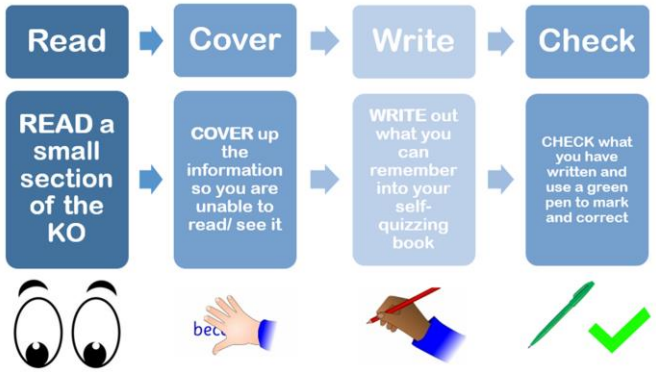
Year 7
Knowledge Organiser: Cycle 2

Name: _____

Tutor group: _____



Article 29:
Education must develop every child's personality, talents and abilities to the full. ***UNCRC***

Your Knowledge Organiser

- Knowledge Organisers contain critical knowledge you must know. This will help you recap, revisit and revise what you have learnt in lessons in order to remember this knowledge for the long-term.

- You must have this book for every lesson – it is part of your equipment.

Using Your Knowledge Organiser for Revision

- Students remember 50% more when they test themselves after learning.
- You can use your book to help **memorisation**.
- **Read** a section of your Knowledge Organiser.
- **Cover** it up.
- **Write** out what you've remembered.
- **Check** the Knowledge Organiser to see if you're right.
- **Repeat** this process.
- Do this **every day** to help commit the information to your **long-term memory**.

How to Use the Book for Self-Quizzing

Read	Cover	Write	Check
READ a small section of the KO	COVER up the information so you are unable to read/ see it	WRITE out what you can remember into your self-quizzing book	CHECK what you have written and use a green pen to mark and correct

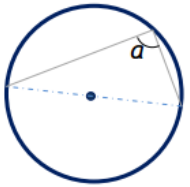
Using Your Knowledge Organiser for Revision

Research shows that students remember 50% more when they test themselves after learning something.

You can use your 100% book to create **flashcards**.

These should be:

- **double-sided**
- **a question on one side, the answer on other**
- **a keyword on one side, a definition or image on the other**
- **used for self-testing.**

Circles	**Circles**
1. What is the size of angle a? 2. State the rule. 	1. What do you know about the angles *x* and *y*? 2. State the rule. 

Q1 What is **emulsion**? Oil, water, droplet, shake, immiscible, bond, mixture.	**Q2** What is **one similarity** between an **alkene** and an **unsaturated** fat?
Q3 What is the name for the **test** for **unsaturated fat** or **alkene**? Describe what you would **see**.	**Q4** Describe two ways that **saturated** fat and **unsaturated fat** (oil) are **different**.
Q5 What is **the advantage** of cooking food in **oil**? **Explain** your answer.	**Q6** **Describe** what an **emulsifier** molecule does.
Q7 Name the **two parts** of an **emulsifier** molecule.	**Q8** What is the difference between a **monounsaturated** fat and **polyunsaturated** fat? **Mono** = one **Poly** = many

Feedback

Your teachers will give you feedback about your learning and progress in many different ways. These will include:

- Verbal feedback about something you are working on in the lesson (practical or written work).
- Verbal feedback through asking questions.
- Guided independent self-assessment.
- Guided peer assessment.
- Instant/quick written comments or identification of SPAG errors on your work as you complete it.
- Written feedback on your work and setting R4 or extension questions for you to complete.
- Knowledge quizzing/short tests that give you a score (i.e. 15/20).
- Longer tests that may also give a score (i.e. in %) as well as feedback about the content you need to re-learn/refresh.

You will be expected to respond to feedback in the following ways:

- ✓ Correcting all SPAG errors and copying out spellings as directed by your teacher.
- ✓ Answering R4 questions and completing extension questions/tasks in green pen.
- ✓ Giving peer feedback when it is expected by the teacher, using the format provided.
- ✓ Setting yourself targets when required, to ensure that you keep developing your knowledge and skills.
- ✓ Focusing on the areas of knowledge that you need to learn and quizzing yourself on these for homework.
- ✓ Showing that you take pride in your work by presenting it neatly.
- ✓ Always asking for help if you don't understand the work or what to do.

The Literacy Mat

Connectives

Adding Ideas
Furthermore, in addition, similarly, also, and, too.

Showing Difference
But, however, on the other hand, although, whereas, alternatively, arguably.

Evaluating
Consequently, surprisingly, significantly, interestingly, unexpectedly.

Listing
Firstly, secondly, last, then, next, finally.

Common Mistakes

Correct Capital Letters
To start EVERY sentence.
For 'I' (as in 'I went').
For ALL names.
Film/book names.
NeVeR To be uSed RanDomLy!

Would HAVE' vs 'Would OF'
NEVER use '**of**' after a modal verb:

'Would have' **NOT '**would of'
'Could have' **NOT '**could of'
'May have' **NOT '**may of'
'Should have' **NOT '**should of'
'Might have' **NOT '**might of'

Great Big Nevers!
Gonna – going to
Ain't – am not
We/they was – we were
Gotta – have got to
Innit –isn't it
Gotten – got
Coz/'cause – because

Homophones
To/too – I went to school (towards). I ate too much (more than enough). I am happy too (also).
Their/there/they're – They're (they are) over there (that place) reading their (belonging to them) books.
Your/you're – Your work is great (belonging to you). You're awesome (you are).

Correct Sentences

Simple Sentence - must contain a verb and a subject.

subject — verb
Matt was very cold today.

subject — verb
I always eat breakfast in the morning

Compound Sentence - two **simple sentences** joined by a **connective**.

I tried to speak slowly **but** (connective) **I was far too excited.**

Dan is very organised and (connective) **he always helps others.**

Complex Sentence - contains a **simple sentence** and one or more '**subordinate clauses**' (extra information!).

subordinate clause — comma
When he handed in the homework, the teacher knew he had worked hard on it.

comma — comma
She told a joke, **which was hilarious,** to her friends.
subordinate clause

Proof Reading

Follow this checklist when proof-reading or editing your work, especially assessments!

1. Check your presentation: Underline your date, title and any subtitles. Check that your work is laid out in paragraphs.
2. Skim read: Make sure capital letters and full stops are 100% accurate.
3. Skim read again: Check that your complex sentences have accurate commas.
4. Skim read again: Check the spelling of words you are not sure about (neighbour/dictionary/teacher/literacy mat).
5. Read a final time but carefully: Do **ALL** of your sentences make sense? Is there a better, clearer way of explaining/describing something?

Apostrophe Rules

1. Contractions
The apostrophe is put in the place of missing/omitted letters:
'I will' becomes 'I'll' / 'should not' becomes 'shouldn't' etc.

2. Possession
If something belongs to someone, we put an apostrophe, then an 'S':
Toby's football / The dog's collar / The door's handle.
But if the name already ends in an 'S', you just put an apostrophe:
Chris' guitar / Jess' book / Mr Jones' classroom.

3. Plural Possession
If something belongs to a group, we just put an apostrophe at the end.
The class' whiteboard / The boys' shoes.

4. It's vs Its
'It's' should ONLY have an apostrophe if it is being shortened from 'it is'.
NEVER for possession: Its legs were long and hairy.

Never use an apostrophe for plurals! Carrot's / Ball's / CD's

The Literacy Mat: Common Spellings

accommodation	daughter	improvise	performance	soldier
actually	decide/decision	industrial	permanent	stomach
alcohol	definite	interesting	persuade/persuasion	straight
although	design	interrupt	physical	strategy
analyse/analysis	development	issue	possession	strength
argument	diamond	jealous	potential	success
assessment	diary	knowledge	preparation	surely
atmosphere	disappear	listening	prioritise	surprise
audible	disappoint	lonely	process	survey
audience	embarrass	lovely	proportion	technique
autumn	energy	marriage	proposition	technology
beautiful	engagement	material	questionnaire	texture
beginning	enquire	meanwhile	queue	tomorrow
believe	environment	miscellaneous	reaction	unfortunately
beneath	evaluation	mischief	receive	Wednesday
buried	evidence	modern	reference	weight
business	explanation	moreover	relief	weird
caught	February	murmur	remember	women
chocolate	fierce	necessary	research	
climb	forty	nervous	resources	
column	fulfil	original	safety	
concentration	furthermore	outrageous	Saturday	
conclusion	guard	parallel	secondary	
conscience	happened	participation	separate	
conscious	health	pattern	sequence	
consequence	height	peaceful	shoulder	
continuous	imaginary	people	sincerely	
creation				

Maths Core Knowledge

hegartymaths

http://hegartymaths.com

Maths Lesson Essentials!

- Have you written and underlined the date and title?
- Have you written the question and shown your working out?
- Have you shown your units?
- Have you brought your calculator?
- Have you marked your answer in green pen?
- Does your answer make sense?

Number and Algebra

Ascending	Solution
Descending	Decimal
Denominator	Percentages
Numerator	Binary
Solve	Integer

Data

Mean
Median
Mode
Range
Scale
Proportion
Discrete data
Continuous data
Frequency
Cumulative frequency
Upper quartile
Lower quartile
Interquartile range
Distribution
Correlation
Scatter graph

Shape

Names 3D

Sphere
Cylinder
Tetrahedron
Prism
Cone
Pyramid

Shape

Names 2D

Quadrilaterals
Parallelogram
Trapezium
Rectangle
Rhombus

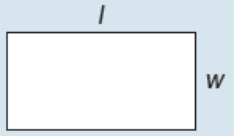
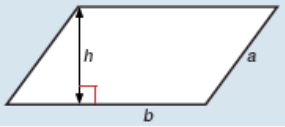
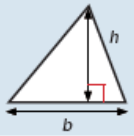
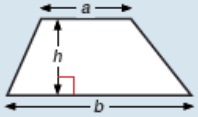
Triangles
Equilateral
Right-angle
Isosceles
Scalene

Keywords

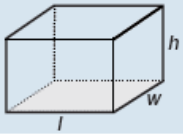
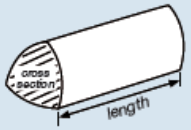
Circle
Polygon
Interior angles
Exterior angles
Acute angle
Right angle
Obtuse angle
Reflex angle
Vertically opposite angles
Corresponding angles
Alternate angles
Co-interior angles
Pythagoras
Trigonometry
Parallel
Perpendicular

Maths Core Knowledge

Areas

Rectangle = $l \times w$	
Parallelogram = $b \times h$	
Triangle = $\frac{1}{2} b \times h$	
Trapezium = $\frac{1}{2}(a + b)h$	

Volumes

Cuboid = $l \times w \times h$	
Prism = area of cross section × length	
Cylinder = $\pi r^2 h$	

Important Formulae

Compound measures

Speed

$$\text{speed} = \frac{\text{distance}}{\text{time}}$$

Pressure

$$\text{pressure} = \frac{\text{force}}{\text{area}}$$

Density

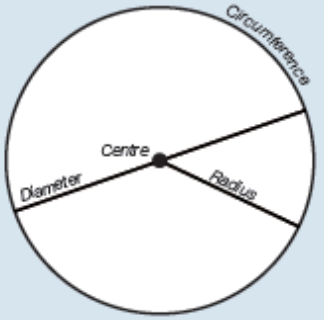
$$\text{density} = \frac{\text{mass}}{\text{volume}}$$

Circles

Circumference = $\pi \times$ diameter, $C = \pi d$

Circumference = $2 \times \pi \times$ radius, $C = 2\pi r$

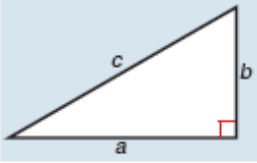
Area of a circle = $\pi \times$ radius squared $A = \pi r^2$



Pythagoras

Pythagoras' Theorem

For a right-angled triangle,
$a^2 + b^2 = c^2$



Trigonometric ratios (*new to F*)

$$\sin x^\circ = \frac{\text{opp}}{\text{hyp}}, \quad \cos x^\circ = \frac{\text{adj}}{\text{hyp}}, \quad \tan x^\circ = \frac{\text{opp}}{\text{adj}}$$

http://hegartymaths.com

hegartymaths

Science Core Knowledge

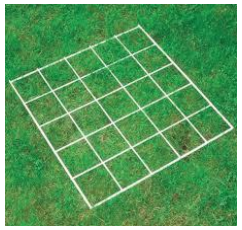
1. How Science Works Keywords

Keyword	Definition
Evidence	A set of data that proves a prediction or hypothesis.
Hazard	Something that could be dangerous.
Risk	Chance of something dangerous happening.
Prediction	Something you think will happen.
Hypothesis	Why you think something will happen.
Variables	Something that changes.
Independent variable	The variable that is changed or controlled in an experiment to test the effects on the dependent variable.
Dependent variable	The variable being tested and measured in an experiment.
Control variable	Something that is constant and unchanged during the experiment.
Repeatability	Closeness of repeats of results to each other.
Reproducibility	Agreement of results from different groups testing the same factor.
Accuracy	Closeness of a measured value to a standard or known value.
Precision	Closeness of two or more measurements to each other.
Reliability	The degree to which the result of a measurement can be depended on to be accurate.

2. Key Equipment

Measuring cylinders – 10 ml cylinders will allow measurement to the nearest 0.1 ml.
100 ml cylinders will allow measurement to the nearest 1 ml.

Thermometers – digital thermometers allow measurement to 1 decimal place, whereas alcohol thermometers only allow measurement to the nearest degree.



Quadrats – are used to do sampling and find the amount of a species in a certain area. Quadrats are placed onto the ground.

Metre ruler – used in multiple investigations in the lab. Allows us to measure to the nearest cm.

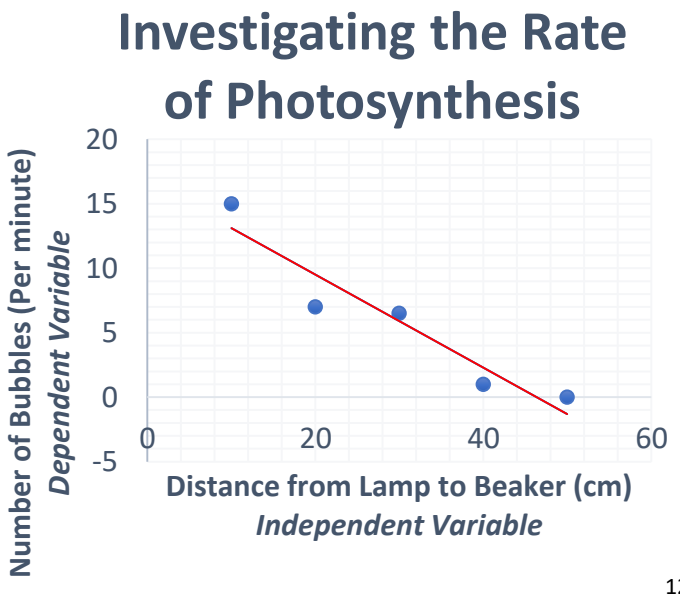
Measuring tape – used in sampling alongside the quadrat. Placed onto the ground to make a transect line to measure against.

Science Core Knowledge

3. Graphing, Analysis and Evaluation Keywords

Keyword	Definition	Example
Hypothesis	An educated guess based on what you already know.	The rate of photosynthesis will increase as the lamp moves closer to the beaker.
Independent Variable	The variable that can be changed by the scientist, it is the cause. Found on the *x*-axis.	Distance from lamp to beaker (cm)
Dependent Variable	The variable that the scientist observes, it is the effect. Found on the *y*-axis.	Number of bubbles (per minute)
Control Variable	The variables that must always be kept the same	Temperature, the size of the pond weed, amount of water
Line of Best Fit	A line that goes roughly through the middle of all the scatter points on a graph.	The red line on the graph above shows the line of best fit for the data plotted
Calculations	Use the correct equation to be used based on the variables of the experiment. Use correct units.	Calculation for mean of number of bubbles per minute: Trial 1 + Trial 2 + Trial 3 ÷ 3 15 + 14 + 15 ÷ 3 = 14.6
Results Analysis	Identify patterns in data. Describe what the table and graph show.	As the lamp is getting closer to the beaker, more bubbles are produced.
Conclusion	Answer your original question. State whether or not the hypothesis was supported.	The results prove that the rate of photosynthesis is effected by the distance of the light source. As the lamp was moved closer to the baker, more bubbles were produced.
Evaluation	Suggest an improvement for the equipment used. Suggest an improvement for the method used.	Use an LED lamp. Measure the volume of oxygen produced.

Distance from lamp to beaker (cm)	Number of bubbles (per minute)			Mean number of bubbles
	Trial 1	Trial 2	Trial 3	
10	15	14	15	14.6
20	7	7	7	7
30	7	7	6	6.7
40	1	2	1	1.3
50	0	0	0	0



Art

Practical Skills Visited

Skills

Colour

The colour wheel – deepening knowledge and ability to confidently mix primaries and secondaries

Drawing

Mark-making
Basic shapes/accuracy of outline shapes
Tone – shading from dark to light and directional shading
Portrait basic – proportions

Painting

Colour mixing, blending, directional brushstrokes.

Printing

Mono – printing

3D

Clay – basic intro – rolling/joining, pinch pot etc.

Photography

Photography for recording ideas – basic editing on phones

Literacy

To be able to explain ideas, and reflect on your own work.
To be able to write about an artwork, describing it in detail using the model 'form, content, process, mood.'

Vocabulary

Colour

Tone – Darks and lights and everything in between

Primary colours – Red, yellow and blue: cannot be created by mixing other colours together

Secondary colour – 2 primary colours mixed together in equal amounts – green, purple and orange

Portrait – An artwork focussing on a person's face.

Proportion – The size things are in comparison to each other

Blending – Mixing colours or tones together

Charcoal – Burnt willow sticks used to create very black dramatic lines and shadows

Texture – The way something feels to the touch – or showing this through the way you draw or paint something, e.g. through mark making

Form – The 3D shape of something

Natural forms – Objects that are natural, e.g. leaves, seedpods fir cones shells

Still life – A group of objects arranged together in a particular way

Stretch/Further Reading

Drawing

1. Complete drawings of anything from real life each week, focussing on the actual shape.
2. Complete some 'blind contour' drawings.

https://www.bing.com/videos/search?q=blind+coltour+drawing&&view=detail&mid=645E010C9DA18F675865645E010C9DA18F675865&&FORM=VDRVRV

3. See how many different tones/shaded you can get out of an HB pencil

4. Find out about traditional African Art.
a. How is Moroccan Art different from the Art of Kenya?
b. How was Picasso influenced by African Art?
5. If possible, visit the British Museum in London
https://www.bing.com/videos/search?q=british+museum+african+art&view=detail&mid=2AEAAA6B885C5075FC092AEAAA6B885C5075FC09&FORM=VIRE

Artists

Find out about the following artists:

- **Van Gogh**
- **Matisse**
- **Paul Klee**
- **Picasso**

Computing – The Computer

Keyword	Definition – Add from Bitesize
Hardware	
Software	
Peripheral	
Motherboard	
CPU	
Spreadsheet Software	
Web Browser	
Database Software	
Presentation Software	
Word Processing Software	

Homework Checklist for first term		
1	Get ahead	https://www.bbc.com/bitesize/topics/zmpsgk7
2	Idea Badges	• Teamwork, The Art of Selling, Researcher • Digital Research
3	Keywords from KO	You could also use https://quizlet.com to practice
4	Extension work	Cyber Spies, Build your own – https://www.computerplanet.co.uk/ How much?

Performance (Drama and Dance)

Drama Techniques

1	**Ensemble:** This is a French word for group. Working as an ensemble means working or moving or talking together as a chorus.
2	**Characterisation:** Creating a character that is different from yourself by using a combination of vocal and physical drama skills.
3	**Soundscape:** Building up a serious of sounds, noises, words or rhythms to create an atmosphere or create the impression of a particular setting, e.g. a storm at sea.
4	**Mime:** Silently using your body language and gesture to act like you are doing something but without props.

Drama Techniques

1	**Choral speaking:** Talking at once as an ensemble/chorus. Also known as 'speaking in unison'.
2	**Choral movement:** Moving at once as an ensemble/chorus. Also known as 'moving in unison'.

Dance: Creating and Developing a Motif

1	Using actions, space, dynamics and relationship content.
2	Choreographic devices to manipulate movement such as repetition, unison, canon and contrast.
3	Choreographic process to include research, improvisation, refinement and development.

Dance
Physical and Expressive Skills

1	**Flexibility**: The range of movement in the joints (involving muscles, tendons and ligaments).
2	**Balance**: A steady or held position achieved by an even distribution of weight.
3	**Stamina**: Ability to maintain physical and mental energy over periods of time.
4	**Strength**: Muscular power.
5	**Focus**: Use of the eyes to enhance performance or interpretative qualities.
6	**Projection**: The energy the dancer uses to connect with and draw in the audience.
7	**Musicality**: The ability to make the unique qualities of the accompaniment evident in performance.
8	**Safe Practice**: To include warm up and appropriate clothing.

English

Keywords

Evidence	the use of information to prove a point that you are making
Quotation	a selection of words or phrases taken, word for word, from a text
Fiction	writing that describes imaginary events and people, e.g. *Private Peaceful*
Non-fiction	writing that describes people's opinions or information on facts and reality, e.g. a newspaper
Identify	to pick out a specific piece of information from a text
Inference (noun)	a thought or opinion about a text that is formed by looking at the evidence
Infer (verb)	to have a thought or opinion about a text, formed by looking at the evidence
Explicit	obvious, specific or clear
Implicit	suggested, not openly stated, an educated guess
Analysis (noun)	the close examination of a text
Narrator	the person telling the story
Perspective	the views and opinions of the writer

Language Devices

Simile	Comparing two objects using 'as' or 'like' to create imagery
Metaphor	Comparing one thing to another by saying it is something else
Personification	Giving inanimate objects human properties
Pathetic fallacy	When you give human emotions to nature (specifically the weather) to create atmosphere
Alliteration	Words in a passage / sentence that begin with the same sound.
Onomatopoeia	Words that sound like the sounds they are describing
Semantic field	A group of words that suggest a theme / topic

Structural Devices

Sequence	the order of events in a text (opening, middle, end)
Flashback / flash-forward	an interruption of the story to describe a past or future event
Past and present tense	identifying whether the events are happening now, or if they have already happened
Narrative viewpoint	writing in the first person ('I'), second person ('you'), or third person (he, she, it, names)
Foreshadowing	Hints about what might happen later in the speech

Parts of Speech

Noun	People, places, things
Adjective	Describes a noun
Adverb	Tells you how, when, where or why something is being done
Verb	Describes an action
Pronoun	Works as a noun and indicates other people in the discussion
Connective	A word used to connect clauses or ideas together
Preposition	Usually used in front of nouns or pronouns and they show the relationship between the noun or pronoun and other words in a sentence

Rhetorical Devices

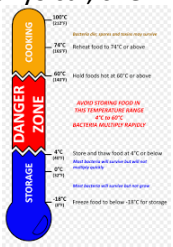
Rhetorical question	Asking a question that gets the reader to consider or do something. Used to emphasise a key point.
Direct address	Directing a statement clearly to the reader / audience using the pronoun 'you'.
Tripartite sequence	When you list three actions or descriptions in a sentence.
Inclusive pronouns	Use of 'us' / 'our' etc. to make the audience feel included and therefore more likely to agree.
Hyperbole	Exaggerated or over the top language.
Facts / statistics	A statement that is known or proven to be true.
Opinions	A view or judgement of something that someone could disagree with.
Repetition	Words or phrases repeated across a text for emphasis.

Food Preparation and Nutrition

Keywords

Bacteria – A single celled organism that can cause food poisoning.

Contamination types – physical, chemical and bacterial.



Cross contamination – When bacteria travels using equipment or food to a different source.

High risk food – Those most likely to encourage bacterial growth e.g. meat, poultry, fish and dairy.

Danger zone – The temperature range in which bacteria thrives.

Ambient temperature – Normal room temperature

Processes and Techniques

Bridge Hold

Claw Hold

The Eatwell Guide

Tips for healthy eating:

1. Base your meals on starchy food
2. Eat lots of fruit and vegetables
3. Eat more fish
4. Cut down on saturated fat and sugar
5. Try to eat less salt – not more than 6 g a day
6. Drink plenty of water
7. Don't skip breakfast

Electronic scales using for measuring ingredients, e.g. flour, butter, sugar

Measuring jug used to measure liquid ingredients, e.g. water, milk, oil

Macronutrients

Macronutrients are needed by the body in large amounts.

Carbohydrates

- Provides the body with energy.
- Most of our energy should come from complex starchy food.
- One third of your diet should come from starch foods.
- If the diet contains more carbohydrates than the body needs, it will turn into fat and be stored in the body.

Fats

- Animal fats are usually saturated **(solid)** and vegetable fats are usually unsaturated **(liquid).**
- Saturated animal fats have been linked to increased cases of heart disease.
- Fat provides us with energy.
- It keeps the body warm.
- It protects and cushions internal organs by covering them.

Protein

- Essential for growth, repair, maintenance and energy.
- High biological value (HBV) proteins come from animals.
- Low biological value (LBV) proteins come from mainly plant foods.

Food Preparation and Nutrition – Recipes

FRUIT SALAD

1 apple
1 orange
5 grapes
Some berries
1 kiwi
a small carton of fruit juice (orange/apple)
a plastic container, with your name on it, to take your fruit salad home in

FAIRY CAKES

100 g self raising flour
100 g butter/margarine
100 g caster sugar
2 eggs
12 cake cases

FRUITY BISCUITS

75 g caster sugar
225 g plain flour
150 g butter

ROCKY ROAD

250 g digestive biscuits
150 g milk chocolate
150 g dark chocolate
100 g butter
150 g golden syrup
100 g chopped dried apricots
75 g raisins

PASTA IN TOMATO SAUCE

200 g pasta shapes
2 tbsp oil
1 small onion
1 clove garlic
1 small tin tomatoes
1 tbsp tomato puree
1 tbsp mixed herbs
50 g grated cheese
OPTIONAL INGREDIENTS: 1 red/green pepper, 1 courgette, 6 mushrooms

TOMATO AND BASIL TART

1 packet of readymade short curst pastry
2 tomatoes
50 g cheese, e.g. mozzarella, gruyere, cheddar
handful of basil leaves
2 eggs
125 ml semi-skimmed milk
black pepper

MUFFINS

240 ml milk
125 ml sunflower or vegetable oil
2 medium sized eggs
250 g plain flour
100 g sugar
2 heaped tsp baking powder
muffin cases

ALWAYS REMEMBER A CONTAINER TO TAKE YOUR FOOD PRODUCTS HOME!!!!

LEARN VOCAB — French — BUILD SENTENCES

Family Members

Ma mère est…	My mum is…
Ma grand-mère a…	My grandma has…
Ma soeur (cadette) **n'**aime **pas**…	My (younger) sister doesn't like…
Ma belle-soeur **n'**est **pas**…	My step-sister isn't…
Ma demi-soeur aime…	My half-sister likes…
Ma tante adore…	My aunt loves…
Un(e) bon(ne) ami(e) est…	A good friend is…
Ma meilleure amie est…	By best (girl) friend is…
Mon père me dit que…	My dad says that…
Mon grand-père a horreur de…	My grandad can't stand…
Mon frère (aîné) a une passion pour…	My (older) brother has a passion for…
Mon oncle déteste…	My uncle hates…
mon meilleur ami s'appelle…	My best friend is called…

Hair and Eyes

Les cheveux bruns	brown hair
Les cheveux courts	short hair
Les cheveux bouclés	curly hair
Les cheveux ondulés	wavy hair
Les yeux verts	green eyes
Les yeux marron	brown eyes
Les yeux bleus	blue eyes

Verb Phrases (present tense)

Dans ma famille, il y a…	In my family, there is…
D'habitude je porte…	Usually I wear…
Je **ne** porte **jamais**…	I **never** wear…
Je veux porter…	I want to wear…
Mon animal préféré est…	My favourite animal is…
Je préfère…	I prefer…

Verb Phrases (future tense)

Je voudrais avoir…	I would like to have…
Je vais avoir…	I'm going to have…
Il sera….	It will be…

Animals

Un poisson (rouge)	a (gold) fish
Un chien (gris)	a (grey) dog
Un chat (roux)	a (ginger) cat
Un oiseau (jaune)	a (yellow) bird
Une (petite) souris	a (small) mouse
Des lapins (noirs et blancs)	some (black and white) rabbits

Clothing

Un pantalon (noir)	(black) trousers
Un jean (moulant)	(skinny) jeans
Un tee-shirt (blanc)	a (white) t-shirt
Une robe (verte)	a (green) dress
Des baskets (blanches)	(white) trainers

Core Questions

1) Décris ta famille.	Describe your family.
2) Tu es comment?	What are you like?
3) Qu'est-ce que tu aimes?	What do you like doing?
4) As-tu des animaux?	Do you have any pets?
5) À l'avenir, quel animal voudrais-tu avoir?	Which animal would you like to have in the future?

Activities

Regarder la télé	watching TV
Faire des magasins	shopping
Lire des magazines	reading magazines
cuisiner	cooking
Faire du patinage	skating
Faire de la musculation	weight-lifting
Jouer de la batterie	playing the drums

Avoir = to have

J'ai…	I have…
Tu as…	You have…
il / elle a…	He/ she has…
On a …	We have…
Ils/elles ont…	They have…

Être = to be

Je suis…	I am…
Tu es…	You are…
il / elle est…	He/ she is…
On est…	We are…
Ils/elles sont…	They are…

Adjectives (personality)

On me dit que je suis…	People tell me I'm…
Marrant(e)	funny
Gentil(le)	kind
Bavard(e)	chatty
Agaçant(e)	annoying
Fort(e)	strong
sympa	nice

Adjectives (appearance)

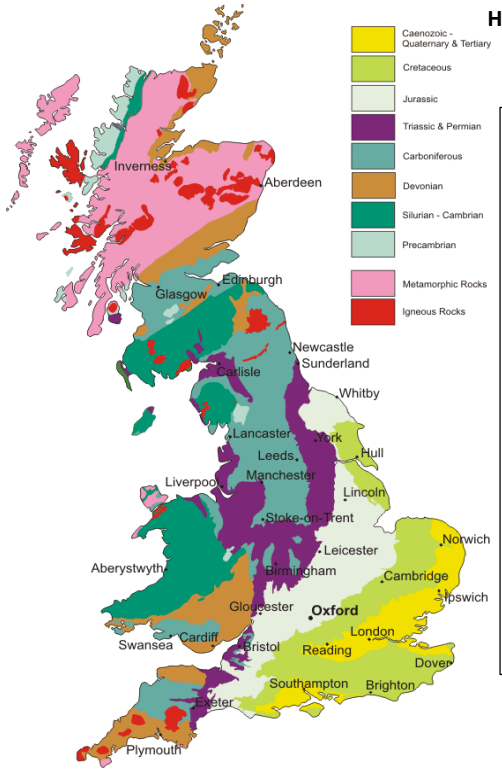
Beau / belle	handsome/ beautiful
mignon(ne)	cute
Grand(e)	big/ tall
Petit(e)	small / short
De taille moyenne	of average height

Intensifiers (make your language more interesting!)

Un peu	a bit
très	very
assez	quite

Geography

How does geology shape the UK?

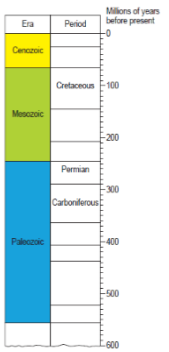


Rock type varies across the UK and it has an impact on the landscape and population distribution of different areas. For example:
The **metamorphic rock** found in Scotland is home to the **'Upland Mountains,'** here the population is small due to the extreme relief of the land.
Whereas, the **'Jurassic'** rock running through Leicester and Oxford, contains **sandstone, clay and shale**, making it ideal for farming.
The **Caenozoic band**, which is found on the east coast, is **made of clay and sand**. This is being destroyed (eroded) by the sea, as it is fairly soft, forcing people to move.

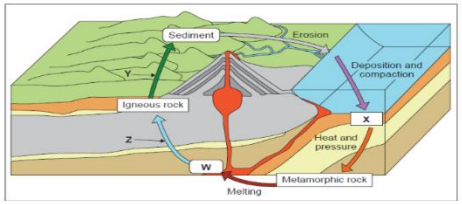
Rock Type		
Igneous 	Sedimentary 	Metamorphic 
Formed by volcanoes **Often contain crystals** **Examples – Basalt / Granite**	Formed on the seabed Contains rocks such as chalk and clay	Rock that is heated – not melted Contains slate and marble

How do we use different rocks?

Sedimentary rock gives limestone is used mainly in the manufacture of Portland cement, the production of lime, manufacture of paper, petrochemicals, insecticides, linoleum, fiberglass, glass, carpet backing and as the coating on many types of chewing gum.
Metamorphic rock gives marble is used for building materials and artwork. Marble is beautiful for statues and decorative items such as vases. Ground up marble is also a component of toothpaste, plastics and paper.
Igneous rock gives granite is used in buildings, bridges, paving, monuments and many other exterior projects. Indoors, polished granite slabs and tiles are used in countertops, tile floors, stair treads and many other design elements.



The Earth is thought to be 4,600 million years old. Life is believed to have become dominant on earth 542 million years ago.
The geological periods relate to events that have happened in the Earth's history. For example, during the **carboniferous period** there were tropical weather conditions in the UK and coal and limestone were formed.
The most recent period in geological time is called the **quaternary**, when the Ice Age occurred.
Rocks are formed at different times and are a result of the environment present during that time. For example, chalk is formed in the **cretaceous** period, as this is when warm tropical seas were present around the shores of the UK.
Era – An era is a length of geological time that can vary in length – the Palaeozoic was much longer than the Mesozoic.
Eras are subdivided into shorter lengths of time known as periods.



Weathering – Is the process whereby rocks are broken down by the action of things in the environment, such as; the temperature (hot / cold), gases in the air (acid rain) and plants and animals (roots of trees).

1. **Mechanical weathering** – the breaking of rock into smaller pieces without any change in its chemical nature.
2. **Biological weathering** – the breaking down of rocks by plant roots or borrowing animals.
3. **Chemical weathering** – causes an alteration to the chemical composition of rock due to a reaction.
4. **Freeze thaw** – water freezes in cracks and expands, then thaws and so on.
5. **Onion skin** – as the sun shines on rocks during the day it causes them to expand. During the night the rock contracts due to the colder temperature. Over time this continued process causes small pieces of surface rock to flake off.
6. **Solution** – where acidic rain is able to dissolve rocks, e.g. limestone.

The rock cycle:

1. Rock on the Earth's surface is broken down into stones, sand and clay by **weathering**. It is known as **sediment**.
2. The sediment can enter rivers and will be eroded and transported by the river.
3. The river drops the sediment on the ocean floor. This builds up on the ocean bed. Over time the weight causes the sediment to be compacted, leading to **sedimentary rocks** forming.
4. Further weight pushes the sedimentary rocks downwards into the Earth's crust. Heat and pressure change this into **metamorphic rock**.
5. The metamorphic rock gets buried further and gets so hot it **melts** to form magma.
6. Overtime the magma rises up and begins to cool to form **igneous rock**. Some of this magma shoots out of volcanoes, cooling on the surface.
7. In time the igneous rock on the Earth's surface is weathered down to form sediment and the process repeats.

Your case study on the impacts of a quarry. You must remember your place specific information!

Advantages – in extraction of rock, distribution and supporting local shops and cafes, providing alternative jobs to farming in rural areas and offering opportunities for young people, providing an essential resource – cement for building.
A quarry will normally try to reduce any problems that it creates, e.g. re-planting trees, adding new habitats, using solar energy etc.

Disadvantages – visual impact due to the presence of a large hole in the ground and the presence of spoil heaps, the impact of noise via blasting, transport via large lorries or trains, air pollution and the presence of dust; the loss of wildlife habitats.

Haustiere – Pets

Der Goldfisch	Goldfish
Der Hamster	Hamster
Der Hund	Dog
Der Vogel	Bird
Der Wellensittich	Budgerigar
Die Katze	Cat
Die Maus	Mouse
Die Schlange	Snake
Die Schildkröte	Tortoise
Das Pferd	Horse
Das Kaninchen	Rabbit
Das Meerschweinchen	Guinea pig
Ich habe kein Haustier	I have no pet
Hast du ein Haustier?	Do you have a pet?

How to say what pet you have:

Ich habe **einen** + masculine noun
Ich habe **eine** + feminine noun
Ich habe **ein** + neuter noun

Use **keinen** / **keine** / **kein** to say what pet you don't have

Regular Present Tense Verbs
Wohnen = To Live

Ich	wohne	I live
du	wohnst	You live
er/sie	wohnt	He/she lives
wir/sie	wohnen	we/ they live

Ich spiele = I play
Ich tanze = I dance
Ich sehe fern = I watch TV
Ich simse = I text
Ich fahre rad = I ride my bike
Ich gehe ins Kino = I go to the cinema

Describing Someone

sie / er hat……. = he/she has……
schwarze/braune/blonde/rote Haare = black/brown/blond/red hair
kurze/lange/mittellange Haare= short/long/mid length hair
blaue/braune/grüne/graue Augen = blue/brown/green/grey eyes

sie / er ist……. = he/she is…
dick/schlank = fat/thin
frech/niedlich = cheeky/cute
gemein/süβ = mean/sweet
gross/klein = big/small
kräftig/schlau = strong/cunning

Meine Familie = My Family

Meine Mutter	My mother
Meine Grossmutter	My grandmother
Meine Oma	My gran
Meine Schwester	My sister
Meine Stiefschwester	My step sister
Meine Halbschwester	My half sister
Meine Tante	My aunt
Meine Cousine	My cousin (f)
Mein Vater	My father
Mein Grossvater	My grandfather
Mein Opa	My grandad
Mein Bruder	My brother
Mein Stiefbruder	My step brother
Mein Halbbruder	My half brother
Mein Onkel	My uncle
Mein Cousin	My cousin (m)
Meine Eltern	My parents
Meine Grosseltern	My grandparents
Hast du Geschwister?	Do you have siblings?
Ich habe zwei Brüder	I have 2 brothers
Ich habe zwei Schwestern	I have 2 sisters
Ich bin Einzelkind	I am an only child
Ich habe keine Geschwister	I have no siblings

History – Challenges to the Crown

Key Content

Pope	Head of the Catholic Church and therefore very important.
Murder of Thomas Becket	Becket was murdered following a challenge to the power of the Church by Henry II.
Divine Right	The belief that God has chosen who should be king therefore no one should question this.
Crusade	A series of military expeditions made to Europeans to recover the holy lands in the Middle East.
Black Death	The plague that spread throughout England in 1348.
Poll Tax	A tax that was introduced to pay for the war with France.
Peasants revolt	A rebellion led by peasants demanding greater rights.
Statute of Labourers	A law created to stop an increase in the wages for peasants after the Black Death.
The signing of the Magna Carta	A document created to make sure that all people follow the law including the King.

Key Concepts

Revolt	To violently challenge authority.
Challenge to the crown.	To test the authority of the King or Queen.
Change	Differences over a period of time.
Continuity	What stayed the same over a period of time.
Cause	Things **that lead to** another event.
Consequence	Things that happened **because of** an event.

Useful links:

http://www.eyewitnesstohistory.com/becket.htm

https://www.bbc.com/bitesize/guides/z2c2pv4/revision/1

https://www.bbc.com/bitesize/guides/zqgqtfr/revision/1

https://www.youtube.com/watch?v=wWKTy1NlxZE

Key Dates

1154-1189	Henry II ruled England.
1162	Thomas Becket appointed Archbishop of Canterbury.
1170	Thomas Becket was murdered.
1348	The Black Death reached England.
1377-1399	Richard II ruled England.
1381	The Peasant's Revolt.
1199-1216	King John ruled England.
1215	The signing of the Magna Carta.

Key Individuals

Henry II	Was the king of England between 1133 and 1189.
Thomas Becket	Was made Archbishop of Canterbury and then murdered by Henry II's soldiers in 1170.
Richard II	Became King in 1387 and was 14 when the Peasants revolt took place.
Wat Tyler and John Bull	Leaders of the Peasants revolt against the king.
King John	Known as 'soft sword' and 'lackland'. Was forced to sign the Magna Carta.

Maths

hegartymaths

http://www.hegartymaths.com

Year 7 Cycle 2

Fractions as Part of a Whole		
Equivalent fractions	You must multiply or divide the numerator and denominator by the same number.	$\frac{1 \times 3}{2 \times 3} = \frac{3}{6}$
Simplify fractions	Divide both the numerator and the denominator by the highest common factor.	$\frac{18 \div 6}{24 \div 6} = \frac{3}{4}$

Fractions as a Value (+/-)		
Adding/subtracting fractions	You must have a common denominator. Find the LCM of the denominators. Use equivalent fractions to change each fraction to the common denominator. Add or subtract the numerators and keep the denominators the same.	$\frac{2}{3} - \frac{1}{5}$ LCM of 3 and 5 is 15 $\frac{2 \times 5}{3 \times 5} = \frac{10}{15}$ and $\frac{1 \times 3}{5 \times 3} = \frac{3}{15}$ So, $\frac{10}{15} - \frac{3}{15} = \frac{10-3}{15}$ $= \frac{7}{15}$

Fractions as a Value (Comparing)		Fractions as an Operation	
Comparing fractions	You must have a common denominator. Then you can compare the numerators. Ascending means smallest to largest. Descending means largest to smallest.	Finding fractions of amounts	Divide the value by the denominator. Multiply the answer by the numerator.

Key Vocabulary	
Integer	A whole number
Fraction	A mathematical expression representing the **division** of one integer by another
Numerator	The 'top' number of a fraction
Vinculum	A horizontal line that separates the numerator and denominator in a fraction
Denominator	The 'bottom' number of a fraction
Equivalent Fractions	Fractions that represent the same value
Simplified Fractions	Fractions where the highest common factor of the numerator and denominator is 1
Highest Common Factor	The largest factor that is common to 2 or more integers
Lowest Common Multiple	The first multiple to appear in the times tables of 2 or more integers
Improper Fraction	A fraction where the numerator is larger than the denominator
Mixed Number	A number formed of an integer part and a fraction part

Converting	
Mixed numbers to improper fractions	Multiply the denominator by the integer. Add the numerator to the answer. This is your new numerator. The denominator stays the same.
Improper fractions to mixed numbers	23

Maths

Basic Rules of Algebra

Simplifying Expressions	Collect **like terms**. Be careful with negatives.	$2x + 3y + 4x - 5y + 3 = 6x - 2y + 3$
$x \times x$	The answer is x^2 not $2x$	Squaring is multiplying by itself, not by 2
$p \times p \times p$	The answer is p^3 not $3p$	If $p = 2$, then $p^3 = 2 \times 2 \times 2 = 8$ not $2 \times 3 = 6$
$p + p + p$	The answer is $3p$ not p^3	If $p = 2$, then $3p = 2 + 2 + 2 = 6$ not $2^3 = 8$

Expanding and Factorising

Expanding a single bracket	To expand a bracket, multiply each term in the bracket by the expression outside the bracket.	$3(m + 7) = 3m + 21$
Factorise	The reverse of expanding. Factorising is writing an expression as a product of terms by 'taking out' a common factors. Do this by dividing each term by the HCF.	$6x - 15 = 3(2x - 5)$ where 3 is the highest common factor

Substitution

Substitution	Substitute letters for words in an equation. When you substitute you replace a variable for a number. You must always follow BIDMAS.	
$3a$	$3 \times a$	If $a = 5$, $3a = 3 \times 5 = 15$
y^2	$y \times y$	If $y = 7$, $y^2 = 7 \times 7 = 49$
$2x^2$	$2 \times x^2 = 2 \times x \times x$	If $x = 9$, $2x^2 = 2 \times 9 \times 9 = 2 \times 81 = 162$

Stretch and Challenge

Can you make your own questions involving fractions and algebra?	$\frac{5}{12}$ [redacted] $\frac{2}{3}$ $5x$ $(2x + \frac{1}{6})$	By collecting like terms, give an expression for the perimeter of the rectangle in its simplest form.

Key Vocabulary

Variable	An 'unknown'. A letter used to represent a number, these can take any value.
Expression	Made up from numbers and/or letters representing unknown values where there is no equals symbol.
Terms	The separate parts of expressions. For example in $5x + 3y - 4$ there are three terms: $5x$, $+ 3y$ and $- 4$.
Coefficient	The numbers in front of the variable. For example, in $6x$ the coefficient of x is 6.
Like terms	Terms with the same variable. For example, $4x$, x and $5x$ are all like terms. x^2 and x are not like terms.

BIDMAS

BIDMAS	An acronym that tells you the order in which to do operations.	
B	Brackets	
I	Indices	Also known as 'powers'.
D	Division	With strings of multiplication and division or addition and subtraction, work from left to right.
M	Multiplication	
A	Addition	
S	Subtraction	

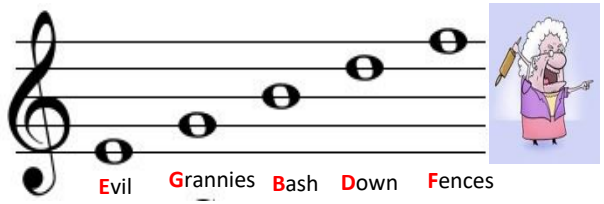
Music

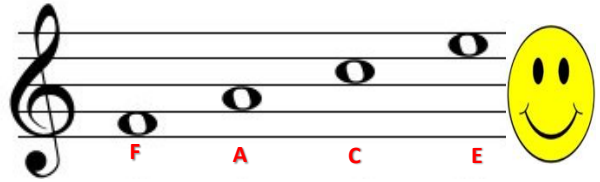
Keywords		
Dynamics	Symbol	Definition
Fortissimo	*ff*	Very Loud
Forte	*f*	Loud
Mezzoforte	*mf*	Moderately Loud
Mezzopiano	*mp*	Moderately Quiet
Piano	*p*	Quiet
Pianissimo	*pp*	Very Quiet
Crescendo	<	Becoming gradually louder
Decrescendo	>	Becoming gradually quieter

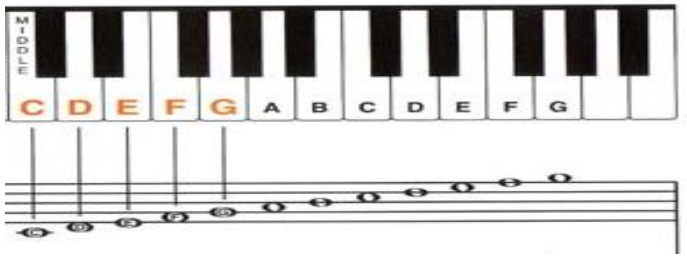
Tempo	Definition
Lento	Slowly
Largo	Slow and stately
Adagio	Leisurely
Andante	At a walking pace
Allegro	Fast
Vivace	Lively
Presto	Very Quickly

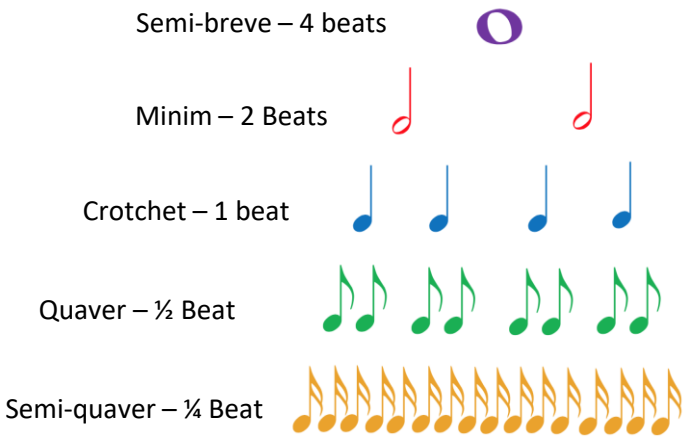
Musical Instrument Families

Woodwind	**Brass**
Flute	Trumpet
Clarinet	French horn
Oboe	Trombone
Saxophone	Tuba
Bassoon	
Strings	**Percussion**
Violin	Timpani
Viola	Piano
Cello	Glockenspiel
Double Bass	Xylophone







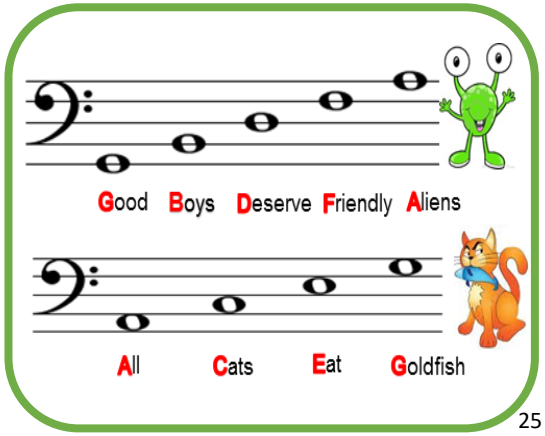


Spellings to Learn in Music

Rhythm
Rehearsal
Guitar

Stretch and Challenge

Listen to the following piece of music. Would you be able to identify each instrument of the orchestra if you heard it again?
'Peter and the Wolf' by Prokofiev
https://www.youtube.com/watch?v=9ueGfjBKbiE



Physical Education

Sports	Key Skills			
Invasion Netball Handball Basketball Football Rugby Hockey		Passing Shooting Dribbling Tackling Catching Throwing Kicking	
Artistic Gymnastics Trampolining		Balancing Travel Vaulting Landing Rotation	
Striking and fielding Stoolball Rounders Cricket Softball Tennis		Striking Hitting Catching Throwing Stopping	
Athletics Track events Field events		Sprinting Jumping Throwing Pacing	
Swimming Strokes Life Saving		Body Legs Arms Breathing Timing	

Components of Fitness

Balance – the ability to maintain centre of mass over a base of support. There are two types of balance: static balance and dynamic balance. A gymnast uses static balance when performing a headstand and dynamic balance when performing a cartwheel.

Coordination – the smooth flow of movement needed to perform a motor task efficiently and accurately.

Reaction Time – the time taken for a sports performer to respond to a stimulus and the initiation of their response.

Agility – the ability of a sports performer to quickly and precisely move or change direction without losing balance or time.

Power – the product of strength and speed. Expressed as the work done over a unit of time.

Muscular Endurance – the ability of the muscular system to work efficiently, where a muscle can continue contracting over a period of time against a light to moderate fixed resistance load.

Muscular Strength – the maximum force (in kg or N) that can be generated by a muscle or muscle group.

Aerobic Endurance – the ability of the cardiorespiratory system to work efficiently, supplying nutrients and oxygen to working muscles during sustained physical activity.

Flexibility – having an adequate range of motion in all joints of the body; the ability to move a joint fluidly through its complete range of movement.

Speed – distance divided by the time taken. Speed is measured in metres per second (m/s). The faster an athlete runs over a given distance, the greater their speed.

STRETCH AND CHALLENGE

Leadership within PE lessons:

- Are you able to identify the correct technique for a particular skill?
- Are you able to demonstrate this to your peers?
- Are you able to identify a WWW and EBI for someone else's performance?
- How can you use your experience in a specific sport to coach someone else safely and correctly?
- Do you know how to communicate effectively with others?
- Can you demonstrate resilience (R6), determination (R5), confidence, teamwork, respect, independence (R8), enthusiasm and creativity (R7)?

Product Design – Materials and Tools

Tools and Equipment
If you are unsure, ask about the use first!

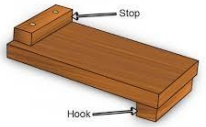
Coping Saw for cutting **curved** lines in **thin** material with a thin blade. The blade can be rotated by undoing the handle first.

Tenon Saw for cutting straight vertical cuts. The depth of the cut is restricted by the brass spine. You must stretch the index finger out when using this saw to steady it and get a more accurate cut. Start cutting on a corner, drawing back several times.

Bevel Edge Chisel for removing wood. Always chisel away from yourself. Use only for cutting wood – they must be razor sharp!

Steel Rule Measuring with accuracy up to 1/2 mm depending on your eyes! It starts at zero on the end, unlike a ruler that has material on the end first. Make sure that you look at the measurements from above to get an accurate reading. You also need a sharp pencil!

Bench Hook and Clamp Use the bench hook to help cut wood with accuracy. Top tip: always cut all the way through your work into the bench hook to avoid splintering the back of your work.



Squares: 45 degree and 90 degree Take care of these – your work accuracy depends on them being accurate! You must keep the stock (wooden bit) tight against your work and your pencil must be sharp!

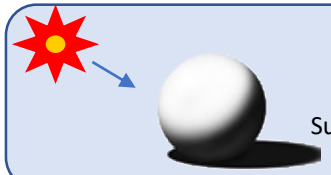
Soldering Iron These are used to join electrical items such as wire, remember to take care because these are very hot, be sensible, use a stand. Apply heat to the whole area to be soldered before putting the solder wire onto the joint.

Machine Tools You must not use these unless you have been shown how to by a teacher and you understand! Always ask if you are unsure.

Fret saw for cutting **curved** lines in **thin** material with a thin blade. Always keep your fingers clear. Make sure the guard is intact. Cut slowly. Use the clamp to stop wood rattling about.

Pillar Drill
We use this for drilling vertical holes in material. Almost always you will clamp your work down first. Wear glasses, use the guard and know how to turn it off in an emergency. Do not use if you are unsure – ask!

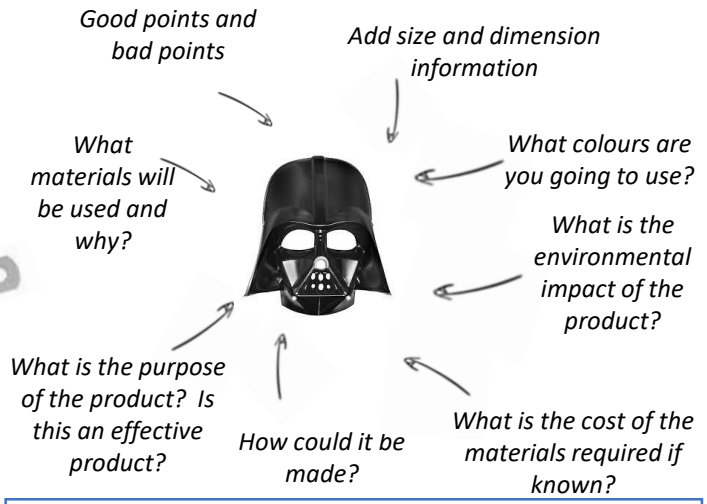
Rendering



Surface facing directly towards light = lightest tone

Surfaces facing directly away from light = darkest tone

Product Analysis



Project Materials

MDF (Medium Density Fibre Board) – a product made of recycled wood dust

Solder – a thin strip of metal used to help stick electronic components together

Switch – a component that allows electricity to go through a circuit

Battery snap – a component that lets you connect a battery to the circuit

Connector block – a component that lets you connect wires together

Wire – red wire is positive, black wire is negative

Product Design – Maths Element

Measuring -

Length: measured using a steel rule or ruler. For small measurements we us mm then cm and m for larger ones.

Angles: measured using a protractor and using degrees. A right angle = 90˚. There are 360° in a circle

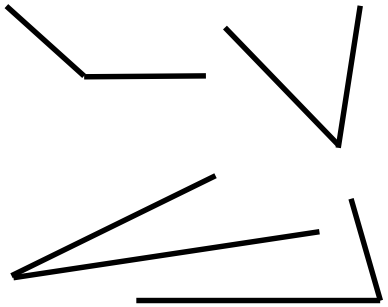
Examples: line measuring below – use a ruler and ask someone to check your answer. Give the answer in mm and cm

1)

2)

3).

Examples: angle measuring. Use a protractor to measure these angles and ask someone to check for you.



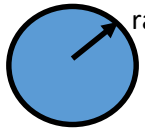
Area – the two-dimensional space taken up by something. For example, the area of a sheet of material like card. Measured in either cm^2 or m^2 for larger problems.

Area of a rectangle = width × length

Area of a circle = πr^2

π = 3.142

The radius is half the diameter



Examples - rectangle area.

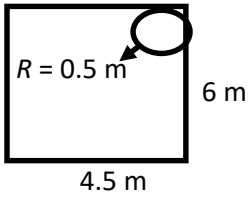
1) If the width of a piece of fabric is 10 cm and its length is 15 cm, what is its area in cm^2?
2) Width = 12 cm, length = 32 cm, what is the area?
3) Width = 3 m, length = 8 m, what is the area in m^2?

Answers below.

Examples - circle area.

1) If the radius of a piece of metal is 5 cm what is its area in cm^2?
2) Radius is 3 cm, what is the area?
3) Radius = 9.5 cm, what is the area
4) Diameter = 12 cm, what is the radius?

Answers below.



Harder Example – combined area problem

This is plan for a carpet for a room. The circular part will be removed for a special floor. How much is the actual carpet area now?

Extension question – if the carpet costs £12 per m squared, how much will this cost?

Answers below

The easiest way to remember these is to ask someone to set you more questions!

Answers:

Rectangle area: 1) 150 cm^2. 2) 384 cm^2. 3) 24 m^2

Circle area: 1) 78.57 cm^2. 2) 28.2 m^2. 3) 283.6 cm^2. 4) 452.4 cm^2

Harder question: rectangular area 27 m^2; circle area .78 m^2; total area = 26.21 m^2; carpet cost = £314.55

Religious Education – Jewish Beliefs and Practices

Keyword	Definition
Chosen people	Jewish belief that G-d chose them for his own.
Covenant	A promise, testament or agreement.
Dietary laws	The food laws given by G-d to the Jews.
Eternal	Beyond time and space and without end.
Exodus	The departure of the Israelites (Jews) from Egypt.
Israel	Jewish homeland promised to them by G-d.
Justice	Fairness and fighting for people's rights.
Kashrut	The name for the Jewish law that states that foods can and cannot be eaten and how those foods must be prepared.
Kosher	Food that is 'clean' and meets the requirements of the Jewish laws.
Obedience	Following rules.
Omnibenevolent	G-d is all-loving.
Omnipotent	G-d is all-powerful.
Omnipresent	G-d is always there.
Omniscient	G-d is all-knowing.
Orthodox	Following traditional practices, rituals and beliefs.
Prophet	A person regarded as an inspired teacher or proclaimer of the will of G-d.
Reform	Jews who have changed certain practices to adapt to modern society.
Responsibility	Being trusted and accepting consequences.
Ritual	A religious ceremony observed by believers.
Rosh Hashanah	The Jewish new year.
Shema	The central prayer in Judaism.
Synagogue	The Jewish place of worship.
Torah	Jewish Holy scripture, part of the written law.
Trefah	Literally means 'torn' – forbidden food.
Trust	Faith in another person.
Yom Kippur	The day of Atonement; day of fasting on the tenth day after Rosh Hashanah.

Prophets	Explanation of this Prophet's Life
Adam	First man on Earth. Eve was made from Adam's rib. Eve tempted Adam to eat from the forbidden tree of knowledge. This disobedience cause original sin to come upon all of humanity.
Noah	Society had become dangerous and many people had turned away from G-d. G-d spoke to Noah and asked him to build an ark as G-d wanted to create a great flood to remove all sin and evil from the world. Two of each animal and Noah's family survive the flood. Noah was given new rules in order to keep society in order, such as 'do not worship idols'.
Abraham	The founder of Judaism and often called 'father Abraham' or 'father of the Jews'. G-d created a covenant between himself and Abraham and stated 'you will be a father of a great nation, if you walk in my ways'. Abraham left his home town to find the promised land and G-d rewarded his obedience by enabling Abraham and Sarah to conceive (have children) even though Abraham was 100 years old.
Moses	Known as the servant of G-d and leader of the Exodus – whereby the Israelites were freed from slavery out of Egypt. After freeing the Israelites, Moses was given the Ten Commandments to inform people in society of how to behave.

CHALLENGE

Go to the links below and extend your knowledge on Jewish beliefs and practices.

- http://www.bbc.co.uk/religion/religions/judaism/
- https://www.bbc.com/bitesize/topics/ztrqxnb

Religious Education – Jewish Beliefs and Practices

Themes	Beliefs
G-d	Jews are monotheists, which means they only believe in one G-d who is omnipotent (all powerful), omniscient (all knowing) and omnibenevolent (all loving).
Covenant	Judaism says that the Jews entered a special relationship with G-d, whereby G-d promised to teach Jews how to live, and Jews are to worship one true G-d and obey his commandments.
Ten Commandments	The fundamental set of rules to guide Jews, revealed by G-d to Moses on Mount Sinai.
Free Will	The belief that G-d created humans with the ability to do good and bad to test them on whether they choose to worship him or not.
Orthodox Jews	Orthodox Jews follow the Torah literally including all the mitzvot (commandments) as these were given to Moses from G-d. Orthodox Jews observe mitzvot by not working on the Sabbath, men wear the Kippah at all times and men and women sit separately during worship.
Reform Jews	Reform Jews believe that the Torah must be made relevant to today so women alongside men can wear the Kippah and men and women can sit together during worship. Reform Jews might set aside some teachings if these are not relevant to today's society.

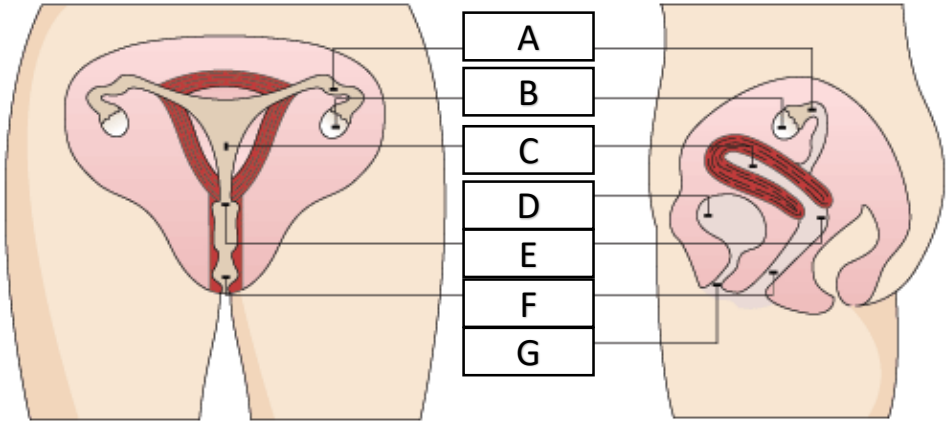
Themes	Practices
Shabbat	Shabbat is the Jewish Sabbath, which occurs Friday night until Saturday night. As the Torah states to 'Keep the Sabbath holy', Jews tend to not work during this holy day as Shabbat means 'stopping' and Jews set the time aside for G-d. At the arrival of Shabbat, a prayer is said and Jews remember G-d's creation of the world whereby he rested on the seventh day as well as the Israelites escape from slavery.
Kashrut	Jews are only able to eat kosher foods: foods that are permitted and prepared under Jewish law. Jews are allowed to eat any animals that chew the cud and have split hooves, e.g. cows, and any fish with fins, e.g. haddock. Any foods that do not fit this category are trefah – not permitted. Food must also be prepared under Jewish law. Jews are also not able to eat dairy and meat together and often have separate facilities for this, e.g. two sinks, two fridges, two sets of plates and cutlery.
Bar/Bat Mitzvah	A religious coming of age ceremony that Jewish children observe at the age of 12, for girls and 13, for boys. Represents the time after which the 613 mitzvot (commandments) are to be followed.
Passover	A religious festival where Jews remember how the Israelites left slavery when Moses led them out of Egypt 3000 years ago.

Seder plate

7 CR Reproduction and Variation

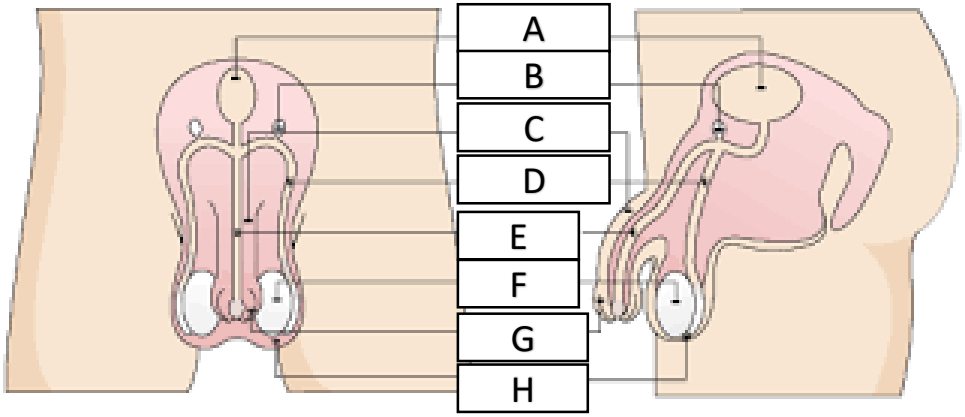
1. The Female Reproductive System

	Part	Function
A	Oviduct (Fallopian tube)	To transport eggs from the ovary
B	Ovary	Production of eggs
C	Uterus (womb)	Where the baby develops
D	Bladder	Where urine is stored
E	Cervix	Entrance to uterus Holds baby in place
F	Vagina	Where penis enters during sexual intercourse
G	Urethra	Tube that carries urine



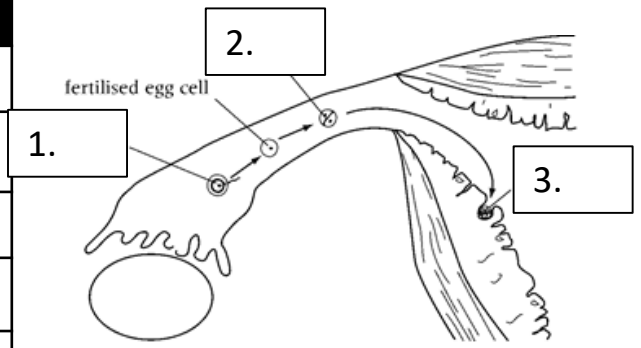
2. The Male Reproductive System

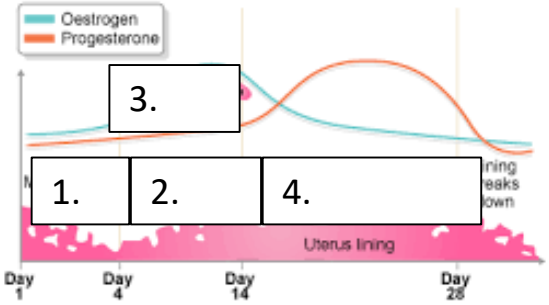
	Part	Function
A	Bladder	Where urine is stored
B	Glands	Excrete fluid that the sperm travel in
C	Penis	Enters the vagina during sexual intercourse
D	Sperm duct	The tubes along which sperm travel
E	Urethra	Tube that carries urine
F	Testis	Produce sperm
G	Foreskin	the retractable roll of skin covering the end of the penis.
H	Scrotum	Skin covering testis, keeping them below body temp



3. Conception of a Baby

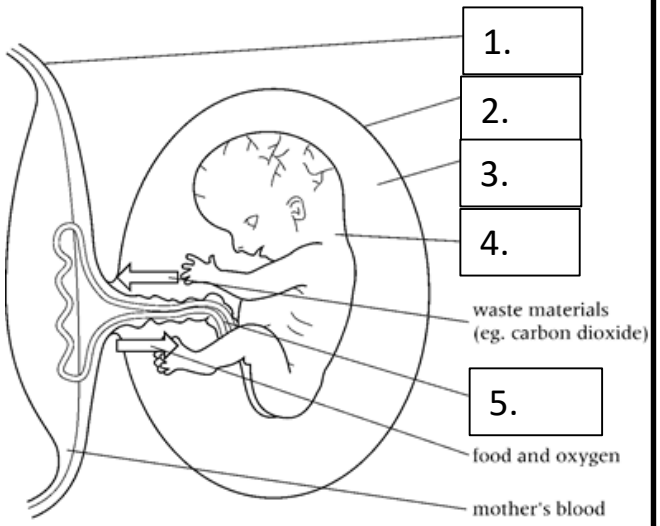
No.	Keyword	Definition
	Ovulation	An egg cell is released from ovary
1.	Fertilisation	When the sperm meets the egg
2	Embryo	A small ball of cells that will grow into a foetus
3	Implantation	The fertilised egg sticks into the uterus lining





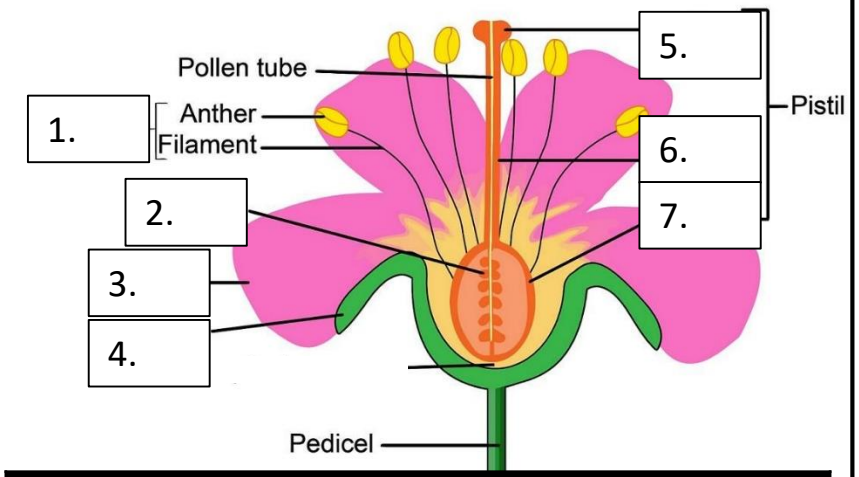
4. The Developing Baby

No.	Keyword	Definition
1	Placenta	Provides, food, oxygen and removes gases from the foetus
2.	Amnion	Protective sac around foetus
3.	Amniotic fluid	Fluid (liquid) contained din the amnion sac
4.	foetus	A developing child that looks like a baby
5.	Umbilical cord	Connects the placenta to foetus.



5. The Menstrual Cycle

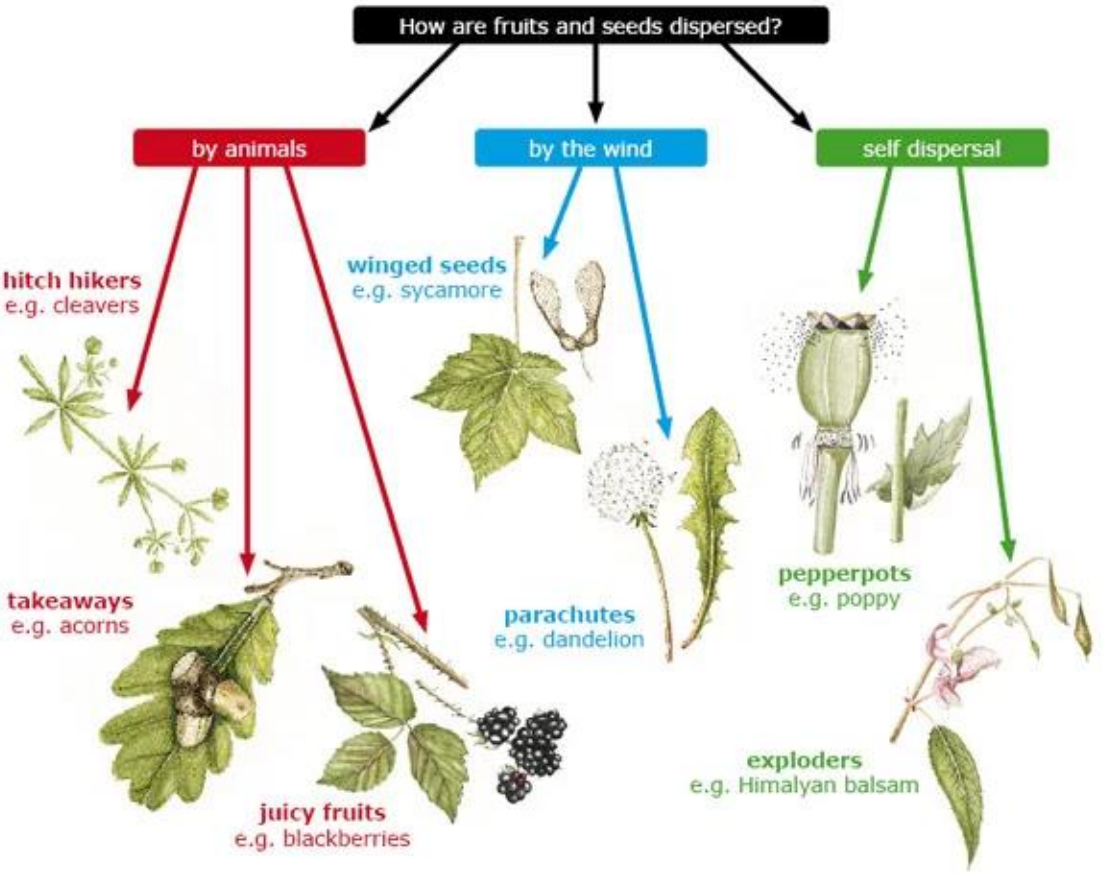
No.	Day	Process	Reason
1.	1–4	Menstruation: lining is lost, woman has a period	To remove the old unused lining
2.	4–14	Uterus lining builds up	To prepare for a possible pregnancy
3.	14	Ovulation	To create a new baby
4.	14–28	Uterus lining maintained	In case the egg is fertilised



6. Plant Reproductive Organs

No.	Keyword	Meaning
	Pollen	The plant equivalent of sperm
1.	Stamen	Male reproductive organ. Contains the pollen on the anther
2.	Ovule	The plant equivalent of the egg cell
3.	Petal	Brightly coloured parts that draw attention to the stamen and stigma
4.	Sepal	Protective layer covering the flower while it develops
5.	Stigma	When the pollen grain lands to fertilise the ovule
6.	Style	Connects the stigma to the ovary
7.	Ovary	Where the ovules are stored. Where the seed grows

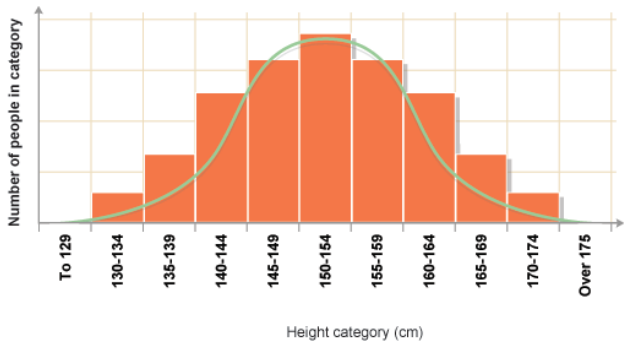
7. Seed Dispersal



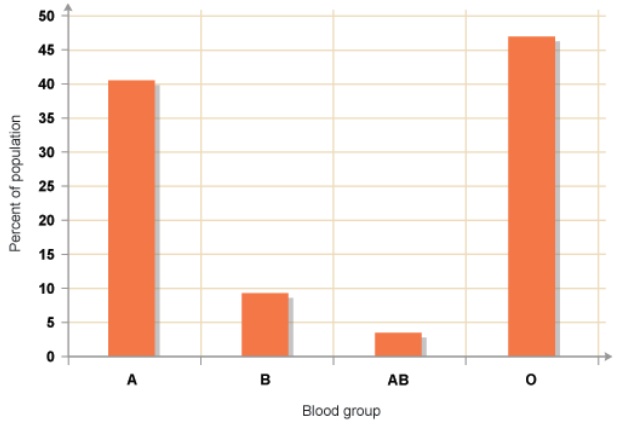
8. Variation Keywords

Keyword	Meaning
Variation	Differences between things
Species	A group of living things that have similar characteristics. They can breed together to produce offspring that can have children.
Characteristics	A quality that allows you to separate things
Gene	A section of DNA that gives the instructions for a characteristic
DNA	A long chemical in every cell that gives the instruction to make a living thing
Inherited variation	Differences within the same species caused by children inheriting different genes from their parents
Environmental variation	Difference within the same species caused by the environment
Clone	Two living things with identical genes
Identical twins	Formed from one embryo dividing into two. They have identical genes but show environmental variation
Non-identical twins	Formed from two egg cells being fertilised by two different sperm. They are equivalent to brothers and sisters

1.



2.



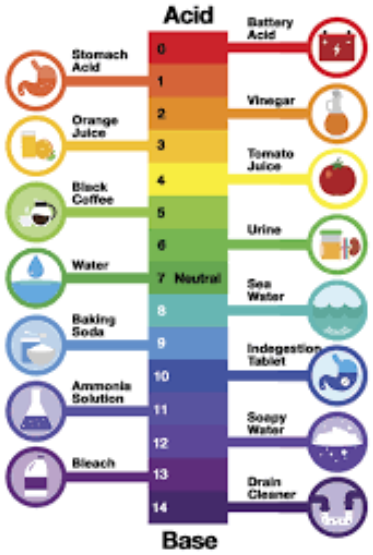
9. Drawing Variation

No.	Type of variation	Cause
1.	Continuous	Inherited and environmental
2.	Discontinuous	Inherited only

7CC Chemical Reactions

1. Word Equations

Keyword	Meaning
Word equations	Show the names of all the chemicals involved in a reaction.
Reactants	The chemical(s) at the start of a chemical reaction
Products	The chemical(s) at the end of a chemical reaction



2. Conservation of Mass

Keyword	Meaning
Conservation of mass	Total mass of products = Total mass of reactants.

Reactants		Products
sodium hydroxide + hydrochloric acid	→ sodium chloride	+ water
sodium hydroxide + sulfuric acid	→ sodium sulfate	+ water
sodium hydroxide + nitric acid	→ sodium nitrate	+ water
magnesium oxide + hydrochloric acid	→ magnesium chloride	+ water
magnesium oxide + sulfuric acid	→ magnesium sulfate	+ water
magnesium oxide + nitric acid	→ magnesium nitrate	+ water

3. pH Scale and Neutralisation

Keyword	Meaning
Acidic	A solution with a pH less than 7. The lower the number the stronger the acid.
Neutral	A solution with a pH of 7
Base	Reacts with an acid to for a salt and water
Alkali	A base that dissolves in water to give a solution with a pH greater than 7. The higher the number the stronger the alkali
pH scale	A measure of how acidic or alkaline a substance is.
Neutralisation	A chemical reaction that produces a salt and has a pH of 7
Oxidation	A chemical reaction where a substance reacts with oxygen

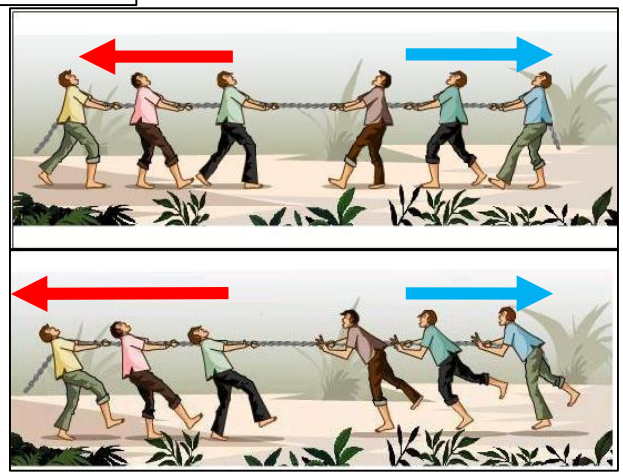
4. Naming Salts

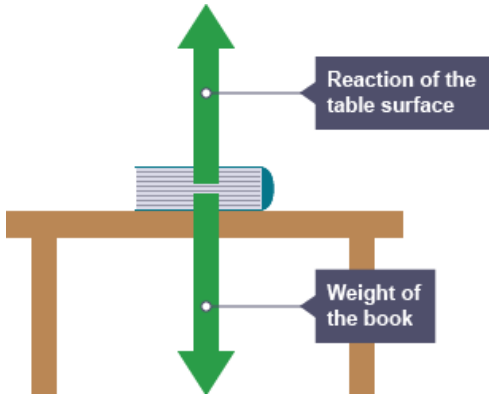
Acid used	Second part of the salt's name
Hydrochloric acid	chloride
Sulfuric acid	sulfate
Nitric acid	nitrate

Science

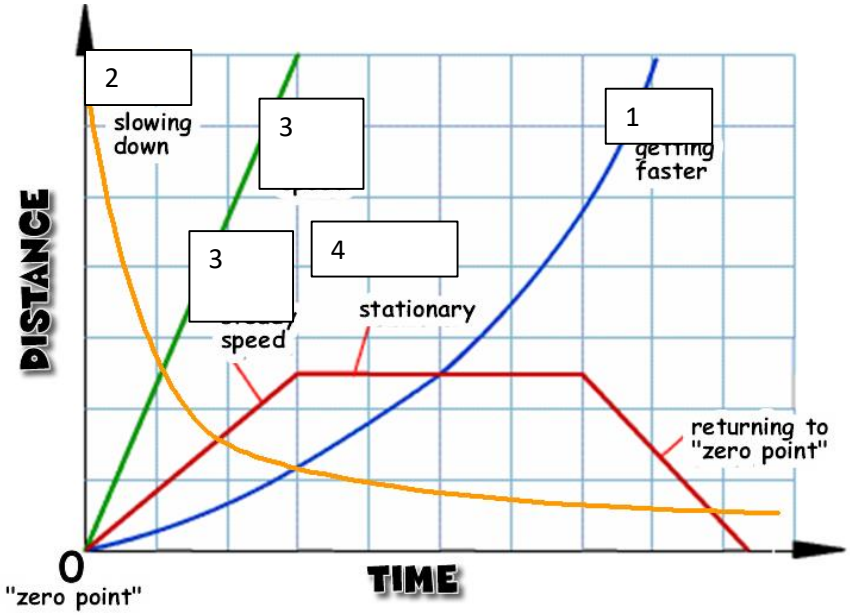
7PF Forces and Motion – Knowledge Organiser

1. Forces Keywords	
Keyword	**Meaning**
Force	Something that makes a change happen
Contact force	Can only act when two things touch
Non-contact force	Can act on things not touching
Balanced (forces)	When forces are equal and opposite each other also called **equilibrium**
Unbalanced (forces)	When opposing forces are not equal to each other
Resultant (force)	The overall force once all the forces are considered
Force arrows	Show direction and size of a force
Opposing forces	Forces working in opposite directions
Weight	The amount gravity pulls an object down
Pressure	Force shared or an area
Newton	Units that force is measured in





2. Types of Force			
Force	**Between**	**Contact or non-contact**	**Example**
Friction	Two moving surfaces	Contact	Brakes
Upthrust	An object and water	Contact	Boat
Reaction	Two stationary objects	Contact	Book on shelf
Air resistance	A moving object and air	Contact	Plane
Gravity	Two masses	Non-contact	You and the earth
Magnetic	Magnets and magnetic materials	Non-contact	Magnet picking up a nail

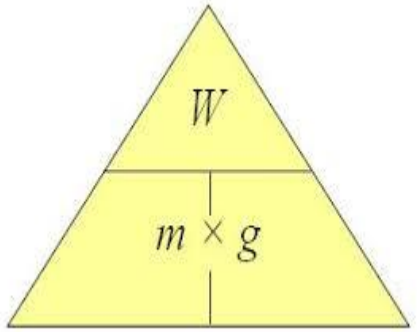


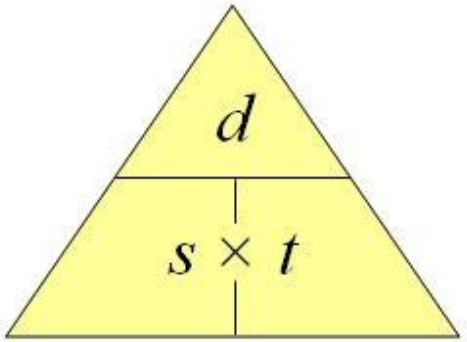
3. Motion Keywords		
Keyword	**Meaning**	**Position on distance time graph**
Accelerate	Speeding up	1
Decelerate	Slowing down	2
Constant speed	Staying the same speed	3
Stationary	Not moving	4
Speed	Distance covered in a certain time	The steepness of the line

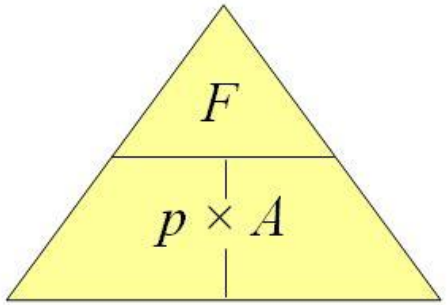
4. Calculating Weight		
Symbol	**Name**	**Calculated by…**
W	weight (N)	= mass × gravity
m	mass (kg)	= weight ÷ gravity
g	gravitational field strength	= weight ÷ mass
On Earth g = 10 N/kg		

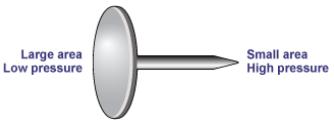
5. Calculating Speed		
Symbol	**Name**	**Calculated by…**
d	distance (m)	= speed × time
s	speed (m/s)	= distance ÷ time
t	time (s)	= distance ÷ speed

6. Calculating Pressure		
Symbol	**Name**	**Calculated by…**
F	force (N)	= pressure × area
p	pressure (N/cm^2)	= force ÷ area
a	area (cm^2)	= force ÷ pressure









LEARN VOCAB — Spanish — BUILD SENTENCES

Family Members

Mi madre es…	My mum is…
Mi abuela tiene…	My grandma has…
Mi bisabuela	My gran
Mi hermana se llama…	My sister is called…
Mi hermanastra	My step-sister
Mi media hermana	My half-sister
Mi tía	My aunt
Mi mejor amigo/a es	By best friend is…
Mi prima	My cousin (girl)
A mi abuelo le gusta…	My grandfather likes…
Mi bisabuelo	My grandad
Mi hermano	My brother
Mi hermanastro	My step-brother
Mi medio hermano	My half-brother
Mi **tío**	My uncle
Mi primo	My cousin (boy)

Hair and Eyes

Tengo…	I have…
El pelo castaño	brown hair
El pelo negro	black hair
El pelo rubio	blond hair
El pelo liso	straight hair
El pelo rizado	curly hair
El pelo largo	long hair
El pelo corto	short hair
Los ojos azules	blue eyes
Los ojos grises	grey eyes
Los ojos marrones	brown eyes
Los ojos verdes	green eyes
Gafas	glasses

Verb Phrases (present tense)

En mi familia hay…	In my family, there is…
Generalmenta, llevo…	Usually I wear…
No llevo…	I **don't** wear…
mi animal favorito es…	My favourite animal is…
Prefiero los…	I prefer…

Verb Phrases (future tense)

me gustaría tener…	I would like…
será….	It will be…

Animals

un pez	a (gold) fish
un perro	a dog
un gato	a cat
un pájaro	a bird
un caballo	a horse
un conejo	a rabbit
Una cobaya	a guinea pig

Clothing

Un vestido (verde)	a (green) dress
Una camiseta (rosa)	a (white) t-shirt
Una falda (naranja)	an (orange) skirt
unos pantalones	trousers
unos vaqueros	jeans

Core Questions

1) ¿Cómo es tu padre?	Describe your Dad.
2) ¿Cómo eres?	What are you like?
3) ¿Qué te gusta/le gusta hacer?	What do you like doing?
4) ¿Qué animales tienes?	Do you have any pets?
5) ¿Qué animales prefieres/quieres tener?	Which animal would you like to have?

Activities

Ver la televisón	watching TV
Ir de compras	shopping
Leer	reading
Tocar la guitarra	cooking
Hacer deportes acuáticos	doing water sports
Montar a caballo	horseriding

Tener = to have		Ser = to be	
Tengo…	I have…	Soy…	I am…
Tienes…	You have…	Eres…	You are…
Tiene	He/she has	Es	He/she is
Tenemos	We have…	Somos…	We are…
Tienen	They have…	Son…	They are…

Adjectives (describing)

Me dicen que….	people say…
divertido / a	funny
Simpático / a	kind
Tonto / a	silly
listo / a	clever
tranquilo / a	quiet, calm
guay	cool

Adjectives (appearance)

Guapo / a	handsome/ beautiful
joven	young
viejo / a	old
Alto / a	tall
Bajo / a	small / short

Intensifiers (make your language more interesting!)

Un poco	a bit
Muy	very
Bastante	quite

Textiles

Keywords

Interpret
Inspiration
Applique
Visual
Embroidery
Annotation
Evaluation
Bondaweb
Design

Annotation: Descriptive sentences to explain WHY you have made those design decisions.

Labelling: One or two words that describe facts about your design.


Cotton


Satin


Fleece


Felt

Health and safety rules:

- Long hair must be tied back.
- **NO** food or drink in the workshop.
- **One** person using a machine.


Tie Dye


Batik


Applique


Embroidery

Cotton

Used for making jeans, T-shirts and towels and has the following qualities:

- Cool to wear
- Very absorbent, dries slowly
- Strong
- Soft
- Good drape
- Durable / hard wearing
- Creases easily
- Can be washed and ironed
- Absorbs dye well
- Easy to cut and work with

Fabric shears are used for cutting out fabric. The blades are smooth and very sharp.

A **tape measure** is used to measure fabric and the body accurately.

To hold fabric together before it is stitched you need to use some **pins**.

You need to use a **stitch unpicker** to undo any stitches that are in the wrong place.

Pinking shears have a zig zag edge. They produce a decorative edge to fabrics, which can stop them from fraying

Tailor's chalk is good for marking fabric because it can be easily rubbed off

To join fabric together permanently you need to use a **needle** and thread.

Textiles and Maths

NUMERACY IN DESIGN

JAMBLED&T

'Maths behind the design':

+

=

Alexander McQueen
S/S 10' Dress

Can you combine inspiration found in research to come up with a design for a product? Try the 'Maths behind the design' to demonstrate in a simple way how patterns are combined to form a solution.

NUMERACY IN MANUFACTURE

JAMBLED&T

Measuring:
Tape Measure
1m=100cm=1000mm

Marking Gauge
Scribes a parallel cutting line

Plastic Ruler
10cm=100mm

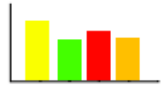
Steel Rule
1cm=10mm

Make sure that you start at zero.
Measure in mm for better accuracy.
Add suggested sizes to initial designs and actual sizes to developments & final ideas.
Double check all measurements!
Use a sharp pencil.

NUMERACY IN EVALUATION

JAMBLED&T

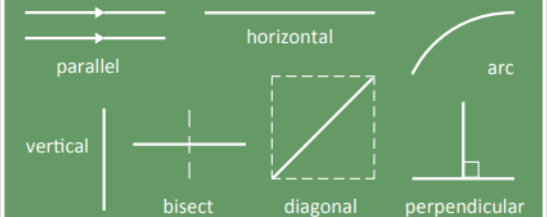
Product questionnaire:
Ease of use?
Appropriate sizes?
Value for money?
Happy with product?
Anthropometrics?
Ergonomics?
Quality of finish?



As we manufacture our products, we find that many changes take place. It is important to analyse data gathered from users of the product in order to figure how successful it is and if any further changes are necessary.

LINES

What do each of following lines mean



SHAPES

How to measure different shapes