## Home Learning Booklet



## Knowledge Goals Year 9 Half Term 4

## How to self-test

## Mind mapping

- Mind mapping is simply a diagram to visually represent or outline information.
- Use information gathered from your knowledge goals booklet to create mind maps, make sure to use colour and images, keep writing to the bare minimum.
How to mind map:



## Information for parents on knowledge retrieval <br> 

## Flash cards

Use your knowledge goals booklet to make flash cards. Write the questions on one side and on the other record the answer. Test yourself or work with a friend to make sure you know all the key information for each topic.
How to mind map:

## How should students use the Knowledge Goals booklets?

Your Knowledge Goals booklet provide the essential knowledge that you need to learn in each subject this half term. You are expected to spend 30 minutes per subject per week 'learning' the content. You will be assessed during lessons using 'low stake' quizzing. Your teacher may choose to set you additional homework.

## How can parents support?

- Read through the organiser with your child - if you don't understand the content then ask them to explain it to you - 'teaching' you helps them to reinforce their learning.
- Test them regularly on the spellings of key words until they are perfect. Get them to make a glossary (list) of key words with definitions or a list of formulae.
- Read sections out to them, missing out key words or phrases that they must fill in. Miss out more and more until they are word perfect.


## Subject Index

| Subject | Page No |
| :--- | :---: |
| Teir 2 Vocabulary | 4 |
| Art | 6 |
| Biology | 9 |
| Chemistry | 11 |
| Computer Science | 13 |
| Drama | 15 |
| English | 17 |
| Food Technology | 20 |
| French | 22 |
| Geography | 24 |
| History | 26 |
| Materials | 28 |
| Maths | 30 |
| Music | 35 |
| Pdev | 36 |
| PE | 38 |
| Physics | 40 |
| PRE | 42 |
| Spanish | 44 |
| Freya model templates | 46 |

Suggested Homework Schedule (1 hour of independent study per night).
To help you get organized, we have planned out your weekly home learning to cover all subjects. You may choose to create your own version:
Week A

| Day | Subject 1 (20mins) | Subject 2 <br> (20mins) | Subject 3 (20mins) |
| :--- | :---: | :---: | :---: |
| Monday | Art | English Language | Physics |
| Tuesday | Biology | Technology | Maths |
| Wednesday | Chemistry | Spanish | Music |
| Thursday | Computer Science | Geography | RS |
| Friday | Design Technology | History | PE |

## Week B

| Day | Subject 1 (20mins) | Subject 2 <br> (20mins) | Subject 3 (20mins) |
| :--- | :---: | :---: | :---: |
| Monday | Drama | Personal Development | Teir 2 Vocab |
| Tuesday | Maths | English | Physics |
| Wednesday | Chemistry | English | Music |
| Thursday | Teir 2 Vocab | Maths | Biology |
| Friday |  |  |  |

## Literacy Tier 2 Vocabulary

These words are all 'tier 2' words; in other words, they are seen as 'academic vocabulary' and if you know them, can understand them and use them, you will do better in your exams and be able to communicate more precisely and effectively in life.

| $\#$ | Key word |  | Definition |
| :---: | :---: | :---: | :---: |
| 1 | Advocate |  |  |
| 2 | Benefit |  |  |
| 3 | Clarity |  |  |
| 4 | Define |  |  |
| 5 | Hierarchy |  |  |
| 6 | Liberate |  |  |
| 7 | Modify |  |  |
| 8 | Notation |  |  |
| 9 | Objective |  |  |
| 10 | Qualify |  |  |
|  |  |  |  |

## Literacy Tier 2 Frayer Model

examples


Have a go at creating a Frayer Model for each of the 6 tier 2 words from this term (blank templates are at the back of the booklet for you to complete this activity).


## The Night Watch Rembrandt

 1642

Emerged in Europe around

There are few remaining exam- 1600. reaction against the ples with early art often favortombs. Egyptian Frescoes, Less the Renaissance. pottery, and metalwork. 1500 BC.

Starry Night Vincent Van Gogh


In France that represent ed both an extension of Impressionism and a rejection of that styles inherent limitations. 20th century.
Post Impressionism

The Scream
Edvard Munch


Art literature of the early 20th century. Artists attempt to depict not objective reality but rather the emotions and responses that objects and event arouse in him. Distoration, exaggeration, primitivism, and fantasy. Highsly subjective and spon-
tanous self expression.
Expressionism


Art Movement's Timeline By; Jesinda Vincent

Characterized by a spirit of anarchic revolt. Revelled in absurdity, and emphasised the role of the unpredictable an artistic expression.

Dada

Modernism Late 19th-20th centuries Revolt against the conser vative values of realism. Traditional forms of art.


Paul Cezanne 1885-1889

Cubism
20th century Avantgarde art movement, objects are broken up, analyzed, and re-assembled in an abstracted form. Revolutionized European painting and


Pop Art Direct descendant of Dadaism in the way it mocks the established art world by appropriating images. Celebrate everyday objects such as; sop can, washing powders, \& coke bottles.

Campobella

TOMATO
sour.
Campbell's Soup Andy Warhol

1962

## Art year 9



## Formal elements of Art

The Visual Elements of line, shape, tone, colour, pattern, texture and form are the building blocks of composition in art. When we analyse any drawing, painting, sculpture or design, we examine these different parts to see how theycombine to create the overall effect of the artwork

## Line

Line is the beginning of alldrawing Line in an artwork can be used in many different ways. It can be used to create shape, pattern, form, structure, growth, depth, distance, rhythm, movement and a range of emotions.

## Shape

Shape can be shown in a number of ways. Sometimes we can recognise the shapes, at other times, they can look like something we haven't seen before. This could be called 'abstract'.

## Tone

Tone is the lightness or darkness of a colour. Tone can be changed by using white or black to make a colour lighter or darker.

## Colour

Colour is the visual element that has the strongest effect on our emotions. We use colour to create the mood or atmosphere. For example, artwork that uses mainly reds and oranges, might make you feel angry.

## Pattern

Pattern is made by repeating parts of the work. There are two basic types of pattern in art Natural Pattern and Man-Made Pattern. The patterns could be made by repeating something ina certain way or completely random.

## Texture

Texture is the surface effect used in art - the roughness or smopthness of the materials used to make the art.

## Space

Space is an element of art by which positive and negative areas are defined or a sense of depth achieved in a work of art.

| Shape / Form | Tone | Pattern / Teature | Colour | Line |
| :---: | :---: | :---: | :---: | :---: |
| Closed | Bright | Repeated | Bright | Fluent |
| Open | Dull | Uniform | Bold | Free |
| Distorted | Light | Geometric | Primary | Controlled |
| Flat | Dark | Organic | Secondary | Expressionis |
| Organic | Faded | Random | Cold | tic |
| Deep | Smooth | Symmetrical | Warm | Strong |
| Positive | Harsh | Irregular | Radiant | Angular |
| Negative | Contrasting | Bold | Dull | Delicate |
| Foreground | Intense | Bumpy | Vivid | Flowing |
| Background | Sombre | Rough | Contrasting | Simple |
| Composition | Strong | Smooth | Complement | Thick |
| Elongated | Powerful | Broken | ary | Thin |
| Compressed | Dramatic | Fine | Monochrom | Horizontal Vertical |
| Large |  | Bold |  |  |
| Small |  | Flat | Harmonious | Broken |
| 20/30 |  | Grid | Natural | Overlapping |
| $20 / 30$ |  |  | Saturated | Faint |
| Blurred |  |  | Luminous |  |
| Movement |  |  |  |  |
|  |  |  | Opaque |  |
| Perspective |  |  | Translucent |  |
|  |  |  | Transparent |  |

## Knowledge Goals: Biology - Digestion

| Enzyme | Found in the: |  |  |  | Breaks Down | Into |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { Salivary } \\ & \text { Glands } \end{aligned}$ | Stomach | Pancreas | $\begin{gathered} \text { Small } \\ \text { Intestine } \\ \hline \end{gathered}$ |  |  |
| Amylase | $\sqrt{ }$ |  | $\sqrt{ }$ | $\sqrt{ }$ | Starch | Sugar |
| Lipase |  | $\sqrt{ }$ | $\checkmark$ | $\sqrt{ }$ |  | Fatty Acids and Glycerol |
| Protease <br> e.g. Pepsin |  |  | $\sqrt{ }$ | $J$ | Proteins | Amino |


| Nutrient | Major function | Major sources |
| :--- | :--- | :--- |
| Carbohydrates | Source of energy, <br> glucose is the main <br> respiratory substrate | Starch: potatoes, rice and wheat <br> products, bread, cereals and <br> pasta. Sugars: fruit, smoothies, <br> fizzy drinks, chocolate and <br> sweets |
| Proteins | Growth and repair | Meat, eggs, cheese, beans, nuts <br> and seeds |
| Lipids | Energy, make up part <br> of cell membranes so <br> essential for normal <br> growth | Butter and margarine, meat and <br> processed meat, plant oils, oily <br> fish, nuts and seeds |



## Temperature affects enzyme action

At low temperatures, the number of successful collisions between the enzyme and substrate is reduced because their energy decreases. The reaction is slow.


The human body is maintained at $37^{\circ} \mathrm{C}$ as this is the temperature at which the enzymes in our body work best. This is known as the optimum temperature.

Higher temperatures disrupt the shape of the active site, which will reduce its activity, or prevent it from working.. The enzyme will have been denatured

## The effect of pH

Enzymes are also sensitive to $\mathbf{p H}$. Changing the pH of its surroundings will also change the shape of the active site of an enzyme.

| Region | Function |
| :--- | :--- |
| Mouth | Begins the digestion of carbohydrates |
| Stomach | Begins the digestion of protein; small molecules such as <br> alcohol absorbed |
| Small intestine <br> -Duodenum | Continues the digestion of carbohydrate and protein; <br> begins the digestion of lipids |
| Small intestine <br> -Ileum | Completes the digestion of carbohydrates and proteins <br> into single sugars and amino acids; absorption of single <br> sugars, amino acids and fatty acids and glycerol |
| Large intestine | Absorption of water; egestion of undigested food |

## Knowledge Goals: Biology - Digestion

|  |  | Half Term 4: Tier 3 Vocabulary |
| :---: | :---: | :--- |
| $\#$ | Key word | Definition |
| 1 | enzymes | Biological catalysts that increase the rate of reactions in living <br> organisms. |
| 2 | bile | A substance made in the liver and stored in the gallbladder <br> which is used to neutralise stomach acid in the intestine and <br> emulsify fats. |
| 3 | lipase | An enzyme that is produced in the pancreas that breaks <br> lipids down into fatty acids and glycerol. |
| 4 | carbohydrates | Source of energy, glucose is the main respiratory substrate. |
| 5 | proteins | Food group that is used in growth and repair. |
| 6 | lipids | Another word for fat - food group that is used for energy and <br> insulation. |
| 7 | amylase | An enzyme produced in the salivary glands and pancreas <br> that breaks carbohydrates down into simple sugars. |
| 8 | protease | An enzyme produced in the stomach and pancreas that <br> breaks proteins down into amino acids. |



## Knowledge Goals: Chemistry - Atmosphere

## The evolution of the atmosphere

The Earth's atmosphere is made up of a range of gases. The percentage of each of these gasses has changed over time.



Current atmosphere

Oxygen gradually increased as plants evolved to photosynthesize. Carbon dioxide decreased by:

- dissolving in oceans
- forming sedimentary rocks
- being absorbed by plants for photosynthesis
- being turned into fossil fuels


## Global Climate Change

Climate change refers to the change in local and regional climate. Global warming is used to explain how the Earth's climate has warmed over the past 200 years

An increase in average global temperature is a major cause of climate change. The potential effects of global climate change include:

- sea level rise, causing flooding and increased coastal erosion
more frequent and severe storms
- water shortages for humans and wildlife
droughts
loss of habitats, causing changes to ecosystems


## The Greenhouse Effect

The greenhouse effect keeps the Earth warm. Greenhouse gases like carbon dioxide $\left(\mathrm{CO}_{2}\right)$, methane $\left(\mathrm{CH}_{4}\right)$, and water vapour $\left(\mathrm{H}_{2} \mathrm{O}\right)$ act like an insulating layer in the Earth's atmosphere. These greenhouse gases:

- absorb heat radiated from the Earth
- then release energy in all directions, which keeps the Earth warm

Some human activities increase the amounts of greenhouse gases in the atmosphere. These include:

- combustion of fossil fuels
- deforestation
- methane release from farming
- more animal farming (digestion, waste decomposition)

If the amount of greenhouse gases in the atmosphere increases, more heat is trapped close to the Earth. This is a major cause of Climate Change.


## Atmospheric Pollutants

Recent activity by humans has changed the composition of the atmosphere.

## Carbon dioxide

Caused by complete combustion of fossil fuels. $\mathrm{CO}_{2}$ is a greenhouse gas and contributes to global warming.

Carbon monoxide
Caused by incomplete combustion of fossil fuels. It is a poisonous gas.

## Soot

Caused by incomplete combustion of fossil fuels. It causes respiratory problems and global dimming.

## Sulfur dioxide

Formed from sulfur impurities in fossil fuels. Sulfur dioxide causes acid rain, destroying wildlife and habitats

## Nitrogen oxides

Formed by nitrogen reacting with oxygen in the air. They cause respiratory problems and acid rain.

## Knowledge Goals: Chemistry- Atmosphere

| Half Term 4: Tier 3 Vocabulary |  |  |
| :---: | :---: | :---: |
| \# | Key word | Definition |
| 1 | atmosphere | The layer of air that surrounds the Earth. |
| 2 | global warming | The increase in the average temperature of the Earth. |
| 3 | greenhouse gas | A gas that can absorb long wave radiation emitted by the Earth. |
| 4 | greenhouse effect | When greenhouse gases in the atmosphere absorb long wavelength radiation and re-radiate it in all directions, including back towards Earth, helping to keep the Earth warm. |
| 5 | combustion | An exothermic reaction between fuel and oxygen. |
| 6 | global dimming | The decrease in the amount of sunlight reaching the Earth's surface due to an increase in the amount of particulates in the atmosphere |
| 7 | carbon footprint | A measure of the amounts of greenhouse gases released by a product, service, or event. |
| 8 | climate change | A change in the Earth's climate e.g. global warming, changing rainfall patterns etc. |



## Knowledge Goals: Computer Science Boolean Logic <br> How to create a truth table for a logic circuit diagram

## AND gate

An AND gate usually has two inputs. AND tells us that both input A AND Input $B$ have to be 1 (or ON) in order for the output to be 1.0 . Oherwise the output is 0 .
The Boolean expression can be written os $Q=A$ AND B
The truth toble would look like this:


## OR gate

An OR gate has two inputs. OR tells us that EITHER Input $A$ OR Input $B$ has to be $1($ or $O N$ ) in order for the output to be 1 . Otherwise the output is 0 .
The Boolean expression can be written as $\mathbf{Q}=\mathbf{A} \mathbf{O R} \mathbf{B}$.


Logic gate diagrams would look like this:



\section*{Creating truth tables

## Creating truth tables <br> When creating truth tables for a logic gate or we need to ensure we have covered all possibilities of inputs. Firstly we need to work out have covered all possibilities of inputs. Firstly we need to work how many rows a truth table will need. The rule for this is as foll follows: <br> $2^{n}$ where $\mathrm{n}=$ the number inputs (normally represented

 by letters
## Example



Step 1: Identify $n$ (the number of inputs). Here we have three $A, B \& C$ Therefore $n$ is 3

Step 2: Calculate $2^{\wedge} 3-2 \times 2 \times 2=8$
Step 3: We can now draw a truth table with 8 rows.

## NOT gate

A NOT gate has just one input. NOT tells us that Input A has to be 0 (or OFF)
in order for the output to be 1 . Otherwise the output is 0 . A NOT gate is
in order for the output to be 1 . Otherwise the output is 0 . A NOT gate is
sometimes colled an inverter.
The Boolean expression is written as $Q=$ NOT $A$.
The truth table would look like this:


Creating a truth table for a logic circuit is trickier than doing so for a single gate.
It is advisable to follow the method below which will eventually lead you to the final output for the circuit. It is not advisable to try and work it all out in your head!


## Method

1. On the circuit diagram, add temporary letters after each gate ( $C, D, E$ in the above example) 2. Create a blank truth table, allowing space for all the temporary letters (stages)
2. Write into the truth table all the possible unique input combinations ( A and B combinations

> in this example)
4. In the truth table, calculate the output at each temporary letter, treating them as separate mini logic problems (e.g. $\mathbf{D}$ is the result of $\mathbf{A} O \mathbf{R} \boldsymbol{B}$ )
5. Eventually you will reach a stage where you are able to find the final output for the logic circuit (Z in this example)

| Input A | Input B | C | D | E | Output Z |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | B | NOT A | A OR B | C AND D | E OR D |
| 0 | 0 | 1 | 0 | 0 | 0 |
| 0 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0 | 0 | 1 | 0 | 1 |
| 1 | 1 | 0 | 1 | 0 | 1 |

## Knowledge Goals: Computer Science

| Half Term 4: Tier 3 Vocabulary |  |  |
| :---: | :---: | :---: |
| \# | Key Term | Definition |
| 1 | Logic gate | A logic gate is a building block of a digital circuit. Most logic gates have two inputs and one output. At any given moment, every terminal is in one of the two binary conditions 0 or 1. |
| 2 | AND gate | A logic gate which returns a 1 when both inputs are 1's. Else a 0 is returned |
| 3 | OR gate | A logic gate which returns 1 when either or both of the inputs are |
| 4 | NOT gate | A logic gate which inverts its input |
| 5 | Truth table | are used to calculate the output from a logic gate or circuit. Every possible binary input combination is covered in a truth table. From this, we can clearly see what the output would be in any scenario. |
| 6 | Logic circuit | When logic gates are connected they form a circuit. |


|  | Notes: |
| :---: | :---: |
|  |  |
|  |  |
|  | .......................................... |
|  | ......................................... |
|  | .......................................... |
|  | ........................................... |
|  | .......................................................... |
|  | $\ldots$ |
|  | . |
|  | ......... |
|  | ......................................... |
|  | .......................................... |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

## Knowledge Goals: Drama

## What is Theatre in Education?

Theatre in education(TIE) is the use of theatre for purposes beyond entertainment. It involves trained actors/educators performing theatre for students or communities, with the intention of changing knowledge, attitudes and behaviour

## Theatre in education often has a very clear moral or social message for young people, who are its target audience.

## Theatre in Education encourages children to investigate challenging situations for themselves, to search to find the answer, rather than be given it on a plate

## THINK!

Remember that although you are aiming to educate the audience, you will fail if your work is boring and uninteresting. Theatre in education could also be entitled 'education in theatre'.
To educate, you must first engage and challenge
your audience

## History of Theatre In Education

## When asked how to create a play for children, Stanislavski replied: 'The same as

 for adults, only better.'After the Second World War, people became aware that drama or theatre techniques might be useful as a way of fostering effective learning in schools. This is known as Theatre in education or 'TIE' for short. Brian Way, who founded the Theatre Centre in 1953, was an early practitioner, and influenced the team, including Gordon Vallins, who established TIE at the Belgrade Theatre, Coventry in 1965. Their work was so influential that it spread nationwide.

The idea of a high impact performance for a specifically targeted school audience became hugely popular. Because the audiences are small, they can be encouraged to participate through work in role and through debate. Projects can be supported with resource materials and training or support for the students' teachers.

## Key Elements of a Theatre in Education Piece

- There is a clear aim and educational objective running throughout.
- A small cast so actors must be versatile and often have to multi-role.
- The production must be portable, so the design is simple and representational.
- They explore issues from various viewpoints, so we can see the effect of an action upon a range of people.
- There is some level of audience involvement.
- They are rarely wholly naturalistic because direct address or narration is used to engage the audience.
- The costumes are simple and representational, especially if actors have to multi-role.
- They may include facts and figures to educate the audience.
- They may have a strong message or moral running throughout


## How TIE is used

- Theatre in education can be used to create different kinds of productions:
- Targeting an area for a particular year group in a school's PSHE (Personal, Social and Health Education) curriculum.
- Plays designed for a young audience, that could be based on a traditional story, and allowing a range of follow-up activities if desired.
- Activities for very young children, linked by a story with the opportunities for involvement.
- Dramatised activities for an adult age group with specific needs, e.g., preparing for employment or learning parenting skills.
- A play designed for an elderly audience, e.g., in a care home, perhaps drawing on memories and engaging active participation in this way.


## Planning a project

When planning a Theatre in education piece companies must take into account: -The age and size of the audience. The performance needs to suit the audience. -The venue, its size and facilities such as lighting and sound.
-Teaching and Learning Objectives. What they have been asked to do and how they can deliver what's required.


## Key words

| Verbatim theatre | When real words spoken by real people are <br> used as dialogue or in the play. |
| :--- | :--- |
| Still image | A frozen picture/when the actors freeze |
| Marking the <br> moment | When a key moment in the drama is highlighted <br> - this could be through lighting/sound/still <br> image |


| Audience <br> Participation | When the audience play an active role in the <br> drama |
| :--- | :--- |
| Multi rolling | Where an actor plays more than one role in a play |
| Narration | Telling the audience the story/what is happening <br> on stage. |
| Direct Address | Where the actors speak directly to the audience |

## Knowledge Goals: English



## Knowledge Goals: English

| Beghnirg | Ending |
| :---: | :---: |
| How a writer begins and finibhes a text is incredbly important. How does a wifher engase you right from the start and what Kind of thoughtis or feelings do they want you to hewe at the end of the articic, letter, speech or review? know these differem bexinnings and endings so you can use these techriques in your own weiting. | Cyclical ending: where the ending returra back to the beginning of the text, often using to emphavise the original point. |
| A parale! Hook your reader / Istreer in with something that hn't dear at the beginring, perhags something unnsual has happened? | Twist a complete duange in direction from where the text was going. <br> Summing up: The writer reflects back on all the topid wovered in their tent to provide the reader with a summary. |
| Direct addreis. Takk drectly to your reader / listener as a wey of engasing them and genting rappon. | Short sentence: Making your final sentence very, wery short can leave the readers with one find 'sunch' or impactual idea to take away from the whole text. |
| Amusing hook. Use a joke to establish a comedic tone at the beginning of your text. tr's a great way to make a reader/ listener feel at easie and lare them into a dificult or controversial topic. | A final question: Aaking the readers a hetorical question or question at the end of a thet mears thep reipomibility or onus is on the reader to make up their owe minds. |
| Subtle hook. Hint ot what lis going to hapgen in the rest of the text. <br> Atmospheric hook. Use your deaciptive language to build up a perticula tone and atmonphere ride the very beginning. It be using a particular eample to engage the reader with the topic of the text. | Repeating examples: A wriker could refer back to a specilic example they made during theri test. For instance, if they spoke about a particular persion or place earlier on in the text to provide evidence for their argumem, they made dedide to repeat that example again for forther emphais: Maybe ilf we change our ways, people like Bob would no longer have to sulfer. |
| Adaling connectives, <br> to add to your initial ideas <br> Morecover <br> Furthermore <br> In addition <br> Additionally <br> Similaly <br> As well as this <br> Contrasting connectives, <br> to show a different perspective or idea: However <br> On the other hand <br> Alternatively <br> Despite this <br> In contrast <br> Corversely / In spite of this | Bias Don't fall into the trap of showing you favour neither one or the other. This is a <br> Think carefully about bias when you are good thing to do for 'writing to explain', writing. If you are 'writing to argue' or however! 'writing to persuade' then you really need to choose one side or the other and show why your viewpoint is correct. |
| Speling, Punctuation and Grammar $;-\infty \quad-\infty$ | Negstive adjectives: disgusting, sickening, repultive, abominable, swful, distasteful, gruesome, horrific, losthsome, nasty, objectionable, obnowious, odious, outrageous, repugnant, scandalous, shocking, vie, vulfar, foul, groas, neuseating, revolting, stirking. detestable, frightrul, ghasty, hideous, horrid, lousy, monstrous, offensive, repellent |
| Unfortunstely there isn't a quick fox for SPAG - it's something you work on over years and years. However, you need to spend time reffecting on SPAG and making sure trat you have proof read your work having written it. <br> As for punctuation, you went to show off all the different types of punctuation you know about - not just commas and full stops but semicolors, deahes, hyphens, speech punctuation and so on. If you know how to use them.. use them! <br> There are s few different types here; punctustion can be used - for effect. Don't fall into the trap of adding in 45 semicolons: $\qquad$ <br> Use high level punctustion occasionally but to hove an impact, not just for the sake of it. | Positive adjectives: amaving, incredible, marvellous, stunning, surprising, unbelievable, wonderful, delightful, fantastic, pesceful, pleasant, thrilling, joyful, alluring, sppesing, charming, dazzing, elegant, exquisite, gorgeous, graceful, grand, handsome, magnificent, plessing, splendid, superb, bresth-takirg, outatanding, sublime, admirable, exceptional <br> Vocatulary <br> Essentially, anty piece of non-fiction witing is more comvinding and engaging when a wider range of words bs used. When we talk to friends we'te not really refiecting on our choice of words and we'l throw in adjectives and noums like "good", "bad", "stuff, "things" and so on. <br> In writing, you want to ahow off any impresivive words you know, but you don't want to fall into the trap of uning words that you've tied to leam for the esam and you're not entirely sare what they mean. instead, what you can do to really boest your vocabulary is learn synomyms. Iratead of using basic adjectives like "kood" and "bad", look at the synompms above. |

## Knowledge Goals: English

## Term 2: Tier 3 Vocabulary

| $\#$ | Key word |  |
| :---: | :--- | :--- |
| 1 | Rhetoric | The art of using language persuasively (DAFOREST). |
| 2 | Superlative | An adjective conveying the highest quality of something ('fastest' etc). |
| 3 | Adverbial Phrase | A group of words that tell us how, when, where, why and how long something <br> is happening ('yesterday morning', 'at the station', 'quite slowly' etc). |
| 4 | Pathos | . A quality that evokes pity or sadness. |
| 5 | Logos | To appeal to the audience's sense of reason or logic. |
| 6 | Ethos | Using language to appeal to the ethics (guiding moral beliefs) of an <br> audience. |
| 7 | Discourse Markers | A word or phrase that plays a role in managing the flow or structure of <br> conversation or writing using a sense of direct address ('So', 'Therefore', <br> 'On the other hand', 'In conclusiuon' etc). |
| 8 | Counter-argument | Citing an opposing argument to one already put forward. |

## Knowledge Goals: Food Technology

| A Head Chef is a |
| :---: |
| highly skilled |
| professional cook |
| who oversees the |
| operations of a |
| restaurant or dining |
| facility |

## AVOIDING CROSS-CONTAMINATI

 cross-contamination

The role of the EHO (Environmental Health Officer)

2) The role of the EHO

They can visit ran
reasonable time
3) They sometimes visit as a result of a complaint
4) Can close a business immediately if the risk is high
5) They can offer advice to business'
6) They can seize and detain food
7) They can prosecute business'
8) They can inspect training records of staff
9) Monitor hygiene and cleaning standards
10) Take temperatures of fridges, inspect how waste is
disposed of, hand washing facilities and food storage

|  | Name of medical condition | Food/drinks to avoid | Reason to avoid |
| :---: | :---: | :---: | :---: |
|  | Diabetes | Starchy food/ high in sugar | High in saturated fat. Can lead to heart disease, while excess sugars can cause unwanted weight gain and blood sugar spikes |
|  | Nut allergy | Nuts, blended cooking oil, margarine with nuts oils and often seeds | the immune system overreacts to proteins in these foods |
|  | Lactose intolerance | Milk, cheese, yogurt, processed food | cannot metabolize lactose properly; they lack lactase, an enzyme required in the digestive system to break down lactose. Patients typically experience bloating, flatulence, and diarrhoea |
|  | Gluten intolerance (coeliac) | Wheat, wholemeal, bran, pasta, rye, beer | Celiac disease is caused by a reaction to a gluten protein found in wheat, barley, rye, and sometimes oats. Symptoms include chronic diarrhoea, weight loss and fatigue |


| Fats, oils and lipids: <br> Too much fat is bad for you, but so is not enough. |  |  |  |  | Carbohydrates <br> There are 2 kinds, simple and complex Sugar \& Starches |  |  | Protein: <br> These are made up of essential amino-acids and nonessential amino-acids. (Our bodies can make nonessential amino acids, but we need to get essential amino acids from our food). |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Source |  |  |  |  |  |  |  |  |
| Saturated Fats <br> (From Animal sources. They are also called unhealthy fats. They are generally solid at room temperature) <br> Sausages / Bacon / Lard / Dairy |  |  |  |  | Polysaceharicies |  |  | Source <br> HBV - these have all the essential amino acids -Meat, fish, dairy, eggs (animal sources) <br> -Tofu <br> LBV - these are missing at least one essential amino acid <br> -Seeds, nuts, beans, pulses, cereals, Quorn (plant |  |  |  |
|  |  |  |  | turated Fats ealthier. They temperature.) saturated fats oil / avocados saturated fats ver oil/seeds | Source <br> Simple - these are sugars (monosaccharides, disaccharides) Cakes, jam, soft drinks <br> Complex - these are starches (polysaccharides) Bread, potatoes, Flour, Pasta,Rice. |  |  |  |  |  |  |
| Omeqa-3. These are Polyunsaturated and called"healthy" fats as your body needs them but can'tmake them. They are good for your heart.- Oily fish / Nuts / Seeds |  |  |  |  | Function <br> Quick bimple <br> burst of energy <br> ComplexLonger lasting energy $\quad$Free sugars <br> These give you no <br> nutritional benefit <br> other than energy. |  |  |  | whth <br> pair enance |  | Quorn |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | Dietary advice <br> - Reduce the amount | Can make - <br> blood sugar Excess is <br> blurned  <br> level drop into fat <br> - hunger, -Can cause <br> - dizziness, <br> obesity |  | Dietary Reference Values |  | Kwashiorkor <br> Oedema <br> Anaemia <br> Slow growth in | Excess protein can be converted to energy. If |
|  |  |  |  |  | t, no more than |  |  | Age | Amou |  | used turns |
|  |  |  |  |  | of our diet |  |  | 1.3 | 15g |  |  |
| Dietary Reference Values |  |  | Too much Not enough |  | Carbohydrates should make up half of the energy we eat. <br> - Wholegrain cereals are a good source of fibre | - Tiredness <br> - Lack of energy Our body will use protein for energy (leads to loss of muscle) | sugar leads to dental problems <br> - Can lead to type 2 diabetes | 4 -6 | 20g | Complementary actions <br> Combining 2 or more LBV proteins helps get a balance of essential amino acids. e.g. beans on toast. |  |
| DRI | ¢ |  | Obesity Heart disease Type 2 diabetes Stroke Cancer | deficiency (fat soluble) Unprotected organs |  |  |  | 7.10 | 28g |  |  |
|  |  |  |  |  |  |  |  | 11 | 42g |  |  |
| Total <br> fot <br> Sat fat | 95g | 70g |  |  |  |  |  | 15-1 | 55g |  |  |
|  |  |  |  |  |  |  |  | 19-50 | 55g |  |  |
|  | 30g | 20g |  |  |  |  |  | 50+ | 53g |  |  |

## Knowledge Goals: Food Technology

| Half Term 1: Tier 3 Vocabulary |  |  |
| :---: | :---: | :---: |
| \# | Key word | Definition |
| 1 | CrossContamination | When bacteria is unintentionally transferred from one food to another, with harmful effect such as cross-contamination between raw and cooked food |
| 2 | Intolerances | A food intolerance is when you have difficulty digesting certain foods or ingredients in food. It's not usually serious, but eating the food you're intolerant to, can make you feel unwell. |
| 3 | Environmental Health Officer | Environmental health officers make sure people's surroundings are safe, healthy and hygienic. They can enforce food safety legislation, issue improvement notices, and shut businesses down if they do not meet standards. |
| 4 | Excess and deficiencies of nutrients | Excess: to consume too much of a specific nutrient Deficiency: to consumer too little of a specific nutrient |
| 5 | Food allergies | A food allergy is when the body's immune system reacts unusually to specific foods. Although allergic reactions are often mild, they can be very serious. |
| 6 | Food miles | The distance in which food has travelled from its origin to the plate 'from farm to fork' |


|  | Notes: |
| :---: | :---: |
|  | ................................ |
|  | ..... |
|  | ......................................... |
|  | . |
|  | ......................... |
|  | ...................................... |
|  | $\cdots$ |
|  |  |
|  | .......... |
|  | ..... |
|  | ........ |
|  | .......... |
|  | ...... |
|  |  |

Knowledge Goals: French


## Knowledge Goals: French

## Half Term 1: Tier 3 Vocabulary

| Half Term 1: Tier 3 Vocabulary |  |  |
| :---: | :---: | :---: |
| 1 | SSC | Symbol-Sound Correspondence: the sound that letters <br> or combination of letters make in a language |
| 2 | cognate | A cognate is a word which looks the same or very similar to <br> a word in English. E.g.: le cinéma, le football |
| 3 | connective | A word which links sentences together. E.g.: and, but |
| 4 | Opinion verb/ <br> phrase <br> Justifier | A verb or a phrase which you use to give an opinion: I <br> like, I dislike, in my opinion etc... |
| 5 | A way of giving a reason, a justification of an <br> opinion. I like .... because it is... |  |
| 6 | qualifier | A word which changes the intensity of an adjective: quite, <br> very, extremely... |
| 7 | adjective | A describing word: big, small, green, interesting, amusing etc... |
| 8 | Time phrase | A phrase used to say when <br> something is happening: normally, on Mondays, yesterday, <br> next weekend... |
| 9 | Tenses | Past, present, future, conditional |
| 10 | Infinitive | A verb as you find it in the dictionary: to play, to eat. This is <br> the form of the verb when it is not used with a pronoun (I, he, <br> she...) |

## Notes:

$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

# Knowledge Goals: What's an ecosystem worth? 




#### Abstract

What pre etovithtirn An ecorytem [er acolbgicallystami consist of all the orgerisur and the physial anvironmentwith which they intercet. These biaticand abioticcomponenti are linked  entors the syitem through photorymthesis and is incorporited inta plantlous.ey fosligen plants and on one anather, animals play an impertant role in the mewement of matter end ancry thrught the sytiom. They also intluence the quantity of plant and micubial biomax present $\mathrm{B}_{\mathrm{y}}$ braiking down dosdorganic matter, dreompocers release car bon back to the atmosphereand facilitatemutriant cyeling by converting rutrisuts stored in day blomass bedk to a form that cin bew radilyumdbyplant and microberi.


| Biome |  |
| :---: | :---: |
| Temperate grassland | Grassland bomes consist of large open areas of grass. Trees oan be present but they are infrequent. <br> Low rainfall, wildand fires, and grazing by animals are threefactors that maintain grasslands. In grasiland regions, the climate is ideal for the growthof grasses only. The low precipitation rates are enough tonourljh grases but not enough for a forest of trees. Temperate grasslands, are known for their rich soil that velds abundant growth of grasess. Temperate grasslands are found in plaoss such as North Amerka and Eastem Eurppe. |
| Tropical rainforest | A rainforest is an area of tall, mostly everereen trees and a high amount of rainfall. Fainforests are Earth's oldest livingexosystems, with some sumbing in their present form for at least 70 million vears. They are incredibly diverse and complex home to more than half of the world's plant and animal specks-men though they cover just six percent of Earth's surfaoe This make rainforests astoundingly dense with flora and faunal a 10 -square-kilometer (four-square-mile) patch can contain as many as 1,500 flowering plants, 750 species of trees, 400 species of bids and 150 species of butterfles. |
| Coral reefs | Coral refes are same of the mast diverse ecosystems in the world. Corall palyps, the animals primarily responsble for building resfs, can take many forms: large resf building colonies, graceful flowing fans, and even small, solitary organisms. Thousands of species of corsls have been discovered; some live in warm, shallow, tropical sess and others in the cold, dark depths of the ceean. |

# Knowledge Goals: What's an ecosystem worth? 

## Half Term 3: Tier 3 Vocabulary

| \# | Key word | Definition |
| :---: | :---: | :---: |
| 1 | Ecosystem | An ecosystem can be defined as a blologkal system that consists of all the living organisms (plants and animals) in an area as well as the nonliwing things with which the organisms interact, In an ecosystem, all the components are interdependent on each other |
| 2 | Biome | Blome refers to the community of plants and animals that occur naturally in an area, often sharing common characteristics specific to that area. Blome, also known as a major life zone, is an area that includes conmunities of plants and animals that have a common adaptation to that particular enwronment. |
| 3 | Abiotic | Ablotic factors refer to all the non-liwine lie chemical and physical factors present in the atmosphere, hydrosphere, and lithosphere, Sunilght, air, precipitation, minerals, and soil are some examples of abiotic factors |
| 4 | Biotic | Biotic factors refer to all living organisms from animals and humans, to plants, fung, and bacterla, |
| 5 | Nutrient cycle | The nutrient cycle is a system where energy and matter are transferred between living organisms and non-Fiving parts of the environment. This occurs as animals and plants consume nutrients found in the soil, and these mutrients are then released back into the environment via death and decomposition. |
| 6 | Regulatine services | Maintaining the quality of air and soil, providing flood and disease control, or pollinating crops are some of the 'regulating services' prowided by ecosystems. They are often invisible and therefore mostly taken for granted. |
| 7 | Over-exploitation | When humans harvest a species from their natural habitat at a faster rate than the species can repopulate, the species is labeled as overexploited or overharvested. Typically, overharvested species are used as a food source. Overexploiting a species can have detrimental impacts on ecosystem health. |
| 8 | Climate | Climate is the long-term pattern of weather in a particular area. Weather can change from hour-to-hour, day-today, month-to-month or even year-to-year. A region's weather patterns, usually tracked for at least 30 years, are considered its climate |
| 9 | Biomas | Biomass is the mass of Fiving biological organisms in a given area or ecosystem at a given time. Biomass can refer to species biomass, which is the mass of one or more species, or to community biomass, which is the mase of all species in the community. |
| 10 | Inwasine species | Invasive species are non-native species that have colonised a new area to the point of damaging the surrounding environment and are seen as one of the top five major threats to our ecosystem today. They can be brought into a new emwironment from pathways such as ships, fishing equipment or accidental releases. |

## Notes:

$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

Knowledge Goals: History - Holocaust

extermination of millions of people from minority groups in Europe by Nazi Germany during World War 2. The Nazis believed that Germans were racially superior, and anyone considered inferior were a threat. This included Jews, Roma \& Sinti (travellers), people with mental or physical disabilities.

## 4. Final Solution?

After the Wannsee Conference in Jan 1942 the decision was made to mass murder European Jews as a 'solution' to the 'Jewish problem'. This was led by the SS under Himmler. Jews from all over Nazi controlled territory began to be deported to extermination camps such as Auschwitz and Treblinka.

| Oct 281938 | Nov 9-10 1938 |
| :---: | :---: |
| Polish Jews expelled |  |
| November Pogrom |  | from Germany (Kristallnacht)

Oct 71944 Revolt at Auschwitz

1933: Jews banned from public places (parks, pools) and all government jobs. 1933 April: Boycott of Jewish businesses. 1935 Sept: Nuremberg Laws; Jews no longer German citizens.
1938 9-10 Nov: November Pogrom; violent attacks on Jewish business \& synagogues. 20,000 Jews sent to camps. 1939: Jews can be evicted without reason. 1939 Nov: Jews not allowed to go to school

## 3. Ghetto Life.

As Nazis invaded other countries, they had lots more Jews to deal with.
They decided Jews should be moved to certain areas of towns and cities called ghettos.
Entire communities were forced to move to these areas.
Meant to be temporary until they could be removed from Europe
Largest was in Warsaw, Poland, created in Oct 1940.
It held 460,000 Jews in dreadful living conditions; starvation, disease, poverty.

## 5. Death Marches

The Nazi's realised they were loosing the war, and in Nov 1944 extermination camp prisoners began to be marched in towards Germany away from the advancing allied forces. Many people died on the way due to abuse, starvation, exposure or being shot by guards and were left on the side of the road / trail.

## 5. Liberation

As they advanced towards Germany the Allies found victims of the extermination camps. The Nazi's had tried to hide evidence in case they faced a trial. On 7th May 1945 Germany surrendered and the remaining prisoners left alive had a chance of survival. Many continued to die because they'd become too weak to recover.

# Knowledge Goals: History Holocaust <br> Half Term 2: Tier 3 Vocabulary 

| \# | Key word | Definition | tes: |
| :---: | :---: | :---: | :---: |
| 1 | Anti-Semitism | Prejudice towards, or discrimination against, Jews. |  |
| 2 | Dehumanisation | Intended to change the manner in which a person or group of people are perceived. Dehumanization reduces the target group to objects therefore no longer human and worthy of human rights or dignity. |  |
| 3 | Persecution | Act of causing others to suffer because of difference in ethnic or cultural background, lifestyle, religion, or political beliefs. |  |
| 4 | Bystander | One who is present at an event or who knows about its occurrence and chooses to ignore it. That is, he or she neither participates in, nor responds to it. | $\qquad$ |
| 5 | Ghetto | Compulsory "Jewish quarters" in the poorest sections of the cities and towns they had conquered. Ghettos were closed off by walls, or fences made of wood and barbed wire. | ... |
| 6 | Scapegoat | A person or group of people unfairly blamed for natural disasters or wrong actions done by others. The Jews were the scapegoats of the Nazis, and unfairly blamed for all of the economic, political, and cultural problems in Germany in the 1920s and 1930s. |  |
| 7 | Sonderkommando | Work units made up of German Nazi death camp prisoners. They were composed of prisoners, usually Jews, who were forced, on threat of their own deaths, to aid with the disposal of gas chamber victims during the Holocaust. |  |
| 8 | Einsatzgruppen | Death squads of Nazi Germany that were responsible for mass murder, primarily by shooting, during World War II in German-occupied Europe. |  |
| 9 | Liberation | The discovery of the camps by Allied forces who stumbled upon them while pursuing the German army. |  |
| 10 | Concentration Camps | - Nazi system for imprisoning those consider "enemies of the state." Many different groups and individuals were imprisoned in concentration camps: religious opponents, resisters, homosexuals, Jehovah's Witnesses, Roma and Sinti (Gypsies), Poles, and Jews. | ........... |

## Knowledge Goals: Materials 1 - Passive Amplifier

It is really important we ASSESS the RISK and REDUCE the RISK of Injury by LISTENING To the TRAINING and following the correct PPE

- Hair must be tied up in the workshop
- Blazers and ties must be removed
- Jewellery must be removed
- Only use machines you have been told to use and have been demonstrated to you
- Ensure you know where the emergency stop button is
- Do not eat or drink in the workshop
- No running


## Two-point

 perspective - This shows an object from the side with two vanishing points. It gives the most realistic view of a product as it shows the item edge on, as we would see it. It is often used to produce realistic drawings of an object.
## Health and Safety

usage


The loudness of a sound is a measure of the amplitude of the wave. The greater the amplitude, the louder the sound.



Hand Tools: Files
Hana Toos: Fies


## Knowledge Goals: Materials 1 - Passive Amplifier

|  |  | Half Term 1: Tier 3 Vocabulary |
| :---: | :--- | :--- |
| \# | Key word | Definition |
| $\mathbf{1}$ | Amplification | the process of increasing the volume of sound, |
| 2 | Etch | To engrave into a design, which cuts the surface but not all the way through <br> the material |
| 3 | 2-point <br> perspective | This shows an object from the side with two vanishing points. It gives the <br> most realistic view of a product as it shows the item edge on, as we would <br> see it. It is often used to produce realistic drawings of an object. |
| $\mathbf{4}$ | Half-round file | a file made flat on one side and convex on the other for filing curves |
| $\mathbf{5}$ | Round file | A file that has a round section, this is used for It is used for rubbing or <br> finishing holes of small diameter |
| 6 | Flat file | A flat file is referred to as a file which is of a rectangular cross-section in <br> shape |
| 7 | Coping saw | a saw with a very narrow blade stretched across a D-shaped frame, used <br> for cutting curves in wood. |


|  | Notes: |
| :---: | :---: |
|  | ............................................... |
|  | ........................................ |
|  | $\ldots$ |
|  | ... |
|  | ....................................................................... |
|  | ... |
|  | ... |
|  | ......................................... |
|  | ........................................................ |
|  | ..... |
|  |  |
|  | ........................................... |
|  | ....................................................................... |
|  |  |

## Knowledge Goals: Materials 1 - Sweet Dispenser

| Wood Joints |  |  |
| :---: | :---: | :---: |
| Dowel Joint | Butt Joint | Mortice and Tenon |
|  |  |  |

## Orthographic Projection

Now look at this example using a set of steps, I have


Avoiding Design Fixation


M
MODIFY, MaGMIFY, MIIIFY



P
PUT TO ANOTHER USE


F
eliminate Omit, get rid of, cut out, simplify, weed out.

R
hearrange, reverse Change the order, sequence, pattern, layout, plan,
scheme, regroup, redistribute...

Health and Safety
It is really important we ASSESS the RISK and REDUCE the RISK of Injury by LISTENING To the TRAINING and following the correct PPE usage

- Hair must be tied up in the workshop
- Blazers and ties must be removed
- Jewellery must be removed
- Only use machines you have been told to use and have been demonstrated to you
- Ensure you know where the emergency stop button is
- Do not eat or drink in the workshop
- No running


Recycle - Take an existing product that has become waste and re-process the material for use in a new product.
Reuse - Take an existing product that's become waste and use the material or parts for another purpose, without processing it.
Reduce - Minimise the amount of material and energy used during the whole of a products life cycle.
Refuse - Don't accept a product at all if you don't need it or if its environmentally or socially unsustainable.
Rethink - Our current lifestyles and the way we design and make.
Repair - When a product breaks down or doesn't function properly, fix it.

## Knowledge Goals: Materials 1 - Sweet Dispenser

|  |  | Half Term 1: Tier 3 Vocabulary |
| :---: | :--- | :--- |
| \# | Key word |  |
| $\mathbf{1}$ | Aesthetics | The look of a product e.g. the colour, theme, texture, finish etc |
| 2 | Sustainability | Sustainability means doing something that will cause little or no damage to <br> the environment and will be able to continue for a long period of time. |
| $\mathbf{3}$ | Plan view | the appearance of an object as seen from above |
| $\mathbf{4}$ | Dimensions | A dimension is a measurement such as length, width, or height. If you talk <br> about the dimensions of an object or place, you are referring to its size and <br> proportions |
| 5 | Adhesives | a substance used for sticking objects or materials together e.g glue |
| 6 | Mechanism | a system of parts working together in a machine; a piece of machinery |
| 7 | Orthographic <br> projections | Orthographic projections are working drawings in either a first or third angle <br> projection and show each side of a design without perspective, ie a 2D <br> drawing of a 3D object. They are used to show an object from every angle <br> to help manufacturers plan production. |



## Knowledge Goals: Maths

## Unit 8 - Angles

| Topic | Video | Resource |
| :---: | :---: | :---: |
| Finding lines of symmetry in 2d shapes. Name/classify quadrilaterals | Watch this | Complete Q1-3 (check answers by clicking at bottom of page) |
| Angles in quadrilaterals identify missing angles. | Watch this | Complete Q1-3 <br> (check answers by clicking at bottom of page) |
| Missing angles in triangles. Recognise special triangles by looking at angle and side properties. | Watch this | Complete Q1-3 (check answers by clicking at bottom of page) |
| Finding missing angles on a straight line and at a point. | Watch this(straight line) Watch this(point) | Complete Q5 <br> Complete Q3 \& 4 (check answers by clicking a bottom of page) |
| Solve multi step angles problems | Watch this | Complete Apply Q1-5 Complete Apply Q4-6 (check answers by clicking at bottom of page) |
| Identify alternate, corresponding and cointerior angles on parallel lines. | Watch this | Complete Q1-4 (check answers by clicking at bottom of page) |
| Use alternate, corresponding and co-interior facts to identify missing angles | Watch this | Complete Apply Q1-5 (check answers by clicking at bottom of page) |



## Knowledge Goals: Maths

| Unit 9-2D shapes |  |  |
| :---: | :---: | :---: |
| Topic | Video | Resource |
| Calculate the area of rectangles and compound shapes made from rectangles. | Watch this(R) <br> Watch this (CS) | $\begin{aligned} & \text { Complete Q1-3 } \\ & \hline \text { Complete Q1 } \end{aligned}$ |
| Calculate the area of triangles and parallelograms | Watch this (triangle) <br> Watch this (parallelogram) | Complete Q1-3 (triangle) Complete Q1-3 parallelogram |
| Calculate the area of a trapezium. | Watch this | Complete Q1\&2 |
| Find missing lengths when an area of a shape is given. | Watch this | Complete Q3\&4 |
| Solve real life problems by calculating area. | Watch this | Complete Apply Q1-3 |
| Calculate the perimeter of different 2D shapes | Watch this | CompleteQ1-3 |
| Solve problems involving perimeter. | Watch this | Complete Apply Q1-5 |
| Solve problems requiring costing of areas and perimeters. | Watch this | Complete Q9\&12 <br> Complete Apply Q6 |



## Knowledge Goals: Maths

Term 2: Tier 3 Vocabulary

| $\#$ | Key word |  |
| :--- | :--- | :--- |
| 1 | Angle | The figure formed by 2 straight lines meeting (degrees) |
| 2 | Quadrilateral | Any 4-sided shape |
| 3 | Parallel | Straight lines that never meet |
| 4 | Transversal | Straight line that cuts across tow or more (sometimes parallel) lines. |
| 5 | $2 D$ | 2 dimensions to the shape, ie length and width |
| 6 | Area | The size of a surface (2D shapes) |
| 7 | Perimeter | The distance around a surface (2d shapes) |
| 8 | Parallelogram | A quadrilateral with 2 pairs of parallel sides |

## Knowledge Goals: Music - Britpop

|  |  | Half Term 3: Tier 3 Vocabulary | 0\%S48 |
| :---: | :---: | :---: | :---: |
| \# | Key word | Definition |  |
| 1 | Hook | A short, catchy passage or phrase of music. |  |
| 2 | Riff | A repeated chord progression | Oasis, Blur, Manic Street Preachers, Reef, Blur, Travis, Elastica, |
| 3 | Middle 8 | a section in a song that tends to happen towards the middle of the song, and tends to be eight bars in length. |  |
| 4 | Chorus | a section of a song that is repeated at least twice |  |
| 5 | Outro | The end of the song. |  |
| 6 | Intro | The beginning of the song where the mood is set. |  |
| 7 | Brit-Pop | British pop music of the mid 1990s that was typically influenced by the Beatles and other British groups of the 1960s |  |
| 8 | Grunge | distortion-filled, down-tuned and rifi-based rock |  |
| 9 | Chord | 2 or more notes played at the same time. |  |
| 10 | I-IV-V-Vi | The chords which are predominantly used to make Brit Pop Music. |  |

 O" 193 MALES BETWEEN 15 AND 34 YEARS OF AGE DIED Fin RROM ALCOHOL

1 the number of ALCOHOL-RELATED HOSPI+AL ADMISSIONS FOR 15 TO 24YEAR-OLD INCREASED BY:

 \% $11 \%$ OF 15-16 YEAROLDS目 HADSEX | UNDERTHE |
| :---: |
| INFLUENCEOF | ALCOHOL AND REGRETTED IT



ALMOST ONE IN TEN BOYS AND ALMOST ONE INTEN BOYS AND
AROUND ONE INEIGHT GIRLS


AFTER DRINKING ALCOHOL

## Knowledge Goals: PDev

## BODY

 POSITIVEFacts and Figures of Schizophrenia



SELF HARM: AN INFOGRAPHIC


All Bodies Are Good Bodies. BODY SIZE AND HEALTH ARE
 Again, we need to stop equating fat wi
 based on their appoaranoe is simply atign
of fotphobino. In fract, studies show that fat
shaming increases health risks. Fat shaming in reases health risks. Fat and
shame is harfulto peolt, mentand
physical health. Fitness is for people of all




## Knowledge Goals: PDev

## Half Term 4: Tier 3 Vocabulary

| 1 | Mental health | like physical health, a measure of how well a person is, just in their <br> mind instead of their body. |
| :---: | :---: | :--- |
| 2 | Anxiety | a feeling or state of worry, nervousness, or unease about something <br> with an uncertain outcome. |
| 3 | Self-expression | A way of showing the world your true self or showing how you would <br> like people to think of you. |
| 4 | Consent | Permission for something to happen or agreement to do something. |
| 5 | Body image | the perception of the physical self and the thoughts and feelings that <br> result from this. |
| 6 | Self-harm | Self-harm - deliberate injury to oneself, typically due to an <br> overwhelming negative mental state. |
| 7 | Dermatillomania | a psychological condition where people pick, scratch or harm <br> themselves, not to feel pain but because of an addictive urge to do <br> this. |
| 8 | Alcohol | a chemical which is in certain drinks and changes how people <br> behave. |
| 9 | Legalisation | The process of making something legal to use. |
| 10 | Schizophrenia | A long-term mental health condition which can cause a sufferer to <br> have frightening hallucinations. |

## Notes:



## Knowledge Goals: PE

## Badminton

- Serving - I can perform the backhand and forehand serve with accuracy, landing the shuttle in the opponents' service box.
$\square$ The Clears - I know that the clear is a defensive stroke and can be used to slow the pace of the game and regain position on court
The Drop Shot - I understand that the drop shot is an attacking shot and why.
The Smash - I can hit the shuttle with power and land the shuttle mid court, showing good accuracy
Net Play - I can accurately hit the shuttle low over the net and land close to the net.
Game Play - I know which side of the court to serve from depending on if the score is odd or even.


## ENGLAND <br> HOCKEY

## Hockey

$\square$ Ball Control - I can use reverse stick at the appropriate times to control the ball.
$\square$ Passing - I can demonstrate passes at increasing variety, speed and accuracy. On reception I rotate the stick forward to ensure the ball is trapped and available.
$\square$ Dribbling - I can move at speed with the ball avoiding challenges by changing speed or direction.

- Tackling - I can apply the block tackle effectively and safely in game situations on many occasions.
$\square$ Game Situations - I can organise effective attacking opportunities quickly in free hit situation.


## Footbal

Ball Control - I can control the ball with most body parts with some consistency

- Passing - I can occasionally pass the ball accurately using different parts of my foot whilst under pressure.
Defending - I can decide whether to commit to a tackle or jockey my opponent.
Dribbling - I can dribble the ball for some distance as long as it's on my stronger side.
Shooting - I can accurately shoot from a moderate distance using different techniques.
- Game Situations - I move into space in games and communicate with teammates and can maintain possession while decision making.



## Netball

 technique.
## Gymnastics

Floor - I can perform a paired sequence, performing advanced movements showing consistently high levels of control and tension.
$\square$ Jumps - I can successfully incorporate a variety of jumps to change the level of a sequence.

- Apparatus - I can adapt the apparatus to perform a multi-move sequence using a range of vaults with correc
- Performance - I can evaluate another group's sequence, making specific suggestions on how to improve the level of their performance.
- Evasion/Support Play - I can demonstrate principles of attack when to penetrate or out flank. I can support in different formations including 'magic diamond'
- Passing \& Catching - I can pass and catch a ball over a longer distance with some accuracy, making decisions on the weight and length of the pass. Developing skills for quick passing to maximise potential overlaps
- Tackling/Defensive Strategies - I can demonstrate the principles of defence, denial of space, pressure, open gate tackle, cover and regain possession
$\square$ Rucks \& Mauls - I can set up a micro maul or micro ruck if none of the 'continuity' options are possible
- Game Play - I can plan and execute set piece plays from a 'scrum' or 'line out'


## Knowledge Goals: PE

|  |  | Half Term 1: Tier 3 Vocabulary |
| :---: | :---: | :--- |
| $\#$ | Key word | Definition |
| 1 | Reverse Hit <br> (Tomahawk) | Hit on your reverse side, can be a pass or a shot. <br> Keeps the speed of play up. |
| 2 | Anticipation | The ability to quickly and accurately predict the <br> outcome of an opponent's action before that action is <br> completed. |
| 3 | Disguise | Ability to deceive the opponent with fake movements <br> or passes. |
| 4 | Line Breaks | An attacking player gets through the opponent's <br> defensive line while in possession of the ball. |


|  | Notes: |
| :---: | :---: |
|  |  |
|  | .......................................... |
|  | ........................................... |
|  | .......................................... |
|  | ........................................... |
|  | ............................................................. |
|  | ........................................... |
|  | ..................................................................... |
|  | .......................................... |
|  | .. |
|  | .................................................................................. |
|  | $\qquad$ |
|  | .............................................................................. |
|  |  |
|  | ................................................ |

## Knowledge Goals: Physics - Electrical circuits



## Equations to learn

charge $=$ current $\times$ time
energy $=$ charge $\times$ potential difference resistance $=$ potential difference $\div$ current

Resistance in ohms ( $\Omega$ )
Current in amperes (A)
Energy in joules (J)
Potential difference in volts (V)
Charge in coulombs (C)
Time in seconds (s)

## Investigating the characteristics of wires and components

This circuit can be used to vary and measure the current and potential difference across a component to be tested. The ammeter measures the current and is connected in series.
The voltmeter measures the potential difference and is connected in parallel.
The variable resistor can be used to either adjust the current in

the circuit or keep it constant.


## Three rules for series circuits

- The same current passes through each component.
- The total resistance of two or more components in series is equal to the sum of the resistance of each component.
- The total potential difference of the cells in series is the sum of the potential difference of each cell.


## Three rules for parallel circuits

- The total current though the whole circuit is the sum of the currents through the separate branches.
- The toral resistance of two or more components in parallel is less than the resistance of the resistance of the component with the least resistance.
- The potential difference across each branch is the same.


## Knowledge Goals: Physics - Electrical circuits

|  |  | Half Term 4: Tier 3 Vocabulary |
| :---: | :---: | :--- |
| \# | Key word | Definition |
| 1 | current | Current is the rate of flow of electric charge. It is measured in <br> amperes (A) using an ammeter connected in series. |
| 2 | potential <br> difference | Potential difference is the energy shifted by each coulomb of <br> charge passing through a component. It is measured in volts (V) <br> using a voltmeter connected in parallel. |
| 3 | resistance | The ratio of the potential difference across a component to the <br> current flowing through it. Measured in ohms ( $\Omega$ ). |
| 4 | component <br> characteristic | A graph which describes the behaviour of an electrical component <br> under different operating conditions. |
| 5 | charge | The physical property of matter that causes an object to experience <br> a force when placed in an electric field. Measured in coulombs (C). |
| 6 | Ohm's law | The current through a resistor at constant temperature is directly <br> proportional to the potential difference across the resistor. |
| 7 | thermistor | A component whose resistance decreases with temperature. |
| 8 | LDR | Light dependent resistor; a component whose resistance <br> decreases with increased light level. |
| 9 | diode | A component which only lets current flow through it in one direction. |

## Notes:

$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

## Knowledge Goals: Year 9 Judaism

Judaism is one of the world's major religions. It is the world's 10th largest religion, with about 14.6 million followers. It is around 4,000 years old.
Jews are the people who follow Judaism. Like Christians and Muslims, Jews believe that there is only one God, who created the world and everything in it.
Abraham is seen as the father of the Jewish religion. Jews believe that Judaism began when he started worshipping one God instead of many
Judaism began in the Middle East - but there are now Jewish people all across the world.
The main holy book of Judaism is the Torah, written in
Hebrew. Synagogues are Jewish worship buildings.
mage of the Great Synagogue of Florence, in Italy, Europe.


## Jewish Beliefs

## The Four Stages of Life

Jews believe in four important stages of life, and mark each with a religious ceremony.
The four are: birth, becoming an adult, marriage and death
When Jewish boys (aged 13) and Jewish girls (aged 12) become Jewish adults, they have a bar mitzvah (for boys) or bat mitzvah (for girls) ceremony. At these ages, Jewish religion, law and social life judges that the boys and girls become responsible for their own actions. The ceremony is usually held on the first Shabbat (Jewish day of rest) after their birthday. In a bar mitzvah ceremony, a boy must read passages from the Torah.

## The Story of Abraham

Abraham is an important figure in Judaism, Christianity and Islam. His story is told in the Genesis section of the Bible
-According to the story, Abraham made an agreement with God, in which he promised to be faithful and to teach his laws to the world. In return God gave Abraham and his descendants the land of Israel. Even though Abraham was 99, and his wife Sarah 90, God enabled them to have a son, Isaac, forming the first Jewish family.

## Ceremonies and Festivals

- Jews enjoy many ceremonies and festivals as a part of their religion.
-Passover takes place in March or April, and is when Jewish people remember how God brought them out of Egypt (the Exodus). A special meal is created to remind the Jews of the good and bad times in the past. It includes hard boiled egg, parsley, boiled potato, lettuce, horseradish, chopped apples and walnuts.
-Hannukah takes place in December and is known as 'the Jewish festival of lights.' People light candles,


## Answers to Important Questions

| Where and how do Jews worship? |  | -Synagogues are where Jewish people go to worship. <br> -In Orthodox synagogues, men and women sit separately. In progressive synagogues, men and women can sit together and worship. <br> -Synagogues have large rooms for prayers, and normally smaller rooms for studying. <br> -The front of a synagogue faces towards Jerusalem. <br> -There is always a raised platform called a Bimah. |
| :---: | :---: | :---: |
| What is the Torah? | $1$ | -The Torah Is the Jewish holy book. <br> -They are written in Hebrew on rolls of parchment. The scrolls are never touched when they are read from - readers use a pointer called a yad. |
| Where do most Jews live in the world? |  | -There are around 14.6 million Jews in the world. <br> -Two countries - the United States and Israel - have $81 \%$ of the world's total Jewish population. <br> -Some of the other countries with substantial Jewish populations include France, Canada, Russia, the United Kingdom, Argentina and Germany. <br> -There were 17 million Jews in 1939, but this was reduced to 11 million by 1945 due to the Holocaust. |
| How many different types of Jews are there? |  | -There are many different branches of Judaism. <br> -Some Jews still follow all of Judaism's original laws and customs <br> - these are called Orthodox Jews. <br> -Jews who do not follow all of these traditions are called <br> Progressive Jews. Progressive Jews are happy to be flexible with |

## Top 10 Facts

Jews believe in one God, that is a spirit and has no physical form
A kippah is the clothing item that many Jewish men wear on their head
Praying is very important in Judaism - there are prayers for every occasion.
Jesus was born into the Jewish religion, but began preaching his own ideas.
Many Jewish homes have a family box, and give to those in need.
6. Strict Jens are not allowed to travel or watch TV on the day of Shabbat!
7. Jewish New Year takes place in September October time, and is called Rosh Hashanah
8. Jews fast for 25 hours and pray during Yom Kippur
9. Anne Frank was a famous Jewish girl, who was killed in the Holocaust
10. The Anne Frank House and Secret Annex, in Amsterdam, Netherlands, remains one Europe's busiest tourist attractions

## Knowledge Goals: Year 9 Judaism

## Term 3: Tier 3 Vocabulary

| \# | Key word | Definition |
| :---: | :---: | :---: |
| 1 | Judaism | the monotheistic religion of the Jewish people. |
| 2 | Synagogue | the building where a Jewish assembly or congregation meets for religious worship and instruction |
| 3 | Passover | the major Jewish spring festival which commemorates the liberation of the Israelites from Egyptian slavery, lasting seven or eight days from the 15th day of Nisan. |
| 4 | Hannukah | a lesser Jewish festival, lasting eight days from the 25th day of Kislev (in December) and commemorating the rededication of the Temple in 165 BC by the Maccabees after its desecration by the Syrians. It is marked by the successive kindling of eight lights. |
| 5 | Bar Mitzvah | the initiation ceremony of a Jewish boy who has reached the age of 13 and is regarded as ready to observe religious precepts and eligible to take part in public worship. |
| 6 | Bat Mitzvah | a religious initiation ceremony for a Jewish girl aged twelve years and one day, regarded as the age of religious maturity. |
| 7 | Shabbat | The Jewish day of rest and celebration that begins on Friday before sunset and ends on the following evening after nightfall. It is ushered in with (late afternoon) candlelighting, prayers, and feasting on braided bread and other delicacies. And its end is marked with a multisensory ceremony as well |
| 8 | Torah | the overall body of Jewish religious teachings encompassing the whole body of Jewish law, practice and tradition |



## Knowledge Goals: Spanish



## Knowledge Goals: Spanish

## Half Term 1: Tier 3 Vocabulary

| Half Term 1: Tier 3 Vocabulary |  |  |
| :---: | :---: | :---: |
| 1 | SSC | Symbol-Sound Correspondence: the sound that letters or combination of letters make in a language |
| 2 | cognate | A cognate is a word which looks the same or very similar to a word in English. E.g.: la historia, el inglés |
| 3 | connective | A word which links sentences together. E.g.: and, but |
| 4 | Opinion verb/ phrase | A verb or a phrase which you use to give an opinion: I like, I dislike, in my opinion etc... |
| 5 | Justifier | A way of giving a reason, a justification of an opinion. I like .... because it is... |
| 6 | qualifier | A word which changes the intensity of an adjective: quite, very, extremely... |
| 7 | adjective | A describing word: big, small, green, interesting, amusing etc... |
| 8 | Time phrase | A phrase used to say when something is happening: normally, on Mondays, yesterday, next weekend... |
| 9 | Tenses | Past, present, future, conditional |
| 10 | Infinitive | A verb as you find it in the dictionary: to play, to eat. This is the form of the verb when it is not used with a pronoun (I, he, she...) |

## Notes:

$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

## Frayer Model Template



## Frayer Model Template



## Frayer Model Template



## Frayer Model Template



