KNOWLEDGE ORGANISER

YEAR 8 – TERM 2

THOMAS HALL SCHOOL

Think Like An
Environmentalist

Community, Collaboration and Challenge

ATTENDANCE MATTERS

EVERY DAY COUNTS
Missing just 1 day every 2 weeks is the same as missing 10% of the school year.

LEARNING
Being in school allows you the best opportunity to learn.

WELLBEING
Attending school supports your mental and emotional health.

FUTURE SUCCESS
Regular attendonce at school is vitol for building the key skills needed for future employment

EQUIPMENT

SCHOOL DAY

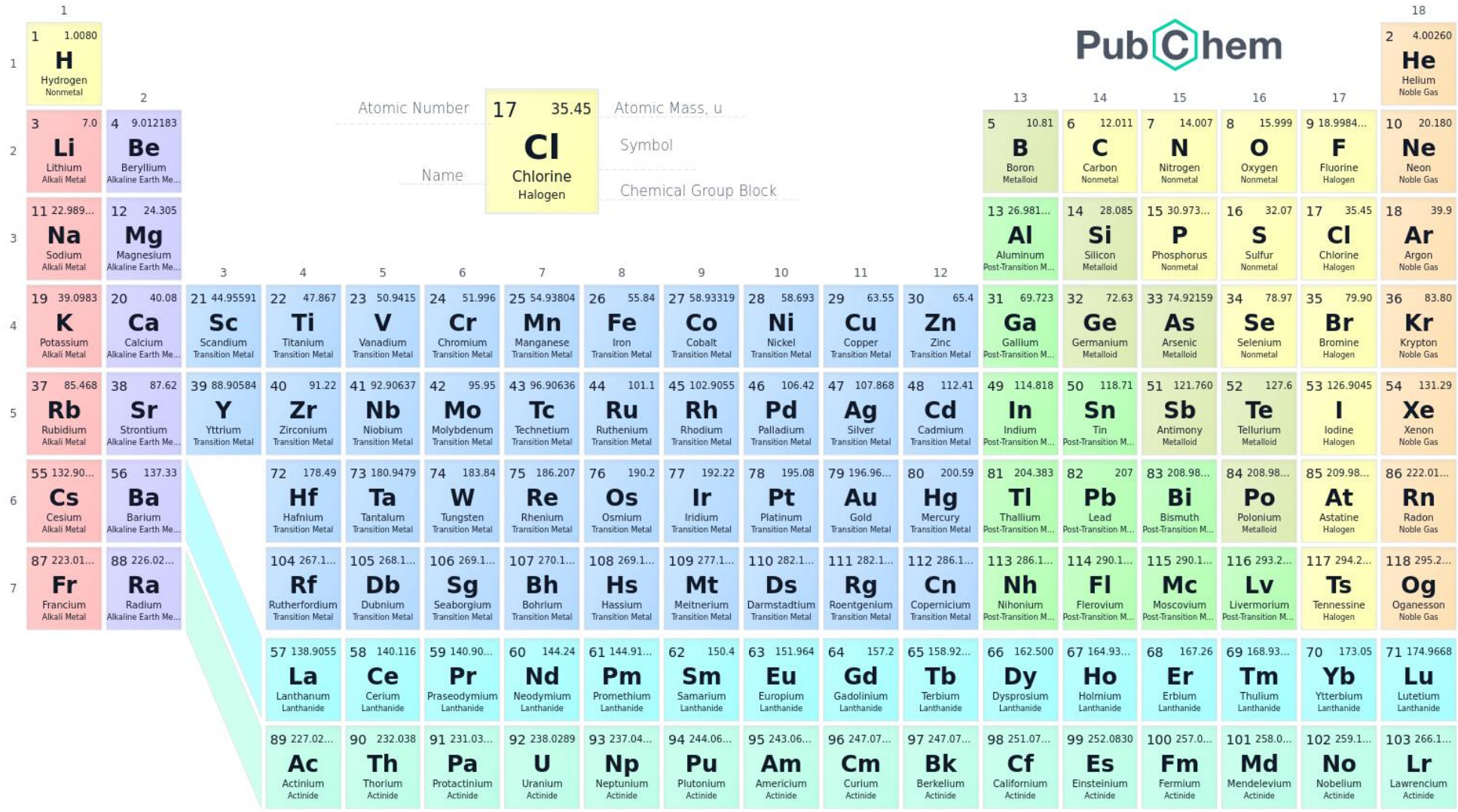
9:00–9:05	AM Reg
9:05–10:20	Lesson 1
10:20–11:35	Lesson 2
11:35–12:05	Break 1
12:05–13:20	Lesson 3
13:20–13:50	Break 2
13:50–15:05	Lesson 4
15:05–15:30	PM Reg – assembly or guided reading

Multiplication Grid

×	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

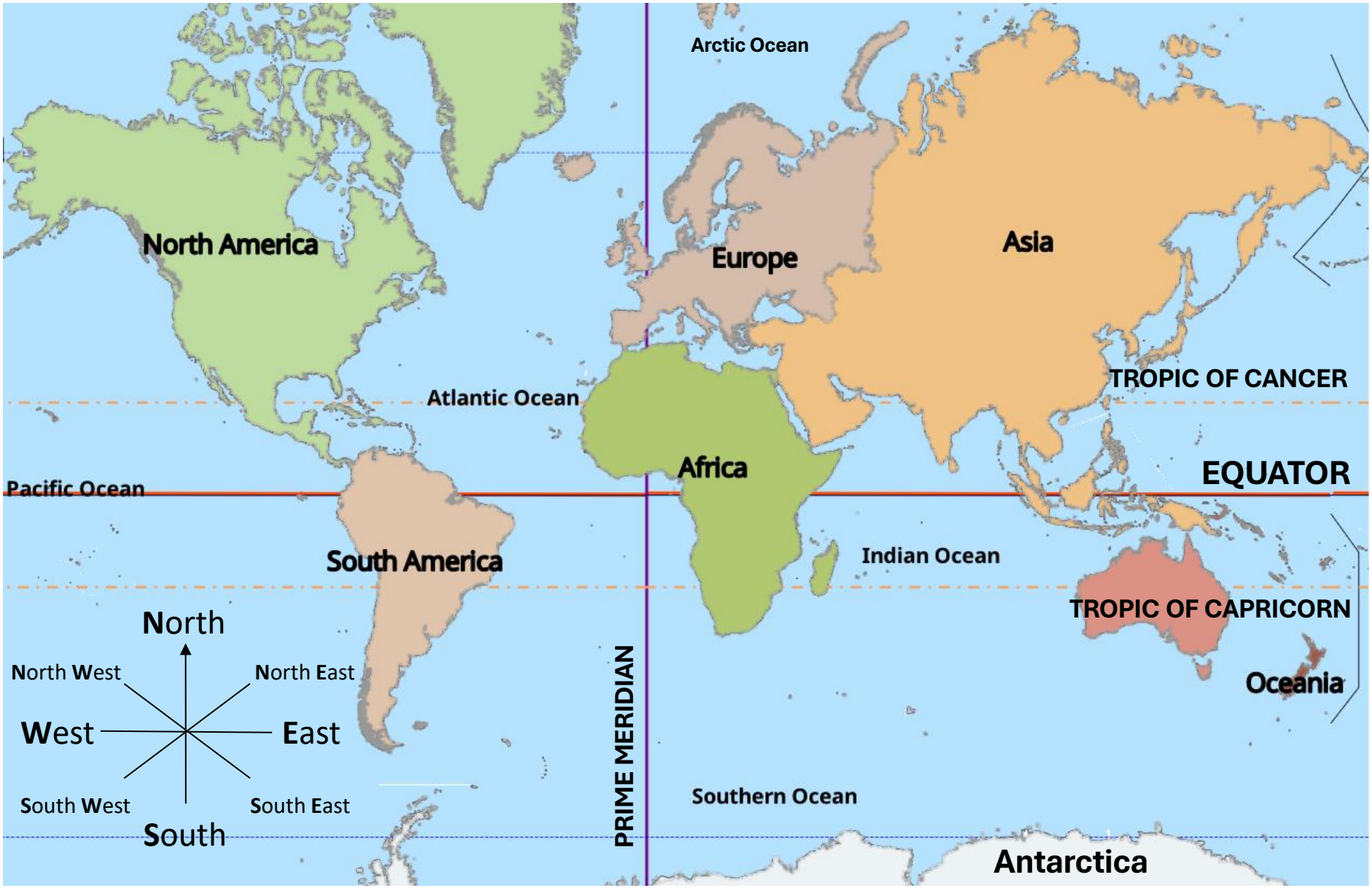
PERIODIC TABLE OF ELEMENTS

Chemical Group Block




01 Adjectives
THAT DESCRIBE:
age: young, old
colour: red, blue
condition: new, used
size: large, medium
speed: fast, slow
etc.
COMPARATIVE:
smaller, better...
SUPERLATIVE:
the smallest,
the worst,
the best...
02 Adverbs
PLACE:
here, there,
outside, everywhere,
upstairs, nowhere,
somewhere....
TIME:
ago, before, since,
yet, for, still,
afterwards...
FREQUENCY:
often, never,
sometimes, always
MANNER:
just, quite,
quickly, hardly,
well, carefully,
barely, almost,
scarcely,
beautifully...
03 Conjunctions
COORDINATING:
and, or, but,
yet, nor, for, so
CORRELATIVE:
both... and...,
either... or...,
just as... so...,
whether... or...,
neither... nor...,
not only... but also...
SUBORDINATING:
after, since, if,
while, although,
before, because,
unless
04 Determiners
TELLS US WHICH:
each, every,
some, none,
all...
TELLS US WHOSE:
my, your, her, his, its,
our, your, their (= possessive
adjectives or determiners)
05 Nouns
COMMON NOUNS: house, dog, laptop...
PROPER NOUNS:
(Capitalised)
London, Paris,
James, William,
Julia, Jennifer...
> VERBAL:
swimming...
> COLLECTIVE:
choir, jury...
> COMPOUND:
mother-in-law...
> COUNTABLE:
book, day...
> UNCOUNTABLE:
traffic, calm...
> ABSTRACT V. CONCRETE:
wit vs. road...
06 Prepositions
PLACE / DIRECTION:
in, at, on,
under, above,
across,
among,
between...
TIME:
in, at, on,
over, until, about,
during, before,
after, while,
through...
OTHER (agent,
phrase...):
by, with, on, over,
to, up, within,
beyond, for...
07 Pronouns
PERSONAL
(subject):
I, you, he, she, it,
we,
you, they
PERSONAL
(reflexive):
myself, yourself,
himself, herself,
itself, ourselves,
yourselves,
themselves
DEMONSTRATIVE:
this, these,
that, those
PERSONAL
(object):
me, you, him, her,
it, us, you, them
POSSESSIVE:
mine, yours, his,
hers, its, ours,
yours, theirs
INTERROGATIVE:
how, where,
when, which...?
INDEFINITE:
somebody,
anyone...
RELATIVE:
that, which,
whose, whom...
08 Verbs
ACTION:
to run, to organise,
to read, to think...
> Transitive
or
> Intransitive
LINKING:
to be,
to look, to appear,
to seem, to smell...
HELPING
(= AUXILIARY):
can, may,
will, must,
should, to be,
to have...
Word Classes

World Map


Arctic Ocean
North America
Europe
Asia
Atlantic Ocean
TROPIC OF CANCER
Africa
EQUATOR
Pacific Ocean
South America
Indian Ocean
TROPIC OF CAPRICORN
Oceania
North
North West
North East
West
East
South West
South East
South
PRIME MERIDIAN
Southern Ocean
Antarctica

Art

Year 8 Perspective Art Term 2

Introducing the core concepts of perspective, gradually building skills from basic one-point perspective to more complex compositions involving two-point perspective and creative application.

Learning Objectives:

- Understand the principles of linear perspective.
- Apply one-point and two-point perspective techniques.
- Create depth and spatial illusion in drawings.
- Explore creative applications of perspective in imaginative and observational work.

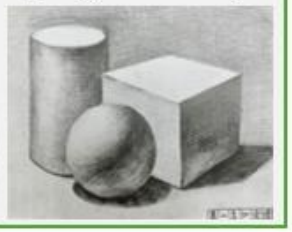
- **Objective:** Understand what perspective is and why it's used.
- **Activities:**
- Class discussion: "What is perspective?"
- Look at examples of Renaissance art and contemporary art using perspective.
- Sketch simple horizon lines vanishing points.


One-Point Perspective Basics

- **Objective:** Draw a simple box using one-point perspective.
- **Activities:**
  - Demonstration on the board.
  - Students draw cubes and simple shapes in one-point perspective.
- **Focus:** Horizon line, vanishing point, orthogonal lines.


Street Scene in One-Point Perspective

- **Objective:** Create an outdoor street scene.
- **Activities:**
  - Students draw buildings on either side of a road using one-point perspective.
  - Emphasize scale and detail.
- **Key Skills:** Overlapping, diminishing scale.

Building Structures in Two-Point Perspective

- **Objective:** Apply two-point perspective to architectural forms.
- **Activities:**
  - Draw buildings or blocky structures.
  - Introduce windows, doors, and roofs in perspective.

Introduction to Two-Point Perspective

- **Objective:** Understand and practice two-point perspective.
- **Activities:**
- Step-by-step demonstration of drawing a cube in two-point perspective.
- Students draw multiple cubes or boxes from different angles.
- **Focus:** Dual vanishing points, corner-on view.


Computing

Web Development Knowledge Organiser

What is the World Wide Web?

The **internet** is a global network of computers. The **World Wide Web** is the part of the **internet** that can be accessed through **websites**. **Websites** consist of **webpages** which allow you to see information.

Websites are accessed using a **web browser**. A **browser** is a **program** designed to display the information held on a **website**. Every **website** has an address at which it can be found, a bit like a house address.

Considering your audience

Define your audience clearly

- For example, young or old!

What is the purpose of your website?

- To entertain or to inform?

How will this affect your design?

Responsive Design

Websites are viewed on different size screens

Webpages must automatically adjust to fit

Set widths as **percentages** rather than pixels

Using HTML to create websites

All **web** pages on the **internet** are created using a language called **Hypertext Markup Language** (**HTML**). **HTML** describes:

- what information appears on a webpage
- how it appears on the page (formatting)
- any links to other pages or sites

HTML can be written in specialist software, or in a simple text editor like Notepad++. As long as the document is saved with the file extension **'.html'** it can be opened and viewed as a **webpage** from a **browser**. This example **HTML** code displays a message on a webpage:

```
<html>
        <body>
                <h1>Hello world</h1>
                <p>This is my first webpage</p>
        </body>
</html>
```

The code uses **tags** to describe the appearance of the information:

<html> states that the document is a HTML document
<body> states that the information appears in the body of the page
<h1> states that the following text appears as a prominent heading
<p> states that this is the beginning of a new paragraph

CSS (Cascading Style Sheets)

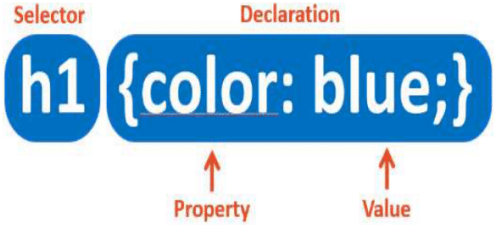
HTML defines the structure and content of your **web page**

CSS defines the style and layout of **web pages**

CSS can be used to change the style of a whole **website**, one **web page** or a single occurrence of an element, e.g.

<h1 style="text-align:center">

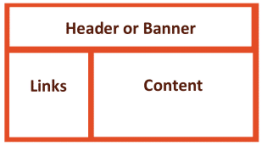
CSS Syntax



When adding **CSS** to a **web page** it is defined at the top of the page between the **<style>** tags.

Common Web Design Features

- Limited colour palette
- Limited font selection
- Common interface across all pages
- Navigation bar



Year 8

Drama

Term 2

Plot

"Stone Cold," follows two parallel narratives: Link, a young man forced to live on the streets of London, and Shelter, a former soldier who targets homeless people for murder. Link, after running away from an abusive stepfather, struggles to survive and befriends Ginger, another homeless youth. Simultaneously, Shelter, driven by a warped sense of patriotism, believes he is cleansing the city by killing the homeless.

Getting from Page to Stage

1) Decide who is playing who.
2) Sit and read the scene, including stage directions.
3) Discuss the scene.
4) Get on your feet and start blocking.
5) Focus on performance skills to make the scene more detailed.

Context

Stone Cold is set in the 1990s, a time when homelessness was a significant issue, and the story highlights the prejudice and vulnerability faced by those living on the streets.

Themes

Homelessness
Society's failure to protect the vulnerable
Friendship and trust
Prejudice
Invisibility

Key Characters

Link - real name Dave: a British teenager who grew up in Bradford until he became homeless.
Shelter - an ex-army man who served for twenty-nine years in the National Service
Ginger - a homeless boy whom Link meets in London and who becomes Link's friend and companion.
Louse - a journalist who goes undercover as Gail; a homeless girl who befriends Link.

Set Design Terminology

Staging type: end-on, traverse, thrust, proscenium arch, in-the-round, promenade.
Naturalistic or non-naturalistic
Stage Flat - a wooden structure to make walls
Rostrum - a raised platform
Painted Backdrop - a decorated back cloth
Cyclorama - a white backdrop that can be lit or projected onto

Stone Cold

THE HUNGER GAMES English

🔍 Key Concepts

•**Dystopia**: A fictional society that is frightening, oppressive, and controlled, often under the guise of being perfect.

•**Utopia vs Dystopia**: A utopia is an ideal society; a dystopia is its dark, flawed opposite.

🧠 Core Features of Dystopian Fiction

Feature	Description	Example
Oppressive Government	Control through surveillance, propaganda, or fear	*1984* – Big Brother watches everyone
Restricted Freedom	Citizens have limited rights or choices	*Divergent* – People are forced into factions
Survival Struggles	Characters fight to survive in harsh conditions	*The Hunger Games* – Katniss fights in the arena
Rebellion	Characters challenge the system	*The Maze Runner* – Teens escape the maze
Technology Control	Advanced tech used to manipulate or monitor	*1984* – Telescreens spy on citizens
Loss of Identity	People are stripped of individuality	*Divergent* – Suppression of personal traits

Key Dystopian Terms

Words like regime, surveillance, and rebellion highlight themes of oppression and conflict in dystopian worlds.

Themes Conveyed Through Vocabulary

Terms such as indoctrination, resistance, and isolation express societal breakdown and autonomy struggles.

Impact on Storytelling

Using genre-specific words creates vivid worlds and engages readers with emotional and ideological depth.

Core Themes of Dystopia

Dystopian fiction explores oppression, environmental disasters, and technological dominance as central societal issues.

Purpose and Reflection

The genre mirrors contemporary issues, prompting readers to consider freedom, surveillance, and resistance.

English

Crafting language in Dystopian writing

Descriptive Techniques

Use stark imagery and symbolism to depict bleak landscapes and deeper meanings in dystopian settings.

Dialogue and Character

Dialogue reveals power dynamics, builds tension, and shows character development effectively.

Sentence and Punctuation

Varied sentence lengths and use of punctuation shape narrative rhythm and convey mood and control.

Techniques for Effective Dystopian Writing

Imagery: Descriptive language to create a vivid setting

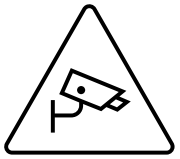
Foreshadowing: Hints about future events

Symbolism: Objects or actions that represent deeper meanings

First-person/Third-person narration: Perspective affects how the story is told

Cliffhangers: Ending chapters with suspense to keep readers engaged

Self-Quizzing for Dystopian Fiction



Key Questioning

Self-quizzing with key questions promotes critical thinking about dystopian themes and narratives.

Vocabulary Recall

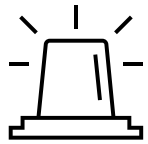
Recalling literary terms like totalitarian and propaganda strengthens understanding of dystopian concepts.

Quick Writing Challenges

Short exercises using dystopian vocabulary and symbols support analytical and creative skills.

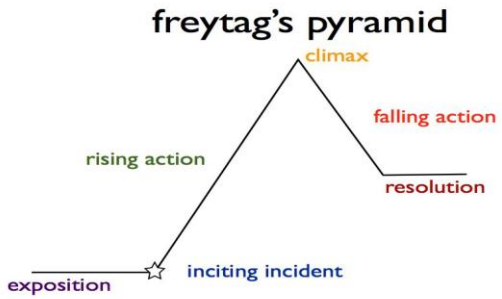
Creative Prompts

Inventing dystopian worlds encourages imagination and deeper genre mastery.



English

Basic features	Definition
Capital Letters	These must be at the starts of names, starts of sentences and use the pronoun 'I'.
Full stops	Unless using another piece of punctuation, these need to be at the end of sentences.
Question marks	Instead of a full stop denoting a question. E.g. When do you use a question mark?
Commas	Used to separate items in a list or a dependent clause from an independent clause. E.g. If I had to choose, I like blue, red and green.
Apostrophes	Indicating a contraction or possessive. E.g. The pie wasn't Peter's to eat.
Consistent tense	The tense you begin writing in should usually stay the same throughout your writing.
Paragraphs	A break in writing indicates the topic, person, place, time or focus of your writing has changed.
Homophone spellings	Easily mistaken spellings like there, their and they're; to, too and two or your and you're.
Semi-colons	A punctuation mark that can separate two independent clauses instead of a conjunction or full stop.
Colon	Colon can separate an independent clause and a dependent clause or start a list.
Simple, compound and complex sentences	Use a variety of these to make writing interesting. Simple sentences are just an independent clause. Compound sentences are two independent clauses usually joined with a conjunction and a complex sentence is an independent and dependent clause.



Language Devices	Definition
Simile	A comparison using the words 'like' or 'as'.
Metaphor	A comparison that represent one thing as being the other.
Personification	When an object is represented as being human.
Onomatopoeia	Words that sound like a sound.
Alliteration	Two or more words starting with the same letter.
Imagery	A vivid, easy to imagine description.
Symbolism	When one thing is standing in the place of another.
Oxymoron	When two things are put together but are impossible.
Juxtaposition	When two opposing ideas or themes are used near each other.
Pathetic Fallacy	When nature creates a mood in a story.

Module 1 - La rentrée

Point de départ

Bonjour Hello Salut! Hi!	(Comment) ça va? How are you?	Ça va (très) bien I'm (very) well Pas mal, merci Not bad, thank you Ça ne va pas! Not good!	Au revoir! Goodbye À plus! See you later

As-tu des frères ou des soeurs?

As-tu des frères ou des soeurs? Do you have brothers or sisters?	Oui, j'ai.. Yes I have..	un (demi) -frère a (half) brother une (demi) - soeur a (half) sister
	Non je n'ai pas de frères ou de soeurs I don't have any brothers or sisters	
	Je suis fils/fille unique I'm an only child	

Tu es comment?

Je suis – I am Je ne suis pas – I'm not Il est – he is Elle est – she is	amusant (e) – funny arrogant (e) – arrogant bavard (e) – chatty fort (e) – strong grand (e) – big/tall intelligent (e) – intelligent méchant (e) – nasty patient (e) - patient petit (e) – small/short timide - shy

Voici ma salle de classe

Qu'est-ce qu'il y a sur la photo? What is on the photo?	Sur la photo In the photo Au fond- at the front Au centre- in the centre À gauche- on the left À droite- on the right	il y a there is/are	un tableau (noir/blanc) a (black/white) board un poster – poster un/une prof(esseur) – a teacher un écran – screen un ordinateur – a computer une porte – a door une fenêtre – a window une tablette – a tablet des tables – some tables des chaises – some chairs des élèves - some pupils	c'est it is	sympa - nice génial - great moderne - modern triste - sad nul – rubbish démodé – old fashioned

French

Module 1 - La rentrée

Qu'est-ce que tu fais?

Ma vie, c'est… My life is… Pour moi, la rentrée c'est… For me, going back to school is….	chanter – to sing danser – to danse retrouver mes amis – to meet up with friends bloguer – to blog surfer – to surf tchatter – the chat rigoler – to have a laugh étudier – to study nager – to sim jouer – to play gagner – to win

Mon interview par vidéo

C'est quand, ton anniversaire ? When is your birthday?	mon anniversaire c'est le… my birthday is the	premier – 1st 2,3,4,5 etc	janvier février mars avril mai juin	juillet août septembre octobre novembre décembre

Tu aimes ça?

Tu aimes…? Do you like?	J'aime – I like	le sport - sport le foot - football le vélo - cycling le collège - school le poisson - fish
	Je n'aime pas – I don't like	la danse – dance la musique – music
	Je préfère – I prefer	les serpents – snakes les pizzas – pizza les glaces – ice-creams les jeux vidéo – video games les vacances – holidays les BD – comics les mangas – manga les araignées - spiders

High Frequency Words

je tu il elle	I you he she
un/une des	a some
et mais aussi	and but also
assez très trop un peu	quite very too much a bit

Les numéros

1 un/une
2 deux
3 trois
4 quatre
5 cinq
6 six
7sept
8 huit
9 neuf
10 dix
11 onze
12 douze
13 treize
14 quatorze
15 quinze
16 seize
17 dix-sept (10+7)
18 dix-huit (10+8)
19 dix- neuf

20 vingt
30 trente
40 quarante
50 cinquante
60 soixante
70 soixante-dix (60+10)
71 soixante et onze (60+11)
80 quatre vingts (4 x 20)
90 quatre-vingts-dix (4x20)+10
100 cent

Module 2 – En classe

Point de départ

ici- here en bas- at the bottom au centre - in the centre à droite – on the right à gauche – on the left	il y a there is, are	un cercle a circle un demi-cercle a semi circle un triangle a trangle	blanc(he) – white bleu (e) – blue gris (e) – grey jaune – yellow marron – brown noir (e) – black orange – orange rose – pink rouge – red vert (e) – green violet(te) - purple

Qu'est-ce que tu portes?

Qu'est-ce que tu portes? What do you wear?	Je porte I wear on porte we wear	l'uniforme scolaire school uniform un pantalon – trousers un polo – a polo shirt un pull – a jumper un sweat – a sweatshirt un tee-shirt – a T-shirt	et c'est and it is… mais, ce n'est pas but it's not…	chic smart confortable comfortable démodé(e) old-fashioned pratique practical
		une chemise – a shirt une cravate – a tie une jupe – a skirt		
		des baskets – trainers des chaussettes – socks des chaussures - shoes		

Ta journée scolaiie est comment?

Ta journée scolaire est comment? What is your school day like?	je quitte la maison – I leave the house j'arrive au collège – I arrive at school je retrouve mes copains – I meet my friends on commence les cours – we start lessons je mange à la cantine – I eat in the canteen je chante dans la chorale – I sing in the choir je joue dehors – I play outside on recommence les cours – we start lessons again à (quatre) heures – at (four) o'clock

C'est comment, un collège français?

Quel est ton jour préféré? What is your favourite day?	Mon jour préféré, c'est le…. My favourite day is….	lundi – Monday mardi – Tuesday mercredi – Wednesday jeudi – Thursday vendredi – Friday samedi – Saturday dimanche - Sunday

Module 2 – En classe

Qu'est-ce que tu penses de tes matières?

Qu'est-ce que tu penses de tes matières? What do you think of your subjects? Tu aimes? Do you like?	J'aime I like J'adore I love J'aime assez I quite like Je n'aime pas I don't like Je déteste I hate	le français – French le théâtre – drama	parce que c'est because it is car c'est because it is	facile- easy difficile- difficult intéressant – interesting ennuyeux – boring amusant – fun(ny) créatif – creative nul – rubblish
		la géographie – geography la musique – music la technologie - technology		
		l'anglais – English l'EPS – PE l'histoire – history l'informatique – ICT		le/la prof est sympa the teacher is kind le/la prof est trop stricte the teacher is too strict
		les arts plastiques – art les maths – maths les sciences - science		j'ai trop de devoirs I have too much homework

Un collège super cool!

Le collège est… The school is..	grand – big petit – small de taille moyenne – medium sized
Il y a There is/are	500 élèves – 500 pupils un cinema 3D – a 3D cinema une piscine – a swimming pool un court de tennis - a tennis court
Il n'y a pas de There is/are not	harcèlement – bullying toilettes sales – dirty toilets profs trop sévères – too strict teachers
Tu es d'accord?	Je (ne) suis (pas) d'accord – I (don't) agree

Extra!

J'ai deux heures d'anglais	I have 2 hours of English
C'est ma matière préférée	It's my favourite subject
Je suis fort (e) en maths	I am good at maths
J'ai un emploi du temps	I have a timetable
Je n'aime pas la rentrée	I don't like the start of the new school year
Je préfère les vacances	I prefer the holidays.

High Frequency Words

on	we
et	and
mais	but
parce que	because
très	very
vraiment	really
trop	too
d'abord	firstly
après	after

French

GRAMMAIRE
Regular present tense verbs

ER VERBS e.g. Passer = to spend (time)	
Je pass**e**	*I spend*
Tu pass**es**	*You spend*
Il/Elle/On pass**e**	*He/She/One spends*
Nous pass**ons**	*We spend*
Vous pass**ez**	*You spend (form/pl)*
Ils/Elles pass**ent**	*They spend*

IR VERBS e.g. Finir = finish	
Je fini**s**	*I finish*
Tu fini**s**	*You finish*
Il/Elle/On fini**t**	*He/She/One finishes*
Nous fin**issons**	*We finish*
Vous fin**issez**	*You finish (form/pl)*
Ils/Elles fin**issent**	*They finish*

RE VERBS e.g. vendre = to sell	
Je vend**s**	*I sell*
Tu vend**s**	*You sell*
Il/Elle/On vend	*He/She/One sells*
Nous vend**ons**	*We sell*
Vous vend**ez**	*You sell (form/pl)*
Ils/Elles vend**ent**	*They sell*

GRAMMAIRE Irregular present tense verbs

Faire = to do / to make		Aller = to go	
Je fais	*I do*	Je vais	*I go*
Tu fais	*You do*	Tu vas	*You go*
Il/Elle/On fait	*He/She/One does*	Il/Elle/On va	*He/She/One goes*
Nous faisons	*We do*	Nous allons	*We go*
Vous faites	*You do (form/pl)*	Vous allez	*You go (form/pl)*
Ils/Elles font	*They do*	Ils/Elles vont	*They go*

GRAMMAIRE Modal verbs

Vouloir = to want	
Je veux	*I want*
Tu veux	*You want*
Il/Elle/On veut	*He/She/One wants*
Nous voulons	*We want*
Vous voulez	*You want (form/pl)*
Ils/Elles veulent	*They want*

Pouvoir = to be able to	
Je peux	*I can*
Tu peux	*You can*
Il/Elle/On peut	*He/She/One can*
Nous pouvons	*We can*
Vous pouvez	*You can (for/pl)*
Ils/Elles peuvent	*They can*

Grammar

Aujourd'hui	*Today*
Demain (soir)	*Tomorrow (night)*
Ce matin / ce soir	*This morning/evening*
Cet après-midi	*This afternoon*
La semaine prochaine	*Next week*

⭐ **S'il fait beau**
If the weather's nice

⭐ **S'il fait mauvais**
If the weather's bad

⭐ **Si j'ai assez d'argent** *If I have enough money*

Ça va être...
It's going to be

cool / génial / sympa
cool / great / nice

Qu'est-ce qu'on va faire? ***What are we going to do?***

Near Future Tense = Aller + infintive (going to do)

Je vais
I am going

On va / **Nous allons**
We are going

Use the present tense of the verb ALLER from above ↗

aller au parc	*to go to the park*
visiter le musée	*to visit the museum*
manger au resto	*to eat at a restaurant*
acheter un jeu vidéo	*to buy a videogame*
voir un spectacle	*to see a show*
faire les magasins	*to go shopping*
prendre le bus	*to take the bus*

French

Qu'est-ce que tu as fait le week-end dernier? *What did you do last weekend?*	**J'ai / Nous avons...** *I / We...*	...passé (le week-end) *...spent (the weekend)*	...participé à une competition *...took part in a competition*	fait du vélo *...went cycling*
	...joué au tennis *...played tennis*	...fêté (mon anniv) *...celebrated my birthday*	*...regardé un match / film* *...watched a match / a film*	fait de la natation *...went swimming*

Hier *Yesterday*
Avant-hier *The day before yesterday*
Le week-end dernier *Last weekend*
La semaine dernière *Last week*
Il y a deux semaines *Two weeks ago*
D'abord / Enfin *Firstly / Finally*
Ensuite / puis *Next / then*
Après *After*
Plus tard *Later*
⭐Après avoir (mangé) *After having (eaten)*
⭐Avant de (partir) *Before (leaving)*

The Past: The Perfect Tense with Avoir

We use the perfect tense to say what we did or have done in the past. To form it you need 2 parts:
PART 1: Avoir (the verb to have) + **PART 2:** Past participle (e.g. visited/done/eaten)

PART 1: Avoir = *To have*			**PART 2: The Past participle**							
			ER verbs +é		**IR verbs +i**		**RE verbs +u**		**Irregulars**	
J'**ai**	*I have*	+	visité	*visited*	fini	*finished*	perdu	*lost*	fait	*did*
Tu **as**	*You have*		regardé	*watched*	vomi	*vomited*	attendu	*waited*	pris	*took*
Il / Elle/ On **a**	*He / She has*		écouté	*listened*	dormi	*slept*	vendu	*sold*	bu	*drank*
Nous **avons**	*We have*		mangé	*ate /eaten*					vu	*saw*
Vous **avez**	*You all have*		acheté	*bought*					lu	*read*
Ils / Elles **ont**	*They have*									

Je suis allé(e) ... *I went...*
Nous sommes allé(e) ... *I went...*
au parc / **au** stade *...to the parc / stadium*
à la piscine *...to the pool*
aux magasins *...to the shops*

The Past: The Perfect Tense with Être

Some specific 'special' verbs take **Être (To be)** instead of Avoir...
Être verbs agree with the subject! If it's feminine, add an 'e'. If it's plural, add an 's'

PART 1: Être = *To be*	
Je **suis**	*I am*
Tu **es**	*You are*
Il / Elle **est**	*He/She is*
Nous **sommes**	*We are*
Vous **êtes**	*You lot are*
Ils / Elles **sont**	*They are*

	PART 2: The Past participle (+e) (+s)			
+	allé(e)(s)	*went*	sorti(e)(s)	*went out*
	resté(e)(s)	*stayed*	parti(e)(s)	*left*
	arrivé(e)(s)	*arrived*	venu(e)(s)	*came*
	retourné(e)(s)	*returned*	revenu(e)(s)	*came back*
	rentré(e)(s)	*went back (home)*	devenu(e)(s)	*became*

Grammar

Module 4 - Ma vie de famille

As-tu un animal?

As-tu un animal? Do you have a pet	oui, j'ai un yes I have a	chat – cat chien- dog cochon d'Inde – Guinea pig hamster – hamster lapin – rabbit lézard – lizard oiseau – bird poisson – fish serpent – snake	il est he is elle est she is qui est who is	violet- purple blanc- white noir - black rose- point vert – green marron – brown bleu – blue gris – grey rouge – red jaune – yellow	
	non, je n'ai pas d'animal				
Quel âge as ton animal? How old is your pet?	Il a He is (literally 'he has') Elle a She is (literally 'she has')	un an – 1 year old deux ans – 2 years old trois ans – 3 years old	mais son âge humain est ... but it's human age is..	20 vingt 30 trente 40 quarante 50 cinquante 60 soixante 70 soixante-dix (60+10) 71 soixante et onze 80 quatre vingts 90 quatre-vingt-dix 100 cent	ans years old

Une drôle defamille

je suis I am il est he is elle est she is	grincheux (-se) – grumpy studieux (-se) – studious marrant(e) – funny sévère – strict maigre – thin furieux(-se) – furious

On fait la fête!

le 14 juillet la fête nationale un jour de congé un défilé (militaire) un bal regarder un feu d'artifice faire un pique-nique faire la fête	Bastille Day national holiday a day off (military) parade a dance to watch fireworks to have a picnic to celebrate

Qu'est-ce que tu manges au petit déjeuner?

Qu'est-ce que tu manges / bois au petit déjeuner? What do you eat/drink for breakfast?	je mange I eat	un croissant – a croissant un fruit – a piece of fruit	du pain grille – toast du beurre – butter du bacon – bacon du yaourt - yoghurt	une tartine – bread with jam de la confiture – jam	des céréales – cereals des oeufs - eggs
	je bois I drinnk	du jus de fruits – fruit juice	du chocolat chaud – hot chocolate	du lait – milk	de l'eau – water
	je ne mange rien – I don't eat anything				

Module 4 - Ma vie de famille

Décris ta famille

Dans ma famille il y a.. In my family there is...	mon - my	(beau-) père (step) father grand-père grandfather (demi-) frère (half/step) brother fils - son	qui a who has qui ont who have	les yeux eyes	bleus – blue verts – green marron – brown	
	ma – my	(belle-) mère (step) mother grand-mère grandmother (demi-) soeur (half/step) sister fille - daughter		les cheveux hair	noirs – black blonds- blond roux- red gris – grey bruns – brown et (and)	courts – short longs - long mi-longs - mid length bouclés – curly raides – straight
	mes – my	parents		une barbe tatouages a beard	des taches de rousseur freckles	des tattoos
			qui porte(nt) des lunettes – who wear(s) glasses qui s'appelle(nt).... – who is (are) called			

Les pièces

Dans ma maison il y a 3 pieces	In my house there are 3 rooms
il y a :	there is:
un salon	a living room
une cuisine	a kitchen
une chambre	a bedroom
une salle de bains	a bathroom
une sale à manger	a dining room
un jardin	a garden

nous de dans à du/de la/des/de l' (ne)...rien	we of in in/at some nothing

High Frequency Words

Où habites-tu?

Où habites – tu? Where do you live?	j'habite I live nous habitons we live	dans in	un appartement a flat un village a village une maison a house une ville a town	en in	Angleterre - England France - France Espagne - Spain Suisse - Swizterland Ecosse - Scotland Irelande - Ireland	J'aime habiter ici I like living here	parce que c'est / parce qu' c'est because it is	tranquille – quiet grand – big confortable – comfortable trop petit – too small il n'y a pas de place – there's no space
				au in	pays de Galles – Wales Portugal - Portugal	Je n'aime pas habiter ici I don't like living here		

Module 5 – En ville

Point de départ

Qu'est-ce qu'il y a dans ta ville/ton village? What is there is your town/village?	il y a there is/are	un – a	centre de loisirs – leisure centre centre commercial – shopping centre château – castle marché – market musée – museum
		une - a	mosquée – mosque patinoire – ice rink piscine – swimming pool
		des - some	magasins - shops
	il n'y a pas de – there is/are not		

Où vas-tu le weekend?

Où vas tu le weekend? Where you do go at the weekend?	je vais I go	au	bowling – bowling alley cinéma/ciné – cinema parc – park stade – stadium	samedi matin / après-midi / soir Saturday morning/ afternoon / evening
		à la	piscine – swimming pool plage – beach	
		à l'	église - church	
		aux	magasins - shops	

Tu veux aller au café?

Tu veux aller au café .... Do you want to go to the café....	aujourd'hui ? – today? ce matin? – this morning? ce soir? – this evening? ce weekend? – this weekend?	Merci, bonne idée - Thanks, good idea Oui, je veux bien – Yes, I want to D'accord – OK Pourquoi pas? – Why not? Non merci – No thanks Désolé(e)! – Sorry! Je ne veux pas – I don't want to Tu rigoles! – You're joking!
Rendez-vous à quelle heure? What time will we meet?	Rendez-vous à 19h. – Let's meet at 7pm	

Qu'est-ce que tu vas faire?

Qu'est-ce que tu vas faire à Paris? What are you going to do in Paris?	Je vais I'm going to	visiter la cathédrale Notre Dame - visit Notre Dame Cathedral visiter la Tour Eiffel - visit the Eiffel Tower aller au musédu Louvre - go to the Louvre museum aller aux Catacombes - go to the Catacombs faire una balade en bateau-mouche - go on a boat trip prendre des photos - take some photos acheter des souvenirs - to buy souvenirs admirer la Joconde - admire the Mona Lisa faire un pieque-nique - have a picnic

Module 5 – En ville

Vous désirez?

Vous désirez? What would you like? Pardon Monsieur/Madame Excuse me sir/madam	je voudrais I would like pour moi for me	un a	Orangina – a fizzy orange diabolo menthe – a mint cordial café express – an espresso coffee café crème – a milky coffee chocolat chaud – hot chocolate thé au lait/au citron – a tea with milk/lemon jus d'orange –orange juice coca (light) – (diet) coke croque monsieur – grilled cheese and ham sandwich sandwich au jambon/fromage – ham/cheese sandwich
Et pour vous? And for you?		une a	grenadine à l'eau – a fruit cordial eau minérale – mineral water crêpe au sucre – pancake with sugar glace au chocolat / à la vanilla / à la fraise / à la pistache - chocolate / vanilla / strawberry/ pistachio ice cream
		des some	frites – chips chips – crisps
C'est combien s'il vous plaît? How much is it please?	ça fait 10 euros – it comes to 10 euros. Voilà, merci. – Here you are, thank you.		

Je vais visiter Paris

Normalement/d'habitude Usually Le weekend At weekends Samedi prochain Next Saturday	je vais I'm going to	jouer au basket – play basketball jouer au foot – play football jouer au laser-tag – play laswer-tag manger un gâteau / une pizza – eat a cake / pizza aller au zoo - go to the zoo aller au centre de loisirs – go to the leisure centre faire un tour en Segway – go on a Segway tour faire les magasins – to shopping

High Frequency Words

Pronouns	
tu	you (singular)
vous	you (plural/formal)
Connectives	
où	where
ou	or
si (s' before vowel)	if
Time expressions	
aujourd'hui	today
ce matin	this morning
cet après – midi	this afternoon
ce soir	this evening
ce weekend	this weekend
normalement d'habitude	normally usually
le lundi matin	Monday morning
le mardi après-midi	Tuesday afternoon
le samedi soir	Saturday evening
le weekend	at weekends
le weekend prochain	next weekend
dimanche prochain	next Sunday

French

GRAMMAIRE
Regular present tense verbs

ER VERBS e.g. Passer = to spend (time)	
Je pass**e**	*I spend*
Tu pass**es**	*You spend*
Il/Elle/On pass**e**	*He/She/One spends*
Nous pass**ons**	*We spend*
Vous pass**ez**	*You spend (form/pl)*
Ils/Elles pass**ent**	*They spend*

IR VERBS e.g. Finir = finish	
Je fini**s**	*I finish*
Tu fini**s**	*You finish*
Il/Elle/On fini**t**	*He/She/One finishes*
Nous fin**issons**	*We finish*
Vous fin**issez**	*You finish (form/pl)*
Ils/Elles fin**issent**	*They finish*

RE VERBS e.g. vendre = to sell	
Je vend**s**	*I sell*
Tu vend**s**	*You sell*
Il/Elle/On vend	*He/She/One sells*
Nous vend**ons**	*We sell*
Vous vend**ez**	*You sell (form/pl)*
Ils/Elles vend**ent**	*They sell*

GRAMMAIRE Irregular present tense verbs

Faire = to do / to make		Aller = to go	
Je fais	*I do*	Je vais	*I go*
Tu fais	*You do*	Tu vas	*You go*
Il/Elle/On fait	*He/She/One does*	Il/Elle/On va	*He/She/One goes*
Nous faisons	*We do*	Nous allons	*We go*
Vous faites	*You do (form/pl)*	Vous allez	*You go (form/pl)*
Ils/Elles font	*They do*	Ils/Elles vont	*They go*

GRAMMAIRE Modal verbs

Vouloir = to want	
Je veux	*I want*
Tu veux	*You want*
Il/Elle/On veut	*He/She/One wants*
Nous voulons	*We want*
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Grammar

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If the weather's nice

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Ça va être...
It's going to be

cool / génial / sympa
cool / great / nice

Qu'est-ce qu'on va faire? ***What are we going to do?***

Near Future Tense = Aller + infintive (going to do)

Je vais
I am going

On va / **Nous allons**
We are going

Use the present tense of the verb ALLER from above ↗

aller au parc	*to go to the park*
visiter le musée	*to visit the museum*
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French

Qu'est-ce que tu as fait le week-end dernier? *What did you do last weekend?*	**J'ai / Nous avons...** *I / We...*	...passé (le week-end) *...spent (the weekend)*	...participé à une competition *...took part in a competition*	fait du vélo *...went cycling*
	...joué au tennis *...played tennis*	...fêté (mon anniv) *...celebrated my birthday*	*...regardé un match / film* *...watched a match / a film*	fait de la natation *...went swimming*

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The Past: The Perfect Tense with Avoir

We use the perfect tense to say what we did or have done in the past. To form it you need 2 parts:
PART 1: Avoir (the verb to have) + **PART 2:** Past participle (e.g. visited/done/eaten)

PART 1: Avoir = *To have*	
J'**ai**	*I have*
Tu **as**	*You have*
Il / Elle/ On **a**	*He / She has*
Nous **avons**	*We have*
Vous **avez**	*You all have*
Ils / Elles **ont**	*They have*

+

PART 2: The Past participle							
ER verbs +é		**IR verbs +i**		**RE verbs +u**		**Irregulars**	
visité	*visited*	fini	*finished*	perdu	*lost*	fait	*did*
regardé	*watched*	vomi	*vomited*	attendu	*waited*	pris	*took*
écouté	*listened*	dormi	*slept*	vendu	*sold*	bu	*drank*
mangé	*ate /eaten*					vu	*saw*
acheté	*bought*					lu	*read*

Je suis allé(e) ... *I went...*
Nous sommes allé(e) ... *I went...*
au parc / **au** stade *...to the parc / stadium*
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Il / Elle **est**	*He/She is*
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Vous **êtes**	*You lot are*
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+

PART 2: The Past participle (+e) (+s)			
allé(e)(s)	*went*	sorti(e)(s)	*went out*
resté(e)(s)	*stayed*	parti(e)(s)	*left*
arrivé(e)(s)	*arrived*	venu(e)(s)	*came*
retourné(e)(s)	*returned*	revenu(e)(s)	*came back*
rentré(e)(s)	*went back (home)*	devenu(e)(s)	*became*

Grammar

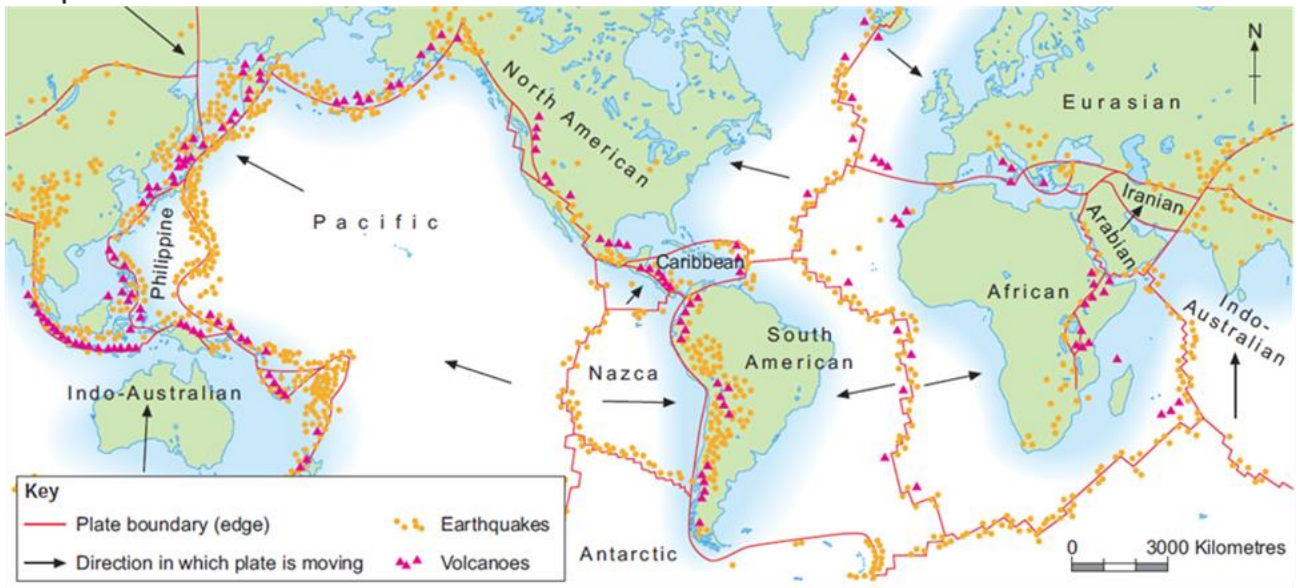
Geography

1

Tier 3 Vocabulary	Definition
Natural Hazards	naturally occurring event that could have a negative effect on human activities.
Convection Current	heat carrying currents in the mantle that move the crust, causing tectonic hazards like earthquakes and volcanoes.
Oceanic Crust	crust that is thin but dense. About 5km thick, caused by being compressed by water (oceans). Mainly made of basalt.
Continental Crust	crust that is thick and less dense than oceanic crust. Varies in thickness but is 30km thick on average. Mainly made of granite.
Pyroclastic Flow	a fast-moving current of hot gas and volcanic matter that flows along the ground away from a volcano at average speeds of 100 km/h.
Primary Effects	the initial (first) impact of a natural event on people and property
Secondary Effects	indirect effects causes by the primary impacts, after the main event - in the coming hours, days and weeks.
Immediate Response	a response in the days and weeks immediately after a disaster has happened.
Long-term Response	responses that go on for months and years after a disaster.

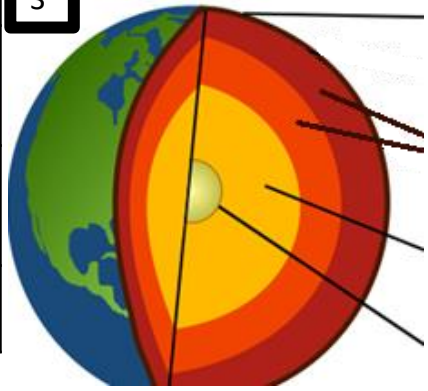
2

Map of Tectonic Plates:



Volcanoes	Earthquakes
Located mostly along plate boundaries. Mainly along the edge of the Philippine and Indo-Australian plates.	Located mostly along plate boundaries, some located away from plate boundaries. High amounts along the edge of the Pacific Plate and to the west of the South American Plate

3

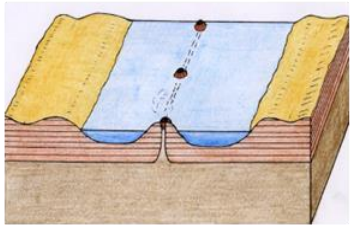


Crust	3miles to 60 miles thick and solid. It 'floats' on the mantle. Made mainly of Granite and Basalt. Broken into tectonic plates which move apart and together causing earthquakes and volcanoes
Mantle	Hot and flows like a thick liquid. Made of Magma. Convection currents in the mantle move the plates in the crust above
Outer Core	Liquid and under huge pressure. Made of liquid Iron and Nickel.
Inner Core	Solid, mainly made of solid iron and nickel 4000°C

Geography

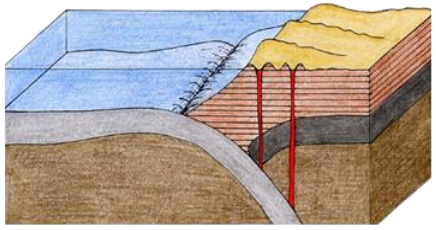
4

Type of Plate Boundary:

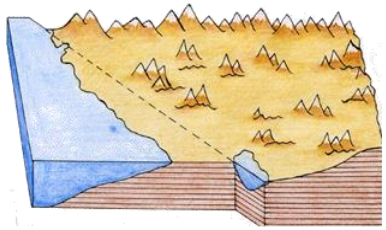


Constructive

Destructive Collision

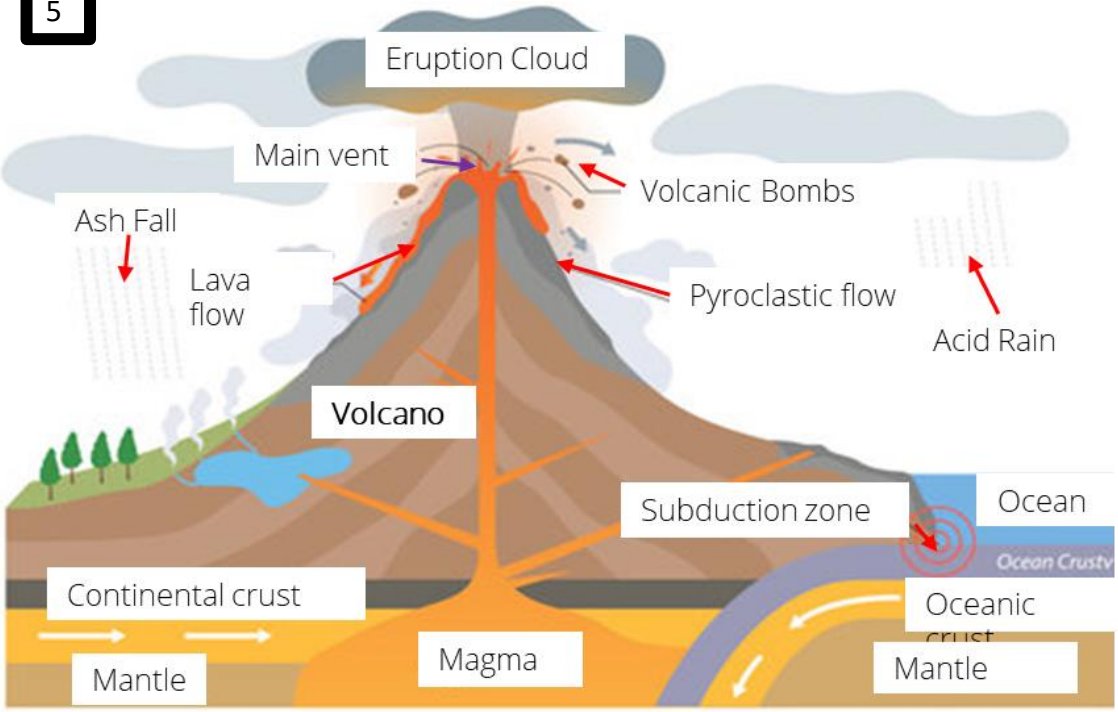


Destructive Subductive



Conservative

5



HIC Eruption: Eyjafjallajökull, Iceland - 20th March 2010	6
Effects	**Responses**
Ash blocked out sun, destroyed crops and caused air pollution. Damage to homes and roads. April 2010 – closure of European airspace, airline share price dropped by 3%. Cancelled sporting events, fresh food imports were stopped ($1.3 million per day lost by Kenya due to rotting food & flowers)	Area around the volcano was evacuated – 700 people from the disaster zone 3 times. European Red Cross mobilised volunteers, staff and other resources to help - provided food and counselling to local farmers. EU developed better management for air traffic, in future closing areas rather than the whole air space.

LIC Eruption: Fuego, Guatemala – 3rd June 2018	7
Effects	**Responses**
Volcano emitted 5mile stream of lava and dense plume of black smoke and ash that blanketed the capital city. Lava flows engulfed local villages, pyroclastic flow caused people to flee. 201 people died. 27 injured, 260 missing. Overall this affected more than 1.3 million people	Nearly 13,000 people evacuated from effected area. Guatemalan Red Cross provided medical care to 6,000 people, managed the dead and provided cash and voucher assistance to 740 families. They also distributed safe water and sanitation systems, as well as giving out food and hygiene kits to 8,000 people.

History

What was England like in Anglo-Saxon times?

- England had a population of about 2 million people (less than half of London today!)
- Almost everyone farmed land.
- England was a Christian country, and religion played a large role in everyday life.
- For centuries England had been under threat from the Vikings, and parts of northern England had Viking settlers.
- Edward the Confessor was king from 1042 to 1066, but the kings before him (Cnut and his two sons) had been Vikings.
- England had a very well-organised government.

The Monarchy

Edward's strengths

- A powerful king was one who had success in battle and led a strong army.
- Edward was not a warrior king himself, but his earls and thegns were a **powerful military force**.
- He was a **respected law-maker** – someone who kept things peaceful.
- He was **pious (very religious)**. Kings claimed to have a special link to God.

Edward the Confessor was king from 1042 to 1066. Every boy swore an **oath** to the king when they reached 12 years old. The king controlled law-making, money, land ownership, the military and taxation.

Limits to Edward's power

- Half of the country, the **Danelaw,** still had strong Danish links from previous Viking invasions. These people wanted to live by their own laws and customs.
- The **Earl of Wessex, Earl Godwin,** was very powerful. He could put pressure on Edward to do things his way.
- Edward and Godwin fell out in **1050**. Edward forced Godwin into exile, but he returned in 1051 with an army, and Edward gave him his earldom back to prevent a war.

Government

The Witan

The Witan was a council of advisers to the king, made up of important people like earls and archbishops. It discussed threats and disputes, and had a large role in choosing a new king.

The king decided who was on the Witan and when it met. He did not have to follow its advice.

The Social System

At the top of Anglo-Saxon society were the King and the elite aristocracy, and at the very bottom were slaves.

The **king** was the **most powerful** person in Anglo-Saxon England. His job was to protect his people from attack and make laws.

King

Earls were the most important men after the king. The area of the country controlled by an earl was called an **earldom**.

Earls

Thegns *("thanes")* were local lords who lived in a **manor house** and held more than 5 **hides** of land. Thegns had a duty to provide men for the fyrd (army) when needed.

Thegns

Peasants made up most of the population. They worked for their local lord. **Ceorls** *("curls")* were free to go and work for another lord if they wanted to, although they still had to do some work for their local lord as well.

Peasants

Slaves made up about 10% of the population, and were viewed more as property than people. Owning slaves was a normal part of life for the Anglo-Saxons, but the Normans thought it was cruel.

Slaves

Peasants and **merchants** could work their way up to **thegn** status.

Slaves could be freed by their masters to become ordinary **peasants**.

Thegns could be promoted to **earls**.

A **peasant** could sell themselves into **slavery** to support their family.

An **earl** could be demoted to a **thegn.**

Earldoms

The earls were given many of the king's powers in order to help run the country.

- **They collected taxes**. Earls kept a third of what they collected, so were very rich.
- They were in charge of **justice and legal punishments** in their earldom.
- They had great **military power**. Each earl had a group of highly-trained bodyguard soldiers called **housecarls.**

Earls depended on the support of the thegns in their earldom.

History

Battle #1

The Battle of Gate Fulford – *20th September 1066*

Harald Hardrada and Tostig attacked in September 1066. They were blocked just outside York by the new Earl of Northumbria **Morcar** and his brother **Edwin** (Earl of Mercia) at **Gate Fulford**.

The battle was a defeat for Morcar and Edwin. Their mistake was fighting just outside York, rather than within the city walls.

Harold heard about the invasion and marched north. He must have been confident that William would not attack the south any time soon.

Battle #2

The Battle of Stamford Bridge – *25th September 1066*

Harold surprised Hardrada and Tostig at Stamford Bridge. Both Hardrada and Tostig were killed. **Harold won** because:

- The Vikings had left their armour on their ships
- He had the element of surprise
- Hardrada and Tostig had fought at Gate Fulford 5 days before
- The Vikings were (wrongly) under the impression that the English hated Harold
- Harold's men broke the Viking shield wall

The Norman Invasion

Battle #3

The Battle of Hastings – *14th October 1066*

After leaving York, Harold stopped in London for around 5 days to gather troops. He then continued south and met William at **Senlac Hill, near Hastings**.

- The battle began in Harold's favour, but his strong **shield wall** gradually broke down.
- At one point a rumour went round that William had been killed, so he tipped his helmet to show he was still alive.
- Harold Godwinson and his brothers Gyrth and Leofwine held their position on the top of the hill. Eventually they were killed, but their housecarls fought on to the last.

Edward the Confessor's Death

Edward died on the 5th of January 1066. He had no children, which meant there was a **succession crisis.**

The Bayeux Tapestry shows Edward on his deathbed, holding out his hand to Harold.

The Witan met quickly and Harold was crowned the same day as Edward's burial, 6th January 1066.

1066 & the Rival Claimants for the Throne

Harold Godwinson

Claim:

Appointed by Edward on his deathbed. Family connection (brother-in-law). Proven military success and influence with the earls.

Strength of claim:

Good – supported by witnesses (though ones loyal to him). Good chance of success.

William, Duke of Normandy

Claim:

An agreement supposedly made with King Edward in about 1051, and confirmed during Harold's 1064 embassy.

Strength of claim:

Backed by the Pope, but no real evidence. **Good** chance of success – the Normans were strong warriors.

Harald Hardrada

Claim:

Complicated – he had essentially inherited the claim from previous Viking kings.

Strength of claim:

Weak, though the Danelaw may have welcomed a Viking king. The exiled Tostig went to Harald for support – together they had a strong army and fleet.

Edgar Aethling

Claim:

Royal blood – Edward's nephew and natural heir ("Aethling" = prince of royal blood).

Strength of claim:

Weak – he was a blood relation, but the Witan wanted a strong king to see off threats from Scandinavia and Normandy.

Maths

YEAR 8 - REPRESENTATIONS...

Working in the Cartesian plane

@whisto_maths

What do I need to be able to do?

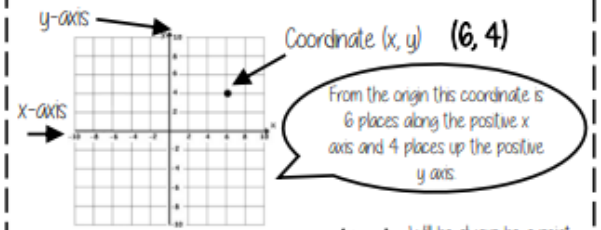
By the end of this unit you should be able to:

- Label and identify lines parallel to the axes
- Recognise and use basic straight lines
- Identify positive and negative gradients
- Link linear graphs to sequences
- Plot y = mx + c graphs

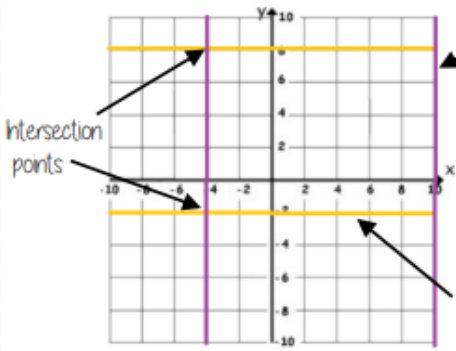
Keywords

Quadrant: four quarters of the coordinate plane.
Coordinate: a set of values that show an exact position.
Horizontal: a straight line from left to right (parallel to the x axis)
Vertical: a straight line from top to bottom (parallel to the y axis)
Origin: (0,0) on a graph. The point the two axes cross
Parallel: Lines that never meet
Gradient: The steepness of a line
Intercept: Where lines cross

Coordinates in four quadrants



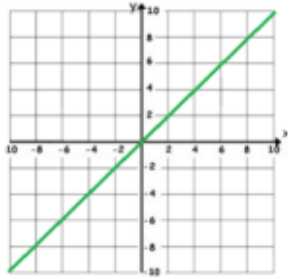
Lines parallel to the axes



Maths

Recognise and use the line y=x

This means the x and the y coordinate have the same value

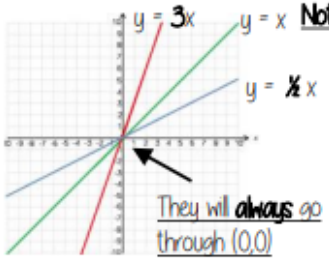


Examples of coordinates on this line: (0, 0) (-3, -3) (8, 8)

The axes **scale is important** – if the scale is the same y = x will be a straight line at 45°

Recognise and use the lines y=kx

The value of **k** changes the steepness of the line



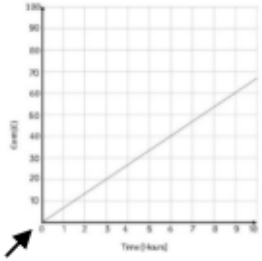
Note: y =x is the same as y= 1x

The bigger the value of k the **steeper** the line will be

They will **always** go through (0,0)

The closer to 0 the value of k the closer the line will be to the x axis

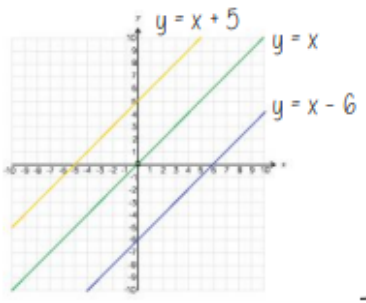
Direct Proportion using y=kx



The line must be straight to be directly proportional – variables increase at the same rate **k**

Direct proportion graphs always start at (0,0) as they are describing relationships between two variables

Lines in the form y = x + a



All the lines are **parallel** because the gradients are the same

y = x + a

This is the line y=x when the y and x coordinate are the same

This shows the translation of that line

e.g y = x + 5 is the line y=x moved 5 places up the graph

5 has been added to each of the x coordinates

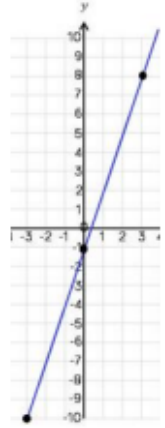
Plotting y = mx + c graphs

$y = 3x - 1$ → 3 x the x coordinate then – 1

x	-3	0	3
y	-10	-1	8

Draw a table to display this information

This represents a coordinate pair (-3, -10)

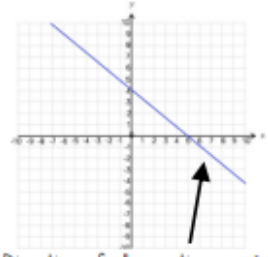


You only need two points to form a straight line

Plotting more points helps you decide if your calculations are correct (if they do make a straight line)

Remember to join the points to make a line

Lines with negative gradients



Any straight-line graph with a negative x value has a negative gradient

E.g $y = -2x$
$y = -x$ $y + x = 12$

Direction of all negative gradients

Maths

YEAR 8 - REPRESENTATIONS...

Representing Data

@whisto_maths

What do I need to be able to do?

By the end of this unit you should be able to:

- Draw and interpret scatter graphs
- Describe correlation and relationships
- Identify different types of non-linear relationships
- Design and complete an ungrouped frequency table
- Read and interpret grouped tables (discrete and continuous data)
- Represent data in two way tables

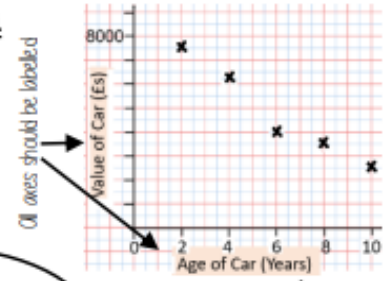
Keywords

Variable: a quantity that may change within the context of the problem
Relationship: the link between two variables (items). E.g. Between sunny days and ice cream sales
Correlation: the mathematical definition for the type of relationship.
Origin: where two axes meet on a graph
Line of best fit: a straight line on a graph that represents the data on a scatter graph
Outlier: a point that lies outside the trend of graph
Quantitative: numerical data
Qualitative: descriptive information, colours, genders, names, emotions etc.
Continuous: quantitative data that has an infinite number of possible values within its range.
Discrete: quantitative or qualitative data that only takes certain values
Frequency: the number of times a particular data value occurs.

Draw and interpret a scatter graph

Age of Car (Years)	2	4	6	8	10
Value of Car (£s)	7500	6250	4000	3500	2500

- This data may not be given in size order
- The data forms information pairs for the scatter graph
- Not all data has a relationship



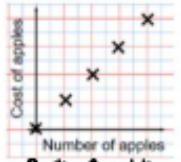
Both axes should be labelled

The axis should fit all the values on and be equally spread out

"This scatter graph show as the age of a car increases the value decreases"

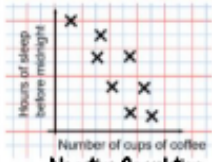
The link between the data can be explained verbally

Linear Correlation



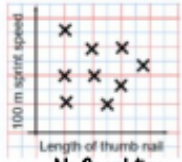
Positive Correlation

As one variable increases so does the other variable



Negative Correlation

As one variable increases the other variable decreases



No Correlation

There is no relationship between the two variables

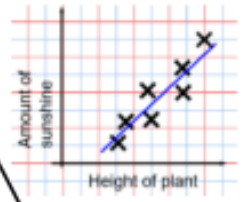
Maths

The line of best fit

The Line of best fit is used to make estimates about the information in your scatter graph

Things to know:

- The line of best fit **DOES NOT** need to go through the origin (The point the axes cross)
- There should be approximately the same number of points above and below the line (It may not go through any points)
- The line extends across the whole graph



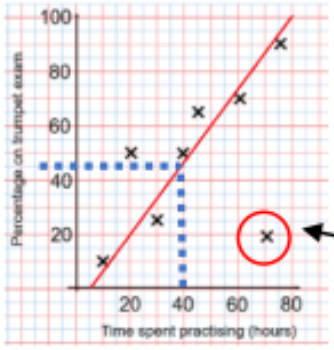
It is only an estimate because the line is designed to be an average representation of the data

It is always a **straight line.**

Using a line of best fit

Interpolation is using the line of best fit to estimate values inside our data point.

e.g. 40 hours revising predicts a percentage of 45



Extrapolation is where we use our line of best fit to predict information outside of our data.
This is not always useful – in this example you cannot score more that 100%. So revising for longer can not be estimated

This point is an "**outlier**"
It is an outlier because it doesn't fit this model and stands apart from the data

Ungrouped Data

The number of times an event happened

The table shows the number of siblings students have. The answers were
3, 1, 2, 2, 0, 3, 4, 1, 1, 2, 0, 2

2 people had 0 siblings. This means there are 0 siblings to be counted here

Number of siblings	Frequency	
0	2	0
1	3	3
2	4	2 + 2 + 2 + 2 OR 2 x 4 = **8**
3	2	3 + 3 OR 3 x 2 = **6**
4	1	4

Best represented by discrete data (Not always a number)

2 people have 3 siblings so there are 6 siblings in total

OVERALL there are
0 + 3 + 8 + 6 + 4
Siblings = 21 siblings

Grouped Data

If we have a large spread of data it is better to group it. This is so it is easier to look for a trend. Form groups of equal size to make comparison more valid and spread the groups out from the smallest to the largest value.

Discrete Data
The groups do not overlap

Cost of TV (£)	Tally	Frequency
101 – 150	𝍸 |	**7**
151 – 200	𝍸 𝍸 |	**11**
201 – 250	𝍸	**5**
251 – 300	|||	**3**

We do not know the exact value of each item in a group – so an estimate would be based to calculate the overall total (Midpoint)

Continuous Data
To make sure all values are included inequalities represent the subgroups

x Weight(g)	Frequency
$40 < x \leq 50$	1
$50 < x \leq 60$	3
$60 < x \leq 70$	5

e.g this group includes every weight bigger that 60kg, up to and including 70kg

Representing data in two-way tables

Two-way tables represent discrete information in a visual way that allows you to make conclusions, find probability or find totals of sub groups

There are 2 green squares

There are 5 green shapes

	Squares	Circles	**Total**
Green	2	3	5
Red	2	1	3
Total	4	4	**8**

There are 8 items in total

Using your two-way table

To find a fraction
e.g. What fraction of the items are red? **3 red items**
but **8 items in total** = $\frac{3}{8}$

Interleaving Use your fraction, decimal percentage equivalence knowledge

YEAR 8 - REPRESENTATIONS...
Tables and Probability

@whisto_maths

What do I need to be able to do?

By the end of this unit you should be able to:

- Construct a sample space diagram
- Systematically list outcomes
- Find the probability from two-way tables
- Find the probability from Venn diagrams

Keywords

Outcomes: the result of an event that depends on probability
Probability: the chance that something will happen
Set: a collection of objects
Chance: the likelihood of a particular outcome
Event: the outcome of a probability – a set of possible outcomes
Biased: a built in error that makes all values wrong by a certain amount
Union: Notation '∪' meaning the set made by comparing the elements of two sets

Construct sample space diagrams

Sample space diagrams provide a systematic way to display outcomes from events

The possible outcomes from rolling a dice

The possible outcomes from tossing a coin

	1	2	3	4	5	6
H	1,H	2,H	3,H	4,H	5,H	6,H
T	1,T	2,T	3,T	4,T	5,T	6,T

This is the set notation to list the outcomes **S** =

In between the **{ }** are all the possible outcomes

S = { 1H, 2H, 3H, 4H, 5H, 6H, 1T, 2T, 3T, 4T, 5T, 6T}

Probability from sample space

The possible outcomes from rolling a dice

The possible outcomes from tossing a coin

	1	2	3	4	5	6
H	1,H	2,H	3,H	4,H	5,H	6,H
T	1,T	(2,T)	3,T	(4,T)	5,T	(6,T)

What is the probability that an outcome has an even number and a tails?

This is the set notation that represents the question **P**

P (Even number and Tails) = $\frac{3}{12}$

There are three even numbers with tails

There are twelve possible outcomes

Numerator: the event

Denominator: the total number of outcomes

In between the **( )** is the event asked for

Maths

Probability from two-way tables

	Car	Bus	Walk	Total
Boys	15	24	14	53
Girls	6	20	21	47
Total	21	44	35	100

The total number of items

P (Girl walk to school) = $\frac{21}{100}$

The event

The total in the set

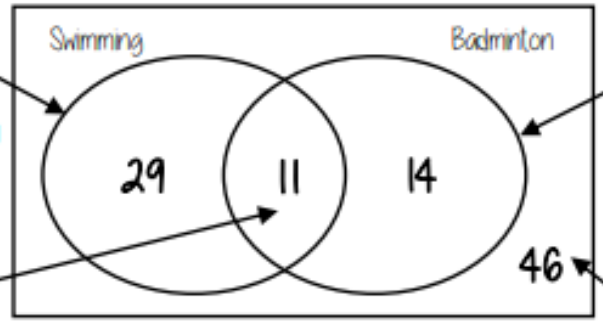
Product Rule

The number of items in event a **x** The number of items in event b

Probability from Venn diagrams

100 students were questioned if they played badminton or went to swimming club
40 went swimming, 25 went to badminton and 11 went to both

This whole curve includes everyone that went swimming
Because 11 did both we calculate **just** swimming by 40- 11



This whole curve includes everyone that went to badminton
Because 11 did both we calculate **just** badminton by 25 - 11

The intersection represents both Swimming **AND** badminton

The number outside represents those that did **neither** badminton or swimming

100 – 29 – 11 – 14

P (Just swimming) = $\frac{29}{100}$

Music

Year 8 Music Term 2

Students learn about musical patterns from 1600 onwards

Baroque: c. 1600 – 1750

Bach – "Toccata & Fugue in D minor"
Dramatic **three-note organ** motif repeats like a modern guitar riff.

Classical: c. 1750 – 1820

Beethoven – Symphony No. 5
Four-note "**da-da-da-DUM**" drives an entire movement. This shows how a tiny rhythmic **motif** can power a **composition**.

Key words

Motif – short, easily recognised idea.
Crescendo – gradual loudness build.
Minimalism – built on repeating riffs.
Synthesizer – electronic keyboard.

Romantic c.1820-1910

Grieg – 'In the Hall of the Mountain King' (1875) Creeping two-bar riff repeats while **tempo** and **dynamics** increase. Builds the **tension** by **layering – a technique** that inspired later video game music.

Tchaikovsky – '1812 Overture'
Bass-drum motif plus real **cannon blasts**: **theatrically dramatic** orchestration long before **stadium rock.** Used in fireworks displays to this day.

Modern 1910 - 1950

Holst – "Mars" (The Planets)
Relentless **5/4 ostinato** under **dissonant** chords paints **war**. Inspired blockbuster scores from ***Star Wars*** to ***Gladiator***.

Orff -"O Fortuna" (Carmina Burana 1936)
Chant-like **minor**-chord **riff** with huge dynamic swings. Classic choice for epic movies and TV programs.

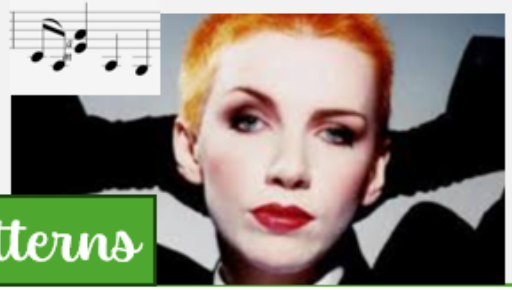
Film and TV 1950 - 1990

Henry Mancini – "Peter Gunn Theme"
Driving bass-**guitar** riff mixed **jazz** instrumentation with **rock**. Inspired themes for spy and detective-shows.

John Williams – "Imperial March"
This menacing 3 note **minor** riff **foreshadows Darth Vader -** A simple, **memorable motif** of a movie franchise.

Synth-Pop 1978 - 1990

Harold Faltermeyer – "Axel F" Very **catchy** 3-note synth **hook** with a **drum machine** gave a classic **1980s** soundtrack riff. Highly **memorable** riffs like this helped push **synths** and **sequencers** into **mainstream** film scores.



History of Repeated musical patterns

PE

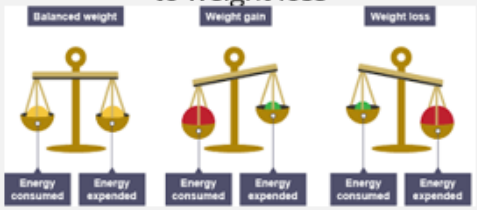
Year 8 Physical Education Term 2

7

Hydration:
Water is essential for **regulating body temperature**, transporting nutrients, and removing waste. Dehydration can reduce performance and lead to heat-related illnesses.

8

Energy Balance:
The relationship between the **calories consumed** (diet) and **calories used** (exercise). Positive balance (more calories in than out) can lead to weight gain; negative balance (more out than in) can lead to weight loss



9

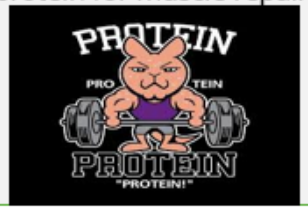
Obesity Risks:
Consistently eating more calories than the body uses can lead to **obesity**, increasing risks of diseases like **type 2 diabetes, heart disease, and some cancers.**

10

Under-eating Risks:
Not eating enough can lead to **fatigue, muscle loss, decreased immune function**, and poor performance in physical activity.

11

Diet for Exercise:
Athletes need to match their diet to their sport. For example, **endurance athletes** need more carbohydrates for energy, while **strength athletes** need more protein for muscle repair.



12

Recovery Nutrition:
After exercise, eating a combination of **carbohydrates** (to refill energy stores) and **proteins** (to repair muscles) helps the body recover quickly and prepare for the next session.

Healthy Eating

Science

Keywords

Hazard	Anything that has the potential to cause harm or damage
Risk	The harm or damage that could be caused by a hazard
Accuracy	The closeness of a measurement to its true value
Precision	How close measurements are to each other
Reliable	Similar data can be reproduced under same conditions

Scientific Method

Hypothesis: What you predict will happen, based on prior knowledge e.g. As X increases, Y will increase because…….

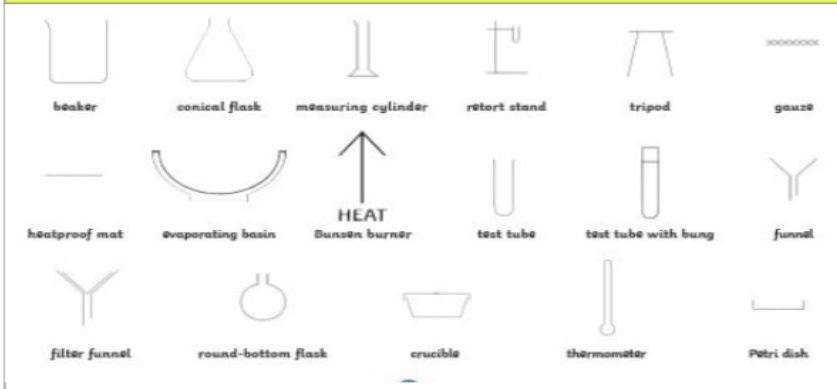
Independent Variable: The thing that is being changed
Dependent Variable: The thing that is being observed/measured
Control Variables: All the things that are being kept the same e.g. volume, concentration, mass, time

Method: Step by step instructions of how to change the independent variable, measure the dependent variable, control all other variables, repeat measurements, perform calculations on collected data

Conclusion: What have you found out? Was your hypothesis correct? Does your data support your hypothesis? Explain the results using scientific knowledge

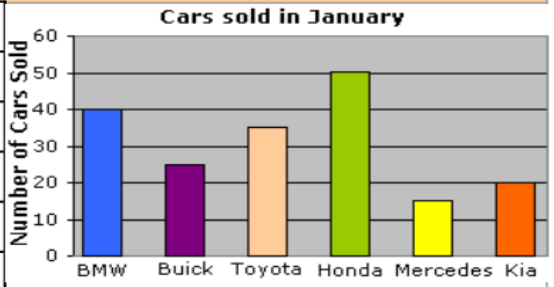
Evaluation: How reliable is your data (could someone follow your method and collect a similar set of results)? Are their anomalies? How could you make it more reliable?

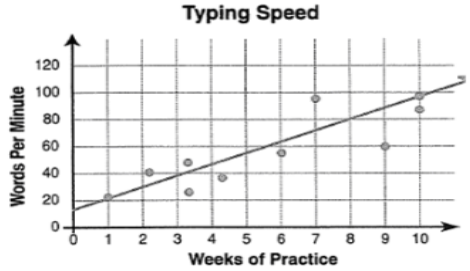
Drawing Scientific Diagrams



Presenting Data in a Graph

S	Scale
P	Pencil & ruler
A	Axis
T	Title
U	Units
L	Line of best fit if appropriate
A	Accuracy





Bar Graph:
Categoric/Discrete data

Line Graph:
Continuous data

Science Skills

Science

Keywords	
Natural resources	Materials from the Earth which act as raw materials for making a variety of products.
Mineral	Naturally occurring metal or metal compound.
Ore	Naturally occurring rock containing sufficient minerals for extraction.
Extraction	Separation of a metal from a metal compound.
Recycling	Processing a material so that it can be used again.
Electrolysis	Using electricity to split up a compound into its elements.

Displacement Reactions

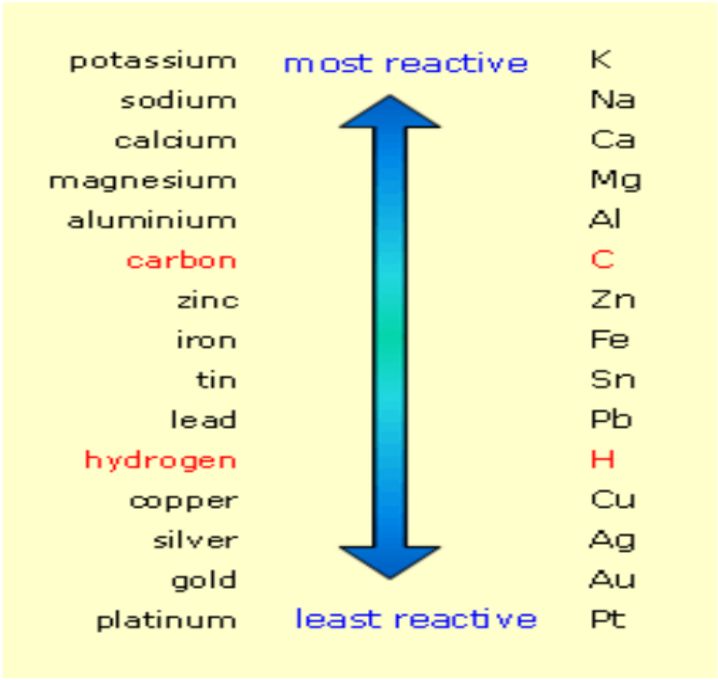
Some metals are more reactive than others. This is displayed in the reactivity series (on the left hand side).

A displacement reaction is where a more reactive metal takes the place of a less reactive metal in a compound.

Example:

Copper + silver nitrate → copper nitrate + silver

Copper is more reactive than silver, so the copper has 'stolen' the nitrate from the silver - therefore silver has been displaced.



Y8 - Earth's Resources

Extracting Metals

Metals can be extracted from their ores using different methods, depending on their reactivity.

1. Very unreactive metals occur native and do not form compounds, so they do not need extracting.

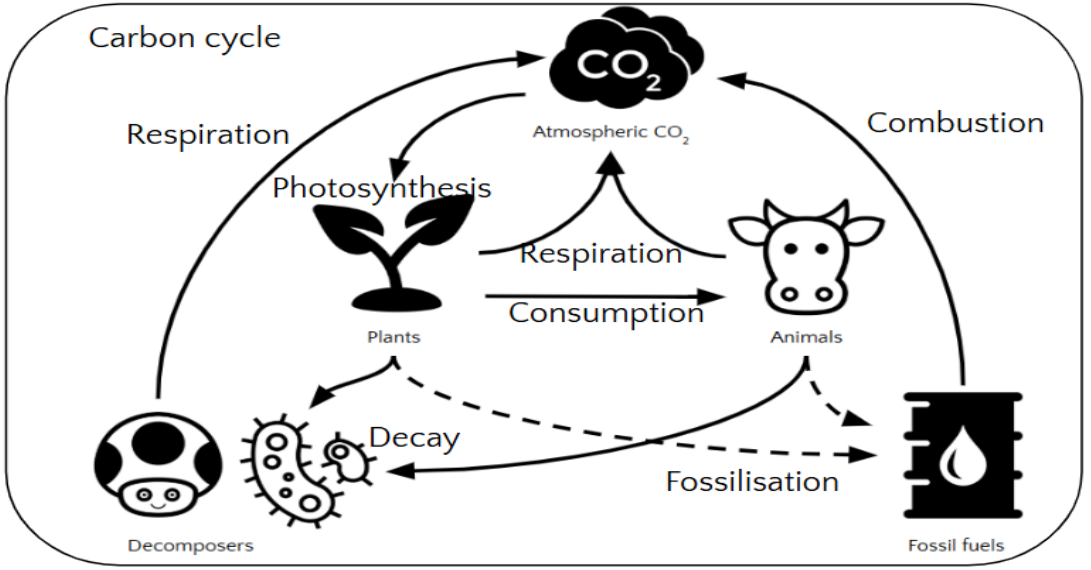
2. Metals less reactive than carbon on the reactivity series can be extracting with a displacement reaction using carbon. For example: Copper oxide + carbon → copper + carbon dioxide. Carbon is more reactive than copper, so copper is displaced.

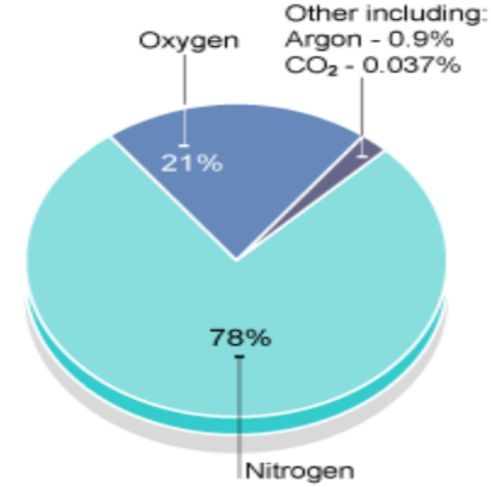
3. Metals that are more reactive than carbon can be extracted using electricity (a process called electrolysis).

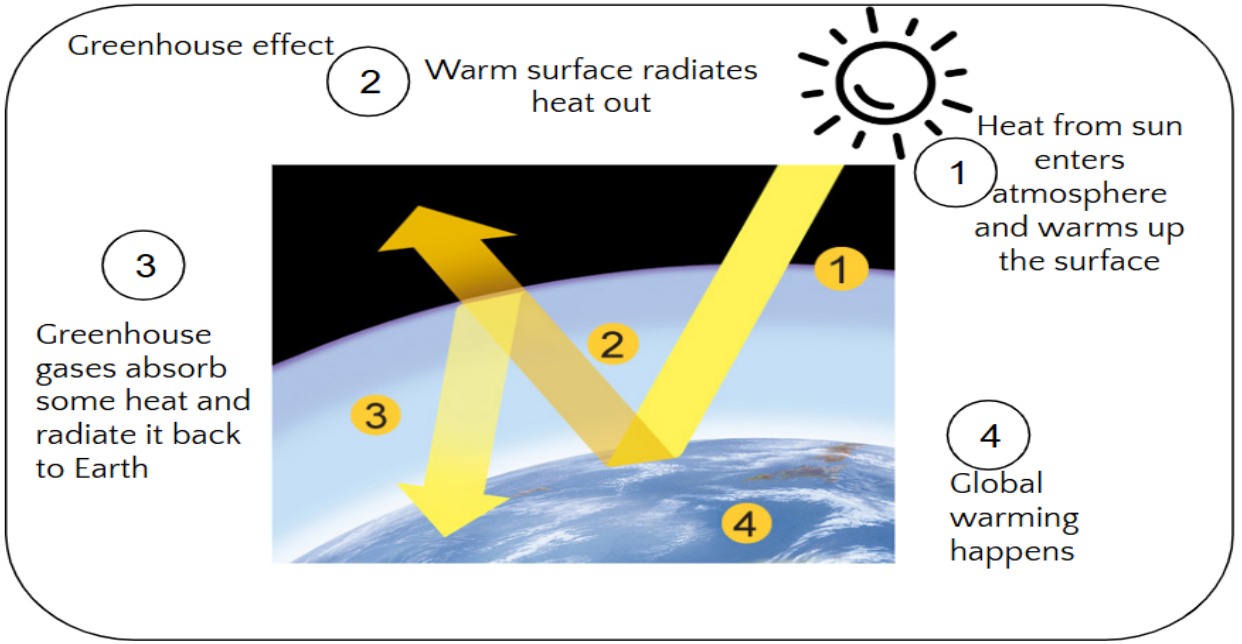
Science

Keywords	
Global warming	The gradual increase in surface temperature of the Earth and atmosphere
Fossil fuels	Remains of dead organisms that died millions of years ago that are burned as fuels
Carbon sink	Areas of vegetation, the ocean or the soil, which absorb and store carbon.
Greenhouse effect	Energy from sun is trapped in the atmosphere

Y8 - Climate







Heating & Cooling

Keywords	
Thermal conductor	Material that allows heat to move quickly through it.
Thermal insulator	Material that only allows heat to travel slowly through it.
Temperature	A measure of the motion and energy of the particles.
Thermal energy	The quantity of energy stored in a substance due to the vibration of its particles.
Conduction	Transfer of thermal energy by the vibration of particles.
Convection	Transfer of thermal energy when particles in a heated fluid rise.
Radiation	Transfer of thermal energy as a wave.

Radiation

Thermal energy is transferred by infrared (thermal) radiation.

It travels in waves just like light. Therefore it does not require particles.

All objects emit and absorb radiation to some extent.

The hotter the object, the more radiation it emits.

Also, the darker the object, the more radiation is absorbs and emits.

Conduction

This method of energy transfer occurs in solids.

All solids are made of particles in a rigid structure.

As you heat up a solid these particles gain kinetic energy and vibrate more.

This means more particles bump into each other, causing the energy to pass through the solid.

Convection

This method of energy transfer occurs in fluids (liquids and gases).

When the particles are heated they gain kinetic energy and move faster.

This means they crash into each other more often and with greater force.

This makes the fluid expand and become less dense.

The hot fluid is displaced (pushed out of the way) by more dense cold fluid.

Reducing energy loss

An insulator is a material that does not transfer heat well.

Insulators in homes slow down the transfer of heat from the warmer internal rooms the cooler outside.

The way insulators work is by preventing conduction, convection and radiation.

<u>Examples of insulation in houses:</u>
Loft insulation
Cavity wall insulation
Aluminium foil behind a radiator
Double glazing

Inheritance

Keywords	
Inherited characteristics	Features that are passed from parents to offspring.
Allele	The form of a gene (e.g. an allele for the hair colour gene might be blonde, or brown etc).
Dominant	The allele that <u>will</u> show up. (Written as a CAPITAL letter eg B for brown)
Recessive	The allele that <u>does not</u> show up if there's a dominant allele too. (Written as a lowercase letter eg b for blonde)
Genotype	Genetic makeup of an individual for a particular characteristic eg Dd
Phenotype	Physical appearance eg dimples or no dimples, black fur or brown fur.

Variation

Variation is the differences in characteristics between individual organisms.

There are 2 types of variation:

<u>1. Genetic Variation:</u> Genes control the development of characteristics. Eg, eye colour.

<u>2. Environmental Variation:</u> Characteristics may be changed by the environment. Eg, personality.

Genetic Modification

Genetic modification is the modification of an organism's characteristics by manipulating its genetic material.

<u>Examples:</u>
- Modifying bacteria to produce insulin for human use.
- Modifying rice to contain more vitamin A to reduce deficiencies in developing countries.
- Modifying vegetables to have a longer shelf life.

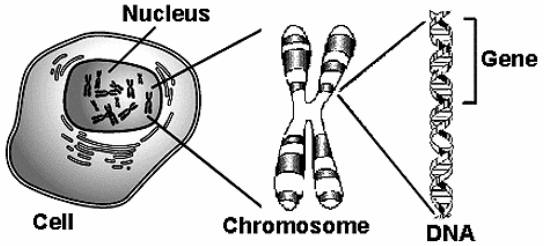
Genetics

Our genetic information is stored inside the nucleus of all cells.

DNA consists of two long strands wound together in a double helix structure.

In our cells, long DNA strands form structures called chromosomes.

A gene is a specific section of a chromosome (eg. the gene for eye colour).



Humans get 23 chromosomes from their Mother (egg), which combine to make an embryo with 23 pairs of chromosomes.