



Year 9 Knowledge Organiser

You will receive a Knowledge Organiser booklet on a termly basis, which includes revision for: English, Maths, Science, MFL, History and Geography

Knowledge Organiser instructions:

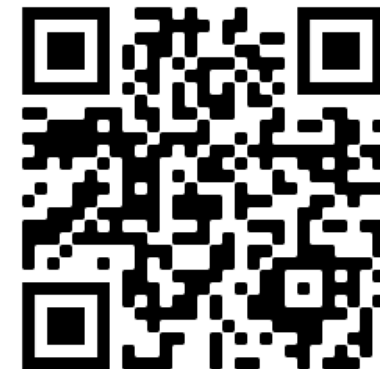
You will be set three pieces of homework per week and you should use the information from each topic to make a poster or a mind map. You will need to bring your work in to school and will be quizzed on each topic in class.

At the back of the knowledge organiser there are some suggested extra tasks that could be completed on top of the homework you will be set.

Email address for any queries:

For further support, scan the QR Code and it will take you to the school website:

English: Miss Pett	pettr035@sflt.org.uk
Maths: Mr Huston	hustj008@sflt.org.uk
Science: Mrs Gilbey	gilbl117@sflt.org.uk
History: Miss Gurung	gurua221@sflt.org.uk
Geography: Mr Butters	buttf095@sflt.org.uk
MFL: Miss Lara	larae006@sflt.org.uk



Preparing you for the Future

Homework schedule for the term:

Week	Subject and section	Revision technique
1 (B)	English, MFL and Maths Topic 1	Create a mind map for the information in Topic 1
2 (A)	Science, History and Geography Topic 1	Create a mind map for the information in Topic 1
3 (B)	English, MFL Maths Topic 2	Create a poster using the information in Topic 2
4 (A)	Science, History and Geography Topic 2	Create a poster using the information in Topic 2
5 (B)	English, MFL Maths Topic 3	Create a mind map for the information in Topic 3
6 (A)	Science, History and Geography	Create a mind map for Topic 3

Optional Extra Tasks

If you would like to spend more time working independently to develop excellence in your subjects. Here is a suggested timetable for you to follow. If you have forgotten your usernames and passwords for these apps, speak to your form tutor and they will be able to support you.

Monday	Spend 30 minutes on Spell Zone	Thursday	Complete 30 minutes DEAR Time using your library book
Tuesday	Complete 30 minutes on Sparx	Friday	Spend 30 minutes learning the key words from your subjects this week.
Wednesday	Spend 30 minutes completing revision using BBC Bitesize		

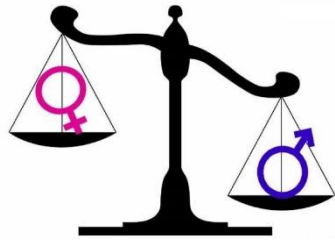


Your teacher will tell you which topic you should revise. Read and learn all the information in the topic, ready for a Quiz in lesson.

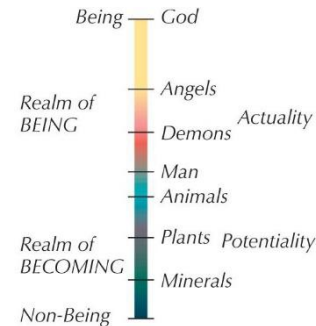
Topic 1: Context

Much Ado About Nothing was written in 1598, but the story takes place sometime around the 16th century - during the Italian Wars in Messina, Italy.

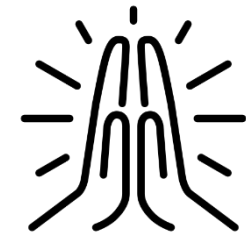
Gender: It was a patriarchal society. Women were ruled by men and were expected to be submissive, sexually pure before marriage and meek. The idea that a woman could challenge a man was unheard of and would have shocked audiences. Sexual relationships before marriage were seen as a sin and socially unacceptable, particularly for women.



Philosophy: Everyone believed that they had his or her place in life. This hierarchy was known as The Great Chain of Being. There was a strong social hierarchy and the audience would have understood that Don Pedro would have been a powerful man. Women were seen as inferior and had a lower social status.



Religion: People were deeply religious. Belief in God and heaven and hell affected people's choice and the way they behaved. 1599: Christian country split between Catholic and Protestant division after Henry VIII



Comedy genre: Much Ado About Nothing is generally considered one of Shakespeare's best comedies because it combines elements of robust hilarity with more serious links to honour, shame, and court politics.

This comedy is based on traditional Roman comic plots in which a pair of lovers are tricked into separation and overcome their foes to marry at the end of the play. Shakespeare weaves 2 plots into this model.

Elizabethan era: England ruled by Elizabeth I. Depictions of strong and resourceful females are common in literature.

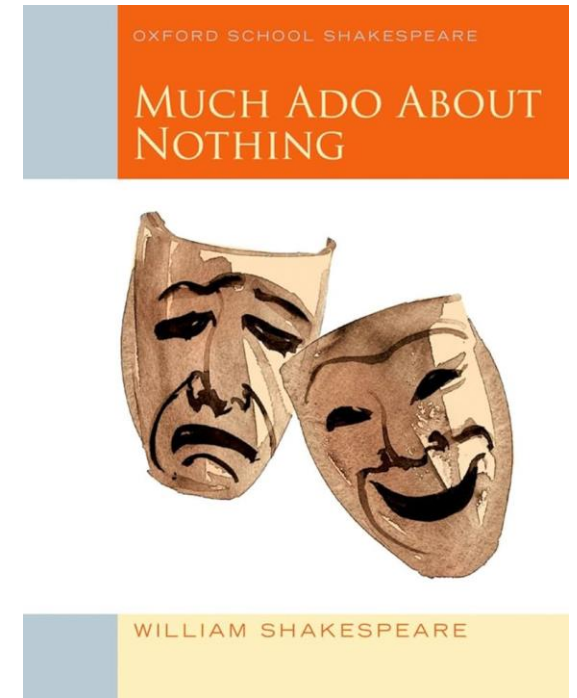




Your teacher will tell you which topic you should revise. Read and learn all the information in the topic, ready for a Quiz in lesson.

Topic 2: Terminology

<u>Terminology</u>	<u>Definition</u>
1. Motif	A theme, subject or idea that runs throughout the play.
2. Dramatic Irony	Where the audience are more aware of the action happening than the characters.
3. Soliloquy	An individual character in a play speaking their thoughts out loud to the audience when alone on the stage.
4. Protagonists	The main character who propels the action forward
5. Puns	joke exploiting the possible different meanings of a word
6. Prose	Ordinary language that people speak in
7. Juxtaposition	Placing contrasting ideas close together in a text
8. Aside	An individual character sharing their thoughts out loud to the audience and some characters on the stage, but not all of them
9. Extended Imagery	Used to create comedy and striking images relating to key characters
10. Hyperbole	Use of extremely exaggerated terms for emphasis





Your teacher will tell you which topic you should revise. Read and learn all the information in the topic, ready for a Quiz in lesson.

Topic 3: The protagonists

Beatrice

- Leonato’s niece. She is quick-witted and intelligent.
- Swears she will never marry but is tricked into falling in love with Benedick.
- Loyal, feisty, quick witted, assertive, unconventional, outspoken and tamed



Quotes: “I had rather hear my dog bark at a crow than a man swear he loves me.” **Beatrice, Act 1, Scene 1** - Beatrice is sceptical or dismissive of professions of love. She implies that she would prefer the sound of her dog barking at a crow, which is generally considered an unpleasant noise, over hearing a man swear that he loves her.

“I wonder that you will still be talking Signor Benedick: nobody marks you” **Beatrice, Act 1:1** – Dismissive tone and insult – Beatrice is putting Benedick in his place and letting him know that he is of little interest to her or anyone else.

“And, Benedick, love on. I will requite thee, taming my wild heart to thy loving hand.” **Beatrice, Act 3, Scene 1** - Beatrice is addressing Benedick and expressing her willingness to reciprocate his love.

Benedick

- A lord, soldier and friend of Don Pedro. Known for his quick wit. Loves Beatrice but does not know it.
- He shifts allegiances and supports Hero after her shaming.
- Obstinate, cynical, misogynistic, loyal and honourable



Quotes: “It is certain I am loved of all ladies, only you excepted. And I would I could find it in my heart that I had not a hard heart, for truly I love none.” **Benedick, Act 1, Scene 1** - Benedick is claiming that he is loved by all ladies except Beatrice. He expresses a wish that he could find it in his heart not to have a hard or unyielding heart, as he confesses that he truly loves none.

“I will be horribly in love with her.” **Benedick, Act 2, Scene 3** - Benedick is expressing a change in his attitude towards love, specifically in relation to Beatrice.

“I am not as I have been.” **Benedick, Act 3, Scene 2** - This line reflects Benedick’s acknowledgment of a change or transformation within himself.



Vocabulary	Wider Research	Apply
<ol style="list-style-type: none">1. Antagonist2. Language3. Betray4. Love5. Chastity6. Loyalty7. Deception8. Disguise9. Power10. Faithful11. Unfaithful12. Protagonist13. Friendship14. Romance15. Gender16. Soliloquy17. Honour18. Status19. Humiliation20. Villain	<ol style="list-style-type: none">1. Much Ado About Nothing – Context https://study.com/academy/lesson/much-ado-about-nothing-historical-context-background.html2. Sparknotes: https://www.sparknotes.com/shakespeare/muchado/context/3. Characters: https://www.youtube.com/watch?v=Z1a_PQEjtk4. Read the script: https://shakespeare.mit.edu/much_ado/full.html5. Quiz yourself: https://www.sparknotes.com/shakespeare/muchado/quiz/	<ol style="list-style-type: none">1. Re-create The Great Chain of Being by drawing each level2. Create a family tree of the families in the play.3. Create a diagram of the Elizabethan hierarchy4. Write a poem that summarises the life and times of Shakespeare5. Write a diary entry of Don Pedro6. Write a letter to Hero explaining the plan.7. Create some song lyrics about love and conflict8. Create flash cards for the key quotations of Benedick and Beatrice9. Draw the structure of the play as a narrative arc



Your teacher will tell you which topic you should revise. Read and learn all the information in the topic, ready for a Quiz in lesson.

Topic 1: Constructions and Translations

Congruency

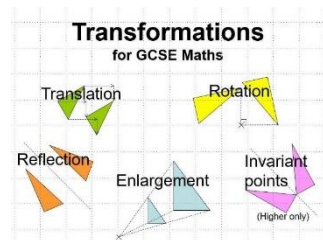
If two shapes are exactly the same shape and size, they are congruent. Reflections, rotations and translations all produce images that are congruent to the original object. For shapes that are congruent, all corresponding sides are equal and all the corresponding angles are equal. Congruent triangles come in three different styles. SSS, SAS and ASA. Congruency occurs following one of these four conditions:

1. when all sides are the same (SSS)
2. when two sides and an angle are the same (SAS)
3. when two angles and one side is the same (ASA)
4. when both triangles have a right angle, an equal hypotenuse and another equal side (RHS)

Rotational Symmetry

A 2D shape has rotational symmetry if it can be rotated about a point to look exactly the same in a new position. The order of rotational symmetry is the number of different positions in which the shape can look the same when it is rotated around a point, 360° . One way to find the order of rotational symmetry is to trace the shape and count the number of times the shape looks the same as you turn the tracing papers through one complete turn.

Transformations



A transformation changes the position or size of a shape. The original shape is called the object and the transformed shape is called the image. There are four basic ways of transforming 2D shapes: translation, reflection, rotation and enlargement.

A **reflection** transforms a shape so that it becomes a mirror image of itself. It is important to note that the reflection of each point in the object is perpendicular, at 90° , to the mirror line, the object and its image will always be congruent. Reflections may have points which are invariant, meaning the point doesn't change. Examples of invariance occur when the mirror line is attached to part of the original image.

A **rotation** transforms a shape to a new position by turning it about a fixed point called the centre for rotation. The direction of turn of the angle of rotation is expressed as either clockwise or anticlockwise. When a shape is rotated it is always congruent to the original shape.

A **translation** is the 'movement' of a shape from one position to another without reflecting or rotating it. It is sometimes called a glide as it appears to glide from one place to another, every point of the shape moves in the same direction and through the same distance. Translations are described via vectors, a vector is represented by the combination of the horizontal shift followed by the vertical shift. The object and its image will always be congruent. The top number in a vector describes the horizontal movement, to the right is positive and the left is negative. The bottom number in the vector describes the vertical movement, upwards is positive and down is negative.

An **enlargement** is the only transformation which does not produce congruent shapes, it changes the size of a shape to give a similar image. It always has a centre of enlargement and a scale factor. Every length of the object will be multiplied by the same scale factor to find the side lengths of the image.



Your teacher will tell you which topic you should revise. Read and learn all the information in the topic, ready for a Quiz in lesson.

Topic 2: Sequences

Nth term of arithmetic sequences

An arithmetic sequence is an ordered set of numbers that have a common difference between each consecutive term. For example in the arithmetic sequence 3, 9, 15, 21, 27, the common difference is 6. An arithmetic sequence can be known as an arithmetic progression. The difference between consecutive terms in an arithmetic sequence is always the same. If we add or subtract by the same number each time to make the sequence, it is an arithmetic sequence. The term-to-term rule tells us how we get from one term to the next. To find the nth term, first calculate the common difference, d . Next multiply each term number of the sequence ($n = 1, 2, 3, \dots$) by the common difference.

This will give you the n th term in the form $an + b$ where a and b are unknown values that we will have calculated.

Non-linear sequences

The difference between a Linear Sequence and a non-linear sequence is that a linear sequence increases by addition or subtraction and the same amount each time. Non-linear Sequences do not increase by a constant amount for example quadratic, geometric and Fibonacci. The Fibonacci sequence is a set of integers (the Fibonacci numbers) that starts with a zero, followed by a one, then by another one, and then by a series of steadily increasing numbers. The sequence follows the rule that each number is equal to the sum of the preceding two numbers.

Inequalities

A relationship between two expressions or values that are not equal to each other is called inequality. The process to solve inequalities is the same as the process to solve equations, which uses *inverse operations* to keep the equation or inequality balanced. Instead of using an equals sign, however, the inequality symbol is used throughout.

The Fibonacci Sequence

1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377...

$$1+1=2$$

$$1+2=3$$

$$2+3=5$$

$$3+5=8$$

$$5+8=13$$

$$8+13=21$$

$$13+21=34$$

$$21+34=55$$

$$34+55=89$$

$$55+89=144$$

$$89+144=233$$

$$144+233=377$$

Solving Inequalities

Solving inequalities is similar to solving equations, but where an equation has one unique solution, an inequality has a range of solutions.

To solve an inequality we calculate the values that an unknown variable can be in that inequality.

Example $2x + 1 < 9$
 $2x < 8$
 $x < 4$

Multiplying or dividing by a negative number changes the direction of the inequality.

Example $1 - 2x < 9$
 $-2x < 8$
 $x > -4$



Your teacher will tell you which topic you should revise. Read and learn all the information in the topic, ready for a Quiz in lesson.

Topic 3: Expressions and formulae

Solving equations

An equation is a mathematical expression that contains an equals sign. There are two sides of an equation, the left is equal to the right. We can solve equations to find out the variables (unknown value) that satisfy the equation. The example on the right shows how to solve an equation with a bracket. First we need to expand the bracket by multiplying. Next we need to subtract the 6 from both sides to leave just the variable on one side, in this case 'x'. As we want to find the value of 'x' we need to divide by 3 on both sides which will give us the value of 4.

$$\begin{aligned}
 3(x + 2) &= 18 \\
 3x + 6 &= 18 \\
 \quad -6 \quad &\quad -6 \\
 3x &= 12 \\
 \quad \div 3 \quad &\quad \div 3 \\
 x &= 4
 \end{aligned}$$

Here are some things we can do to solve an equation:

- Add or Subtract the same value from both sides.
- Clear out any fractions by Multiplying every term by the bottom parts.
- Divide every term by the same non-zero value.
- Combine Like Terms.
- Factoring.
- Expanding (the opposite of factoring) may also help.

Substituting in expressions

Substitution means replacing variables in an algebraic expressions with numerical or algebraic values. An example of this can be seen on the right, we are given an expression and a value for 'b'. An expression is a mathematical statement which consists of numbers, variables and an operation. When we substitute b with 10 this now becomes the equation $3 \times 10 + 4 = 30$.

Example

Find the value of $3b + 4$ when $b = 10$

$3b$ means $3 \times b = 3 \times 10 = 30$

So $3b + 4 = 30 + 4 = 34$

$a^m \times a^n = a^{m+n}$

$a^m \div a^n = a^{m-n}$

$a^0 = 1$

$(a^m)^n = a^{m \times n} = a^{mn}$

Index laws and brackets

Index laws are the rules for simplifying calculations or expressions involving powers of the same base number. When multiplying two powers of the same base number we add the two indices together. When dividing two powers of the same base together we subtract the indices. When a power of a base number is within a bracket and the bracket has a power, the two indices are multiplied together. See the example on the left.

Expanding double brackets

Writing two brackets next to each other means that they need to be multiplied. A method to expand double brackets is called FOIL, which stands for first, outer, inner and last. This is the order that will be used when multiplying the terms. The first term in each bracket is multiplied together then the two outer terms are multiplied. This is followed by multiplying the two inner terms and finally the two last terms. Please see an example below:

$(a + 2)(a + 3)$ First - $a \times a = a^2$ Outer - $a \times 3 = 3a$ Inner - $2 \times a = 2a$ Last - $2 \times 3 = 6$

Answer

$= a^2 + 3a + 2a + 6 = a^2 + 5a + 6$



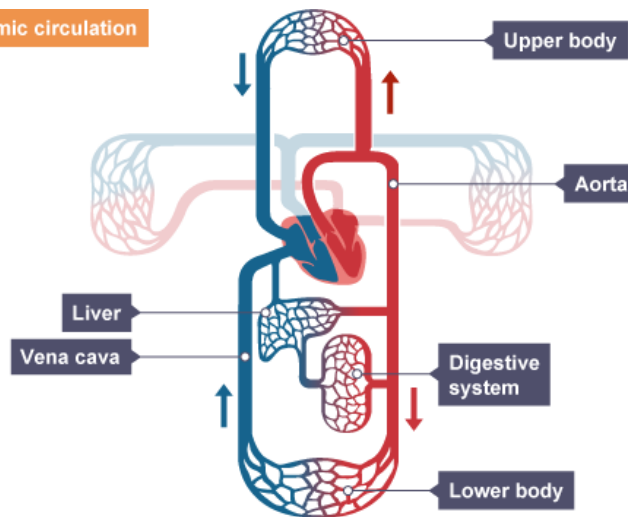
Vocabulary	Wider Research	Apply
Congruent Symmetry Translation Enlargement Rotation Reflection Vector Arithmetic Difference Linear Inequality Term Nth term Term to term rule Equation Substitution Formulae Subject Expand	<p>Topic 1</p> <ul style="list-style-type: none">• https://www.bbc.co.uk/bitesize/guides/z9wjng8/revision/1• https://www.bbc.co.uk/bitesize/guides/zkw2pv4/revision/3 <p>Topic 2</p> <ul style="list-style-type: none">• https://corbettmaths.com/2013/11/13/describingrules/• https://corbettmaths.com/wp-content/uploads/2021/09/nth-term-Exercise-288-289.pdf• https://corbettmaths.com/2018/12/17/inequalities-2/ <p>Topic 3</p> <ul style="list-style-type: none">• https://corbettmaths.com/2012/08/24/solving-equations/• https://corbettmaths.com/2012/08/20/substitution-into-expressions/• https://corbettmaths.com/2013/12/23/changing-the-subject-video-7/• https://corbettmaths.com/2013/12/23/expanding-two-brackets-video-14/	<p>Topic 1</p> <ul style="list-style-type: none">• https://corbettmaths.com/2019/09/06/transformations-of-graphs-practice-questions/ <p>Topic 2</p> <ul style="list-style-type: none">• https://corbettmaths.com/wp-content/uploads/2020/05/Sequences.pdf• https://corbettmaths.com/wp-content/uploads/2021/09/nth-term-Exercise-288-289.pdf• https://corbettmaths.com/wp-content/uploads/2020/10/Inequalities-textbook.pdf <p>Topic 3</p> <ul style="list-style-type: none">• https://corbettmaths.com/wp-content/uploads/2020/10/Equations-pdf.pdf• https://corbettmaths.com/wp-content/uploads/2013/02/substitution-pdf2.pdf• https://corbettmaths.com/wp-content/uploads/2013/02/changing-the-subject-pdf1.pdf• https://corbettmaths.com/wp-content/uploads/2013/02/expanding-two-brackets-pdf2.pdf



Your teacher will tell you which topic you should revise. Read and learn all the information in the topic, ready for a Quiz in lesson.

Topic 1: Systems in the Human Body

Systemic circulation



Respiration

- Respiration is a reaction in which energy stored in compounds such as glucose is released through cell reactions.
- The energy from respiration is used for all cell reactions in the body including digestion and muscle movement.
- There are two methods of respiration, aerobic respiration and anaerobic respiration.
- Aerobic respiration uses oxygen to release a lot of energy stored in glucose, whereas anaerobic respiration does not utilise oxygen, releasing less energy. Aerobic respiration is represented by the equation: $\text{Glucose (C}_6\text{H}_{12}\text{O}_6) + \text{Oxygen (6O}_2) \rightarrow \text{Carbon dioxide (6CO}_2) + \text{Water (6H}_2\text{O)}$.
- Anaerobic respiration is represented by the equation: $\text{Glucose} \rightarrow \text{Lactic acid (Lactate)}$. Aerobic respiration is an oxidation reaction which occurs mainly in the mitochondria of cells, while anaerobic respiration is an incomplete oxidation reaction that occurs in the cytoplasm.

Circulatory System

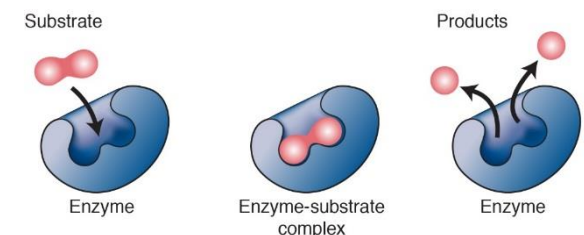
- The circulatory system is a method of transport in the body and is made up of the heart, blood vessels and blood. The heart pumps blood around the body through muscle contraction.

- Deoxygenated blood enters the heart through the Vena Cava and fills the compartment known as the right atrium.
- The right atrium will contract forcing the deoxygenated blood through a valve into the right ventricle.
- The valve the blood passed prevents back flow in the heart. In the right ventricle, the compartment will contract forcing blood through another valve into the pulmonary artery, which transports the deoxygenated blood to the lungs for gaseous exchange.
- Once oxygenated at the lungs, the blood is transported back to the heart and enters through the pulmonary vein into the left atrium.
- The left atrium contracts forcing blood to the left ventricle, which will contract forcing blood into the aorta to transport the oxygenated blood to the rest of the body.
- The left side of the heart is made up much thicker muscle because it must move the blood through the aorta with enough force to circulate around the body.

Digestive System

- The digestive system breaks down complex structures into simple molecules.
- Digestion occurs using enzymes, biological molecules that facilitate a reaction in a substrate without being used up themselves. Enzymes end in -ase.
- Different enzymes break down different substrates, carbohydrase breaks starch into glucose, protease breaks proteins into amino acids and lipase breaks fats into fatty acids and glycerol.
- Unwanted amino acids are converted to urea by the liver and excreted as urine by the kidneys.

Mechanism of enzyme activity



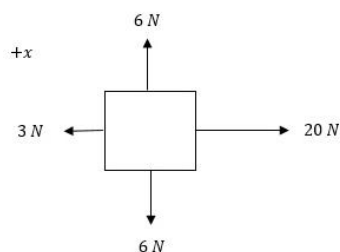


Your teacher will tell you which topic you should revise. Read and learn all the information in the topic, ready for a Quiz in lesson.

Topic 2: Forces

Vector or Scalar, Contact or Non-Contact

- Physical quantities are measured using a scale, two forms: Vector Quantities and Scalar Quantities.
- Scalar and vector quantities have magnitude (have an amount) but vector quantities also have direction.
- Forces can be contact or non-contact. Forces such as friction are contact as it requires two surfaces to be moving past each other. Gravity is a non-contact force as it acts upon an object even though there is no physical interaction between the force and object.



Free Body Diagrams

- Free body diagrams are used to demonstrate different forces acting upon an object.
- Free body diagrams will show the forces acting from central point.
- The downwards arrow usually represents the force weight, the upwards arrow reaction force or up thrust and the left and right arrows demonstrating either thrust or air resistance/friction.

Work Done

- Work done is the energy transferred to an object via a force to change the speed, direction or shape of that object.
- Work done is calculated using the equation: Work done = Force (N) x Distance (m).
- As work done is the energy transferred to an object, work done is measured in Joules.

Weight

- Weight is the downwards force acting upon an object, it can be calculated using the equation: Weight = Mass x Gravitational field strength.
- The gravitational field strength of Earth is 9.8N/kg, meaning for every 1kg of mass, 9.8N of force is exerted down as weight.
- Gravitational field strength can vary between the different planets and other celestial objects in the universe. For example, the gravitational field strength of the moon is 1.6N/kg, meaning a person with a mass of 70kg exerts a weight of 112N on the moon. This same mass will exert a force of 686N on Earth.

Elastic Potential Energy

- Work is done when a spring is compressed or extended, transferring energy to the spring.
- The work done to the spring will be equal to the elastic potential energy stored within the spring, which can be calculated using the equation: Elastic potential energy = 0.5 x Spring constant x (Extension)².
- Elastic potential energy will be measured in joules, the spring constant is measured in Newtons per metre (N/m) and extension is measured in m.
- A spring can only be extended by a specific amount of force until it reaches an extension from which it will not return to its original shape.
- This is known as the limit of proportionality. If a spring has a spring constant of 3N/m and is extended by 50cm the elastic potential energy stored in the spring can be calculated using: $0.5 \times 3\text{N/m} \times (0.5\text{m})^2 = 0.375\text{J}$.

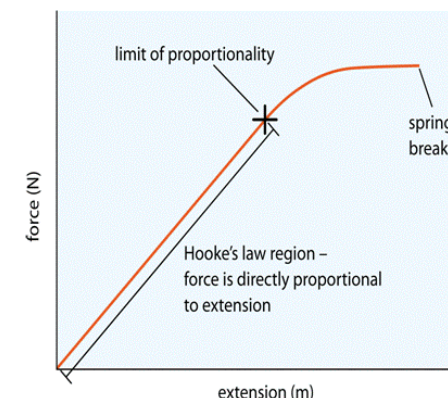
Scalar Quantities

length, area, volume
speed
mass, density
pressure
temperature
energy, entropy
work, power



Vector Quantities

displacement
velocity
acceleration
momentum
force
lift, drag, thrust
weight



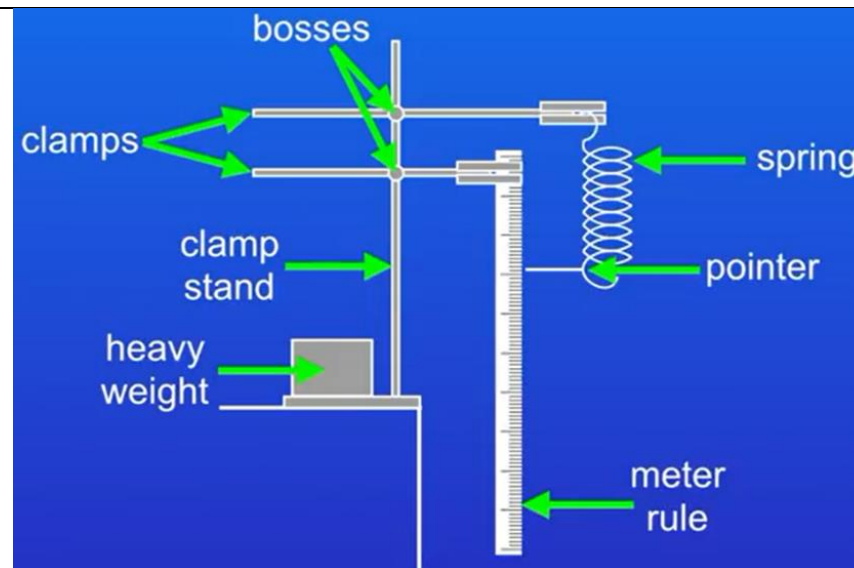


Your teacher will tell you which topic you should revise. Read and learn all the information in the topic, ready for a Quiz in lesson.

Topic 3: Forces and Extension

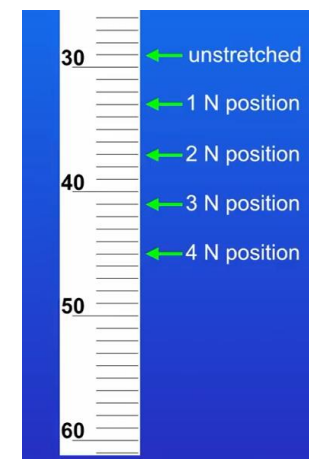
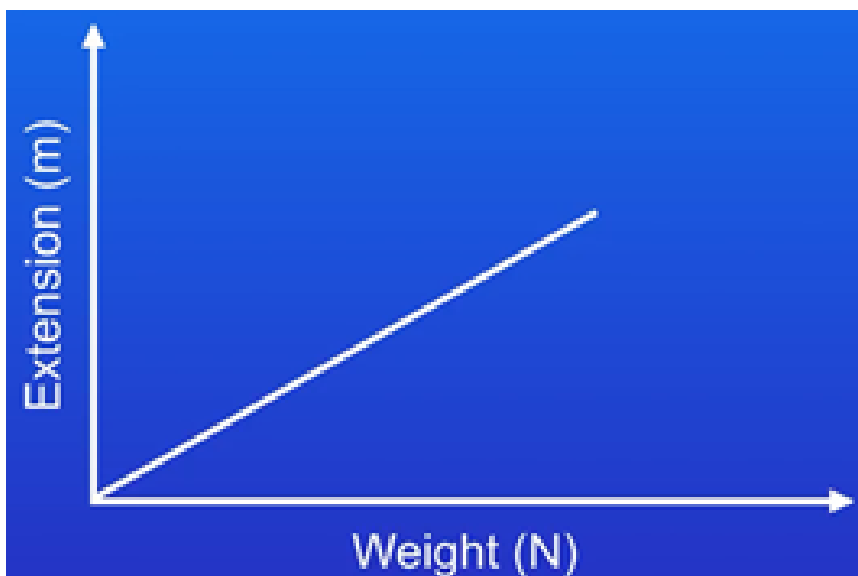
Practical Method

- The aim of this required practical is to investigate the relationship between the force exerted on a spring and the extension of a spring.
- To conduct this experiment a clamp stand must first be set up with two clamps at varying levels.
- On the highest clamp, a spring is attached, with a pointer at the bottom of the spring and on the lower clamp a metre ruler attached.
- The top of the spring must be in line with the zero mark of the metre rule so the level of extension can be accurately recorded. The point on the spring will show the distance moved as the spring extends.
- The initial length of the spring where the pointer is indicating must be recorded to identify this extension. A heavy weight can also be placed onto the clamp stand to prevent the equipment toppling over the bench.
- One Newton (1N) weights can then be added to the spring to cause extension and the distance shown on the metre rule recorded.
- After each 1N weight is added the extension of the spring can be identified by recording the



new length of the spring and subtracting the initial length of the spring.

- The data obtained from this investigation used to plot a graph detailing the weight in Newtons along the x-axis and the extension of the spring (m) along the y-axis.
- The second part to this practical is to identify the weight of an object based upon the extension of the spring, utilising the graph produced earlier.
- The same method of measuring spring extension will be used as before, the unknown weight is attached to the spring and the extension measured from the metre ruler.
- This extension will be identified on the graph and a line drawn parallel to the x-axis from the measured extension until the line of best fit is intercepted.
- A second line will be drawn parallel to the y-axis from this intercept to identify the weight of the unknown object.





Vocabulary	Wider Research	Apply
<ol style="list-style-type: none"> 1. Force 2. Vector 3. Scalar 4. Magnitude 5. Resistance 6. Friction 7. Gravity 8. Weight 9. Newton 10. Joules 11. Exerted 12. Proportionality 13. Compression 14. Extension 15. Newton 16. Relationship 17. Accuracy 18. Parallel 19. Intercept 20. Equipment 21. Enzyme 22. Vessel 23. Substrate 24. Ventricle 25. Atrium 26. Contraction 27. Aerobic 28. Anaerobic 29. Respiration 30. Deoxygenated 	<p>Work done – https://www.bbc.co.uk/bitesize/guides/z8pk3k7/revision/1</p> <p>Forces – https://www.bbc.co.uk/bitesize/guides/zq94y4j/revision/1</p> <p>Investigating force and weight – https://www.youtube.com/watch?v=jQAt3e6Bz7U</p> <p>Required Practical Simulation – https://phet.colorado.edu/sims/html/masses-and-springs/latest/masses-and-springs_en.html</p> <p>Digestive System - https://www.bbc.co.uk/bitesize/guides/zxcrsrd/revision/1</p> <p>Circulatory System - https://www.bbc.co.uk/bitesize/guides/zhnk7ty/revision/1</p>	<p><u>Forces and Energy Change:</u></p> <ol style="list-style-type: none"> 1. Draw a free body diagram to show a box with a weight of 50N and a reaction force of 50N. The box is being pushed to the right with a force of 70N and there is an opposite frictional force of 20N. 2. Calculate the resultant force pushing the box above to the right. 3. Compare the weight of a person on Earth and on the moon, who has a mass of 60kg. <p><u>Hooke's Law Required Practical:</u></p> <ol style="list-style-type: none"> 1. Explain the importance of a pointer to investigate the relationship between force and spring extension. 2. Explain what is meant by the limit of proportionality and predict the change in the shape of a spring past this limit <p><u>Systems in the Human Body:</u></p> <ol style="list-style-type: none"> 1. Create a flow chart to show the movement of food through the digestive system. Include the function of each digestive organ. 2. Create a flow chart to show the moment of blood through the circulatory system. Include labels for deoxygenated and oxygenated blood. 3. Create a Venn diagram to compare anaerobic and aerobic respiration. What are the similarities? What are the differences?



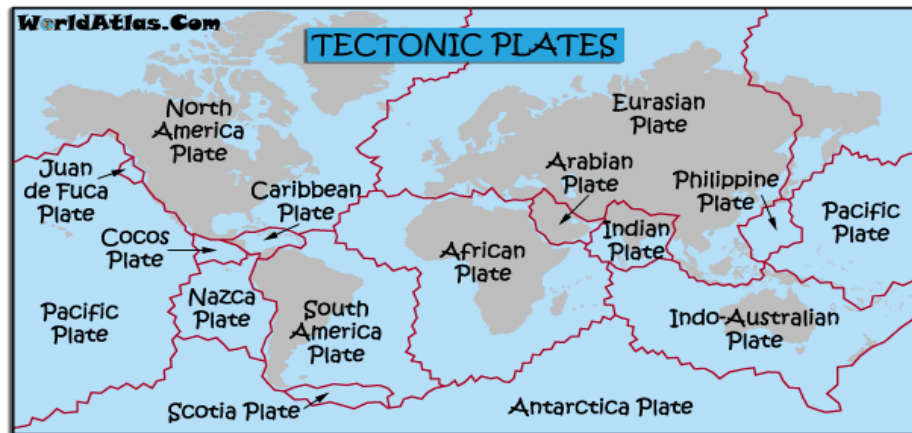
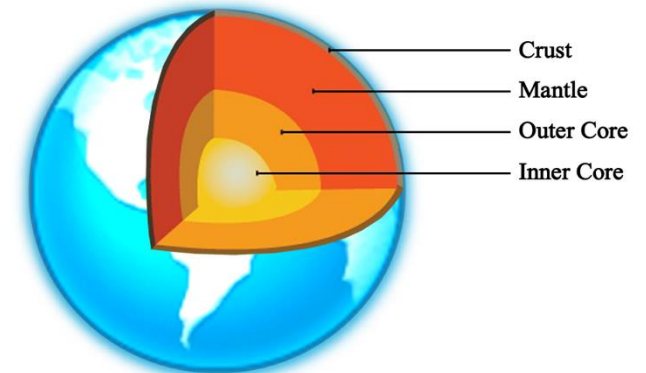
Your teacher will tell you which topic you should revise. Read and learn all the information in the topic, ready for a Quiz in lesson.

Topic 1: Tectonic plates

Tectonic plates are pieces of the rocky outer layer of the Earth known as the crust. These plates are constantly moving, and volcanoes and earthquakes are found at plate boundaries.

The Earth has four main layers - the inner core, the outer core, the mantle and the crust.

- The inner core is 5,500°C - extremely hot. It is a very dense solid made from iron and nickel.
- The outer core is 2,000 km thick and is a liquid.
- The mantle is semi-molten and about 3,000 km thick.
- The crust is the rocky outer layer. It is thin compared to the other sections, approximately 5 to 70 km thick. If the Earth was scaled down to the size of an apple, the crust would be about the thickness of the apple skin. The crust is made up of pieces called plates. There are two types of crust: oceanic and continental crust. The oceanic crust is found under the sea and is thinner and more dense than the continental crust.



All of the world's plates are split apart by plate boundaries. Every single continent sits on its own tectonic plate. The plates are generally known as the continent that is most prominent on top of the plate itself. We, in the UK are far away from a plate boundary but we sit on the Eurasian plate, due to being in the continent of Europe. You can see that the plates act as a puzzle, with the world fitting together from these different pieces (plates). Different landforms and impacts are created when these move. You will learn about these in section 2.



Your teacher will tell you which topic you should revise. Read and learn all the information in the topic, ready for a Quiz in lesson.

Topic 2: Types of plate boundary

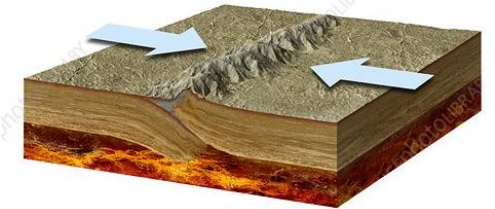
The movement of tectonic plates create three types of tectonic plate boundaries: destructive, where plates move into one another; constructive, where plates move apart; and conservative, where plates move sideways in relation to each other. They move at a rate of one to two inches (three to five centimetres) per year.

Destructive Boundaries

A destructive plate boundary usually involves an **oceanic** plate and a **continental** plate. The plates move **towards** one another and this movement can cause earthquakes. As the plates collide, the oceanic plate is forced beneath the continental plate. This is known as subduction. This happens because the oceanic plate is denser (heavier) than the continental plate.

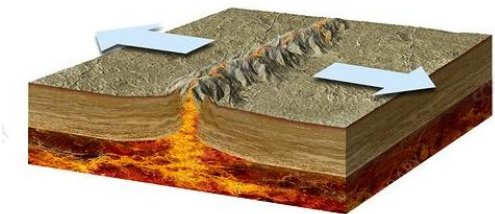
When the plate sinks into the mantle it melts to form magma. The pressure of the magma builds up beneath the Earth's surface. The magma escapes through weaknesses in the rock and rises up through a **composite volcano**. The volcanic eruptions are often violent, with lots of steam, gas and ash.

If two continental plates collide, neither can sink and so the land buckles upwards to form fold mountains – this is called a **collision boundary**. This movement can cause large earthquakes and was the process that created the Himalayan mountains, which contains Mount Everest, the tallest mountain in the world.



Constructive Boundaries

At a constructive plate boundary, the plates move **apart** from one another. When this happens the magma from the mantle rises up to make (or **construct**) new land in the form of a **shield volcano**. The movement of the plates over the mantle can cause earthquakes.



Conservative Boundaries

At a conservative plate boundary, the plates move past each other or are side by side moving at different speeds. As the plates move, friction occurs and plates become stuck. Pressure builds up because the plates are still trying to move. When the pressure is released, it sends out huge amounts of energy, causing an earthquake. The earthquakes at a conservative plate boundary can be very destructive as they occur close to the Earth's surface. There are no volcanoes at a conservative plate margin.





Your teacher will tell you which topic you should revise. Read and learn all the information in the topic, ready for a Quiz in lesson.

Topic 3: Tectonic hazards

Plate movements cause different impacts on the planet:

- When tectonic plates pull apart different land masses are created from magma releasing from underground, forming new rock
- Mountains and volcanoes are formed when tectonic plates push together, pushing the continental rock upwards.
- When tectonic plates collide an earthquake can happen due to the energy release from the collision.
- When an earthquake occurs, the vibrations and energy released come from the epicentre, which is the centre of the earthquake.
- Earthquakes that happen in the oceanic crust can cause Tsunamis, which cause great danger to human life.
- Tectonic hazards are measured in magnitude.
- Tectonic hazards are rated on the Richter scale, with the greater the magnitude number, the worse the hazard is and impact it can have on the world.

The following are impacts of tectonic movements:

Social: Anything to do with people

Economic: Anything to do with money

Environmental: Impact on the planet

Political: Decision making from politicians

Fukushima 2011 Case Study:

Case Study: In 2011 an earthquake struck off the coast of Japan which led to a Tsunami. Many people lost their homes and died (social) and many businesses were destroyed (economic). The Japanese government had to spend lots of money (economic) to repair the damage caused (environment) with a nuclear disaster happening due to damage to a power plant. People have to remember the 3p's in tectonic zones so they are ready to survive.

The three P's help people to survive in the event of a tectonic hazard:

- Plan
- Prevent
- Protect



[This Photo](#) by Unknown Author is licensed under [CC BY-SA](#)



Vocabulary	Wider Research	Apply
<ol style="list-style-type: none">1) Tectonic2) Volcano3) Mountain4) Fukushima5) Impact6) Economic7) Social8) Disaster9) Boundary10) Plate11) Movement12) Destruction13) Death14) Landscape15) Composite16) Shield17) Nuclear18) Tsunami19) Earthquake20) Richter21) Scale22) Measurement23) Prevent24) Protection25) Plan26) Continent27) Oceanic28) Geology	<p>What is plate tectonics https://www.livescience.com/37706-what-is-plate-tectonics.html</p> <p>Fukushima case study https://news.un.org/en/story/2011/03/368932-japan-un-stepping-assistance-wake-quake-and-tsunami</p> <p>Structure of The Earth https://www.natgeokids.com/uk/discover/geography/physical-geography/structure-of-the-earth/</p>	<p><u>Get creative with what you know!</u></p> <ol style="list-style-type: none">1. Create a poster about the Fukushima disaster in 2011. What happened? What tectonic processes caused this to happen? What was the impact on people? What was the impact on business? What was the long term impact on the environment?2. Create a series of diagrams for the different types of plate boundary. Annotate these in lots of detail showing how each forms and what types of landscape are formed around them.3. Create a paper mâché Planet Earth showing the different layers and the different tectonic plates on the surface. <p><u>Questions to answer:</u></p> <ol style="list-style-type: none">1. What is a tectonic plate?2. What happens at plate boundaries?3. What are the risks of living near a plate boundary?4. Provide a recent example of a tectonic disaster.5. What can humans do to lower the risks faced by living near a tectonic plate?6. How is a mountain formed?7. Which plate boundary is the USA closest to?8. What plate boundaries are close to Eurasia?9. Why is Japan vulnerable to Earthquakes?10. Why do we find lots of Volcanoes in the Pacific Ocean?



Your teacher will tell you which topic you should revise. Read and learn all the information in the topic, ready for a Quiz in lesson.

Topic 1: Introduction to the Holocaust

Anti-Semitism, which is the hatred of Jewish people, had been common in Europe since the Middle Ages, and was especially strong in the 19th century.

An anti-Semitic movement in Germany in the 1890s failed. In the 1920s, Germany was one of the countries in Europe where Jewish people were free.

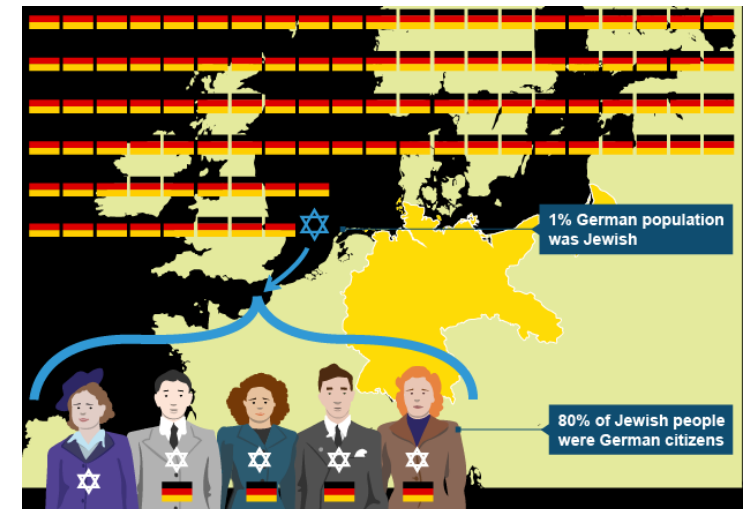
German Jewish people:

- were few in number - 1% of the population
- were often wealthy and successful in business
- were prominent in politics and the arts (theatre and film)
- had married Germans – in some cases they had converted to Christianity
- many had fought for Germany in the First World War
- most (80%) were German citizens

However, German-Jewish success and wealth made many non-Jewish Germans envious.

In the 1920s and 1930s, so-called 'race scientists' declared that some races, eg German 'Aryans', were a master race, or 'Herrenrasse', and superior to other sub-humans, or 'Untermenschen', such as the Roma gypsies, and black people. Nazi race-scientists said that the Jewish people were an anti-race, or 'Gegenrasse', which means not really human at all.

After the First World War and the signing of the Treaty of Versailles in June 1919, right-wing politicians looked for a scapegoat to blame for Germany's defeat. Hitler who was part of the Nazi Party blamed the Jewish people – he said they had stabbed the German army in the back. He believed that the Jewish people had no ambition but greed. He thought that they were selfish and not truly German and saw them as enemies of Germany.



Topic 2: Persecution

As soon as Adolf Hitler came to power in Germany in 1933, he began to persecute the Jewish people:

1933	Hitler's 'brownshirts' stood outside Jewish shops and persuaded Germans to boycott them.
Summer 1935	'Jews not wanted here' posters began to go up around Germany.
September 1935	The Nuremberg Laws deprived Jewish people of their civil rights. They were forbidden to vote and they were not allowed to marry Germans. Other laws were passed forbidding them to go out at night or own a bicycle, among other things.
9 November 1938	Kristallnacht was when Jewish businesses, synagogues and homes were destroyed. Many Jewish men were killed or put in concentration camps.
January 1939	Hitler accused the Jewish people of stirring up other countries against Germany. He threatened them with annihilation if a war broke out.
1940	In many towns, Jewish people were forced to leave their homes and go to live in Jewish areas, or 'ghettos', where they were forbidden to earn a wage. Many starved to death.
1941	All Jewish people were forced to wear a yellow Star of David.
1941	In eastern Europe, Nazi Einsatzgruppen rounded up and murdered over a million Jewish people.
1942	Wannsee Conference: In January, the decision was taken for a 'Final Solution to the Jewish Problem' – to exterminate all the Jewish people in Europe. Camps were built at places such as Auschwitz and Jewish people were rounded up and sent there to be gassed. Jewish prisoners were organised into Sonderkommando units to burn the bodies in the crematoria. Others were worked to death in labour camps to help the war effort.
Winter 1944–1945	The 'Death Marches'. As the Russians advanced, the SS guards marched the Jewish people to concentration camps in the west. Many Jewish people died on the marches. Many were killed because they could not keep up. When they reached camps such as Bergen-Belsen in West Germany, they were crammed in in such numbers that they died of starvation or disease.



During the Second World War, Nazi persecution of the Jewish people worsened into 'genocide' – the attempt to kill all the Jewish people in Europe.

Topic 3: Consequences

Jewish people call the Holocaust the 'Shoah', which means 'destruction' or 'catastrophe'. It's estimated that 6 million Jewish people died. The Nazis also:

- exterminated half a million Roma gypsies
- put a quarter of a million mentally ill and disabled people to death
- sterilised deaf people
- imprisoned homosexuals
- considered that Slavic people were sub-human and intended to starve up to 30 million Soviet civilians and prisoners of war

Jewish people reacted in different ways:

- in some places, the Jewish people resisted, eg the Warsaw Uprising of 1943
- some of them fled from Germany and other countries such as Poland.
- Some put their children on Kindertransport trains, which took them to Great Britain, where they were fostered
- some hid
- in some places, the Jewish people accepted their fate and even cooperated with the Nazis
- some survived the concentration camps, often against all odds

Many Jewish people were saved by acts of bravery and compassion carried out by Jewish and non-Jewish people alike, eg Oskar Schindler. Schindler was an ethnic German and credited with saving the lives of 1,200 Jews, despite being a member of the Nazi party. His moving story was made into the film, *Schindler's List* in 1993.

After the war, Nazi leaders were put on trial at the Nuremberg War Crimes trials (1945–1946). Many were sentenced to death. War criminals continued to be found and put on trial, including high profile cases such as Adolf Eichmann in 1960 and Klaus Barbie who was put on trial in 1987. It is universally believed that such a genocide must never be allowed to happen again.

In 1948, the nation of Israel was established as a state for Jewish people.

27 January is Holocaust Memorial Day (HMD). The date was chosen as the anniversary of the liberation of Auschwitz-Birkenau. Holocaust Memorial Day is an international day of remembrance – not only for the Jewish Holocaust, but for subsequent genocides in places like Cambodia, Bosnia and Rwanda. All over the world, people honour the survivors and reflect on the consequences.





Vocabulary	Wider Research	Apply						
<ol style="list-style-type: none"> 1) Anti-semitism 2) Racial studies 3) Aryan 4) Herenrasse 5) Untermenschen 6) Gegenrasse 7) Treaty of Versailles 8) Citizen 9) Democracy 10) Dictatorship 11) Dolchtoss Theory 12) Persecution 13) Pogrom 14) Ghetto 15) Genocide 16) Brownshirts 17) Nuremberg Laws 18) Kristallnacht 19) Synagogue 20) Concentration Camp 21) Annihilation 22) Final Solution 23) Death March 24) Holocaust 25) Execution Camp 26) Auschwitz 27) Memorial 28) Compassion 29) Remembrance 30) Trial 	<h2 style="text-align: center;">The Holocaust</h2> <p>https://www.bbc.co.uk/bitesize/guides/zkfk7ty/revision/1</p> <p>https://www.bbc.co.uk/bitesize/guides/zkfk7ty/revision/2</p> <p>https://www.bbc.co.uk/bitesize/guides/zkfk7ty/revision/3</p> <p>https://www.bbc.co.uk/bitesize/guides/zkfk7ty/revision/4</p> <p>https://www.bbc.co.uk/bitesize/guides/zkfk7ty/revision/5</p> <p>https://www.bbc.co.uk/bitesize/guides/zkfk7ty/revision/6</p>	<ol style="list-style-type: none"> 1. Create a dictionary for this topic. Include all the key vocabulary, definition and use the word in a sentence. <table border="1" data-bbox="1294 395 2121 614"> <thead> <tr> <th data-bbox="1294 395 1570 467">Key Word</th> <th data-bbox="1570 395 1845 467">Definition</th> <th data-bbox="1845 395 2121 467">Use the word in a sentence</th> </tr> </thead> <tbody> <tr> <td data-bbox="1294 467 1570 614" style="height: 80px;"></td> <td data-bbox="1570 467 1845 614"></td> <td data-bbox="1845 467 2121 614"></td> </tr> </tbody> </table> <ol style="list-style-type: none"> 2. Write a newspaper article/blog explaining Kristallnacht. 3. Write a newspaper article/blog explaining what Jewish citizens in Germany were not allowed to have. 4. Research and write notes using the links given for wider research. 5. Write a PEEL paragraph explaining the long-term consequences of the Holocaust. 6. Create a mind map summarising the introduction, persecution of Jews, and consequences of the Holocaust. <div data-bbox="1518 981 1899 1220" style="text-align: center;"> </div>	Key Word	Definition	Use the word in a sentence			
Key Word	Definition	Use the word in a sentence						



Revise your French vocabulary and make a poster or a mind map. Get ready for an assessment each term.

Topic 1: Tu es où en vacances ? Where are you on holiday?

J'ai = I have

- une semaine de vacances = a week of holiday
- deux semaines de vacances = two weeks of holiday

en janvier/ février (etc.) = in January/ February (etc.)

C'est pour Noël = It is for Christmas.

C'est pour Pâques = It is for Easter.

C'est pour les grandes vacances =
It is for the summer holidays.



- Tu es où en vacances? = Where are you on holiday?

- Je suis en vacances...= I'm on holiday...

- au bord de la mer = at the seaside
- à la montagne = in the mountains
- à la campagne = in the countryside
- en colonie de vacances = at a holiday camp
- chez mes grand-parents = at my grandparents' home



- C'est amusant = it is fun
- C'est génial = it is great
- C'est ennuyeux = it is boring
- C'est intéressant = it is interesting
- C'est sympa = it is nice
- C'est nul = it is rubbish

INTENSIFIERS

- un peu = a bit
- assez = quite
- très = very
- quite = assez



Revise your French vocabulary and make a poster or a mind map. Get ready for an assessment each term.

Topic 2: Qu'est-ce que tu as visité ? What did you visit ?

THE PERFECT tense or THE PAST tense (le PASSE COMPOSÉ) Grammaire

You use the perfect tense to say what **has happened OR what happened.**

It is made up of three parts:

the Subject + the Auxiliary = present tense of the verb AVOIR + a Past participle

J' ai visité

I have visited =

I visited

"visiter" (to visit) in the PERFECT tense also called PAST tense (le PASSE COMPOSÉ)

Français	English
J'ai visité	I have visited = I visited
Tu as visité	You (sing., informal) have visited = You (sing., informal) visited
il/elle/on a visité	He/she has visited , we have visited = he/she visited , we visited
Nous avons visité	we have visited = we visited
Vous avez visité	You (plur., formal) have visited = You (plur., formal) visited
ils/elles ont visité	They (masc./fem.) have visited = They (masc./fem.) visited

Unité 1: Qu'est-ce que tu as visité? What did you visit?

- J'ai visité...= I visited le château= the castle
 le lac= the lake le musée= the museum
 le parc= the park le stade= the stadium
 la cathédrale= the cathedral
 la mosquée= the mosque
 la chocolaterie= the chocolate shop

C'est...= It is...

C'était comment? = How was it?/ What was it like?

C'était...= It was...

- génial= great
 amusant= fun ennuyeux= boring
 intéressant= interesting sympa= nice
 nul= rubbish moderne= modern

SEQUENCERS

- D'abord = first of all après= after(wards)
 Ensuite = next finalement = finally, last of all
 Puis = then



Revise your French vocabulary and make a poster or a mind map. Get ready for an assessment each term.

Topic 3 : Qu'est-ce que tu as fait pendant les vacances ? what did you do during the holidays ?

Unité 2: Qu'est-ce que tu as fait pendant les vacances? What did you do during the holidays?



Pendant les vacances... = During the holiday...

J'ai joué... = I played...

au tennis = tennis **au foot** = football

J'ai mangé... = I ate...

des glaces = ice creams **une pizza** = a pizza

J'ai écouté de la musique = I listened to music

J'ai acheté.... = I bought...

des baskets = some trainers

un tee-shirt = a tee-shirt **des BD** = comics

J'ai regardé... = I watched....

des clips vidéos = video clips

un film à la télé = a film on TV

J'ai nagé dans la mer = I swam in the sea

J'ai retrouvé Leo = I met up with Leo

J'ai traîné au lit = I hung around in bed

J'ai dormi = I slept

Unité 3: Qu'est-ce que tu as fait? What did you do?

J'ai visité un parc d'attractions = I visited a theme park

J'ai bu un coca = I drunk a coke

J'ai vu... = I saw **un spectacle** = a show

mes personnages préférés = my favourite characters

J'ai fait une balade en bateau = I went on a boat ride

J'ai fait les manèges = I went on the rides

J'ai pris des photos = I took pictures

Je n'ai pas mangé de glaces = I didn't eat ice creams

Je n'ai pas acheté de souvenirs = I didn't buy souvenirs

Unité 4: Tu es allé(e) où? Where did you go?

Tu es allé(e) où en vacances? = Where did you go on holiday?

Je suis allé(e)... = I went...

en Espagne = to Spain **en Grèce** = to Greece

au Maroc = to Morocco **aux États-Unis** = to the USA

Avec qui? = Who with?

Avec... = With... **mon frère** = my brother **ma famille** = my family

mes parents = my parents **mes amis** = my friends

Tu as voyagé comment? = How did you travel?

J'ai voyagé.... = I travelled... **en avion** = by plane **en bateau** = by boat

en car = by coach **en train** = by train **en voiture** = by car

Grammaire.

Prepositions:

au (+ masculine name of country) = to/in

en (+feminine name of country) = to/in

aux (+plural name of country) = to/in

Perfect tense: To say what you did or have done. To form it, you need: **1.** A subject pronoun (je/tu/il etc);

2. the verb **avoir** (to have) in the present tense;

3. a past participle (ex. joué);
ex. **J' ai ai + joué** = I played

