia*
los derechos de la mujer	*women's rights*
los derechos de los refugiados	*the rights of refugees*
los niños desfavorecidos	*underprivileged children*
la justicia social	*social justice*
a pesar de sus problemas…	*despite his/her problems…*
ha batido varios récords	*he/she has broken several records*
ha creado…	*he/she has created…*
ha ganado … medallas / premios	*he/she has won … medals / awards*
ha sufrido varias enfermedades	*he/she has suffered several illnesses*
ha superado sus problemas	*he/she has overcome his/her problems*
ha tenido mucho éxito como…	*he/she has had lots of success as…*
siempre sonríe	*he/she always smiles*
solo piensa en los demás	*he/she only thinks of other people*