



Year 8 - Half term 6 100% Book

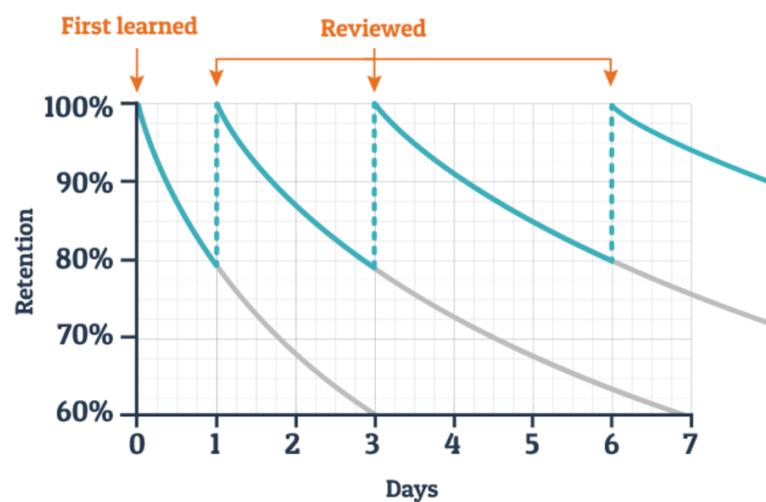
Name: _____

Form Tutor: _____

Your 100% book and knowledge organisers

Your knowledge organisers contain the threshold knowledge you must know for each topic, for each of your subjects. They aim to help you to recap, revisit and revise what you have learnt in lessons in order to remember this knowledge for the long-term. If we don't go back over the new information we learn in lessons we will simply forget it!

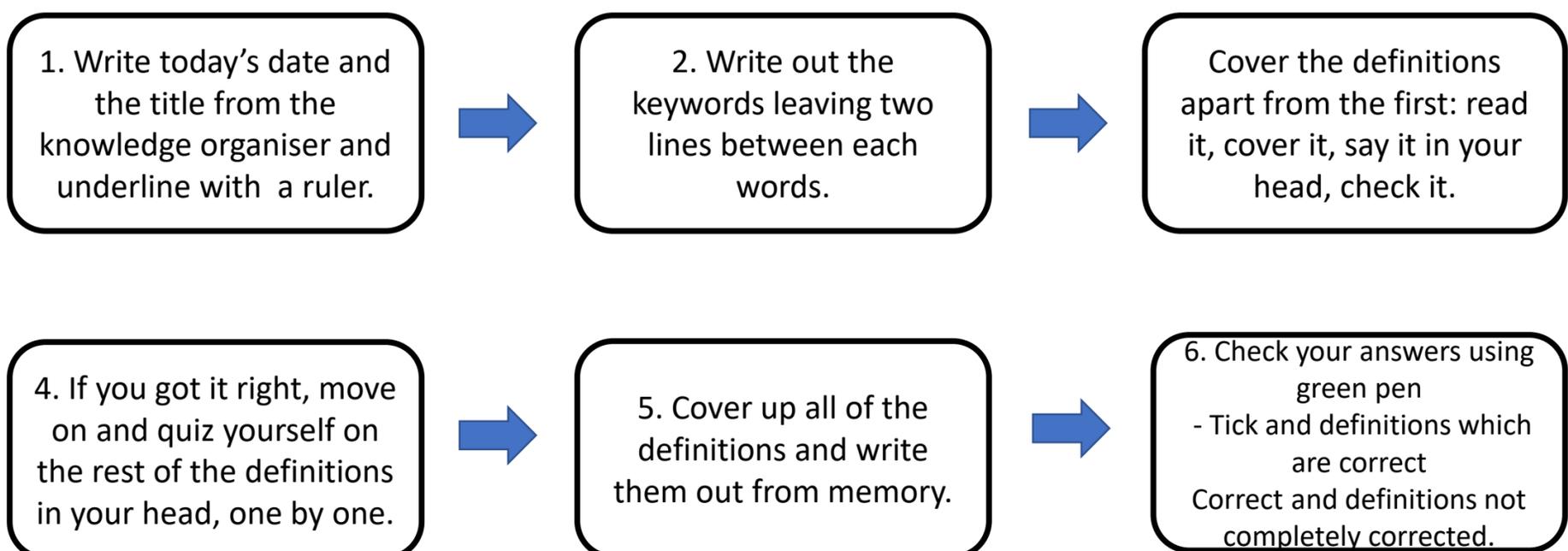
Typical Forgetting Curve for Newly Learned Information



- **You must** have this 100% book with you for every lesson – it is part of your equipment and will be checked each day by your form tutor.
- **You must** keep each of your 100% books once you have finished each half term for revision.

How do I use my 100% book? (Insert you tube link to a demo)

- Your teachers will set HW tasks from them including; spelling tests, ACE tasks, Cold and Hot questions and CMQs.
- You will use your book in lessons to research new knowledge and to test your knowledge of what you have learnt.
- You will use your book to self-quiz and test your knowledge of key terms as part of your HW and revision using the 'memory method' technique below. **You will remember 50% more when you test yourself.**



Another great self-quizzing strategy we recommend is:

- **The Leitner system:** Create Q&A flashcards with a question on one side, and an answer on the other (or key terminology on one side, and definitions on the other). Aim to test yourself several times a week, and revise each card depending on whether you got it right last time or not.



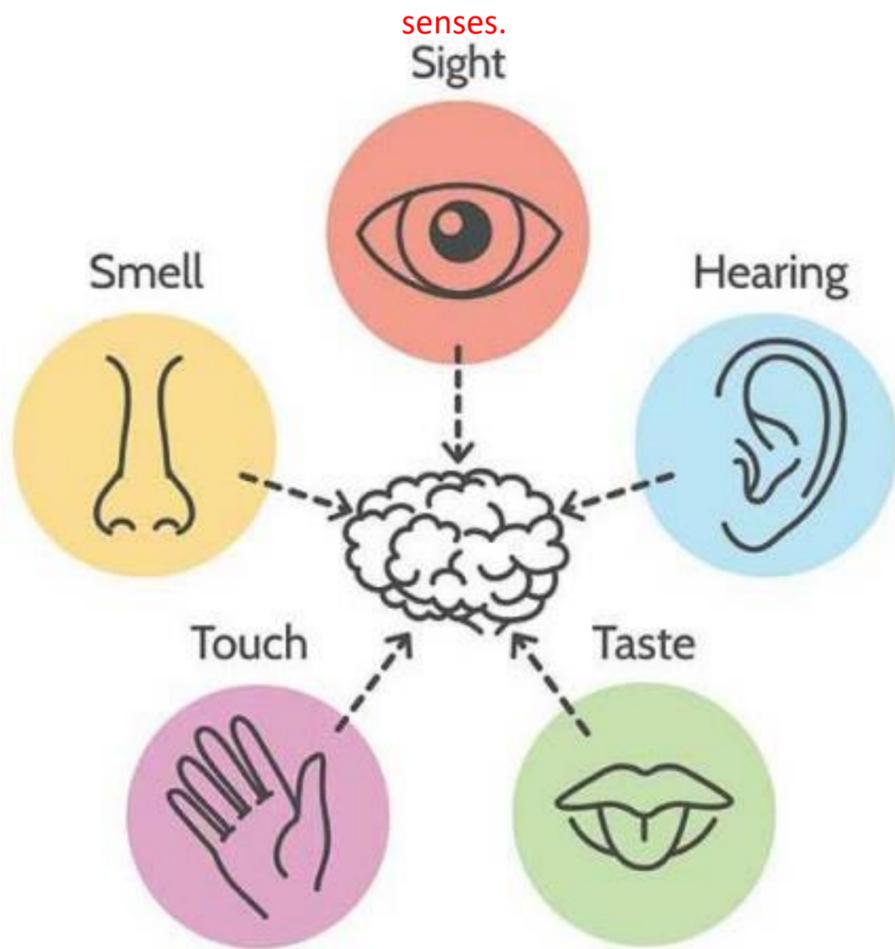
Unit Intent: In Year 8, pupils will study a range of devising and planning strategies that enhance their creative abilities in writing. Pupils will analyse a range of texts to evaluate the impact of other writers' methods in order to develop their own style and strengthen skills. We will study writers' methods and their intended effect; form and genre; social, historical, literary and cultural context, and SP&G and its purpose.

Personification	Narrative	Repetition
Cyclical	Silky	Tension
Triplet	Groaning	Suspense
Descriptive	Glistening	Juxtaposition
Beginning	Metaphor	Foreshadow
Turbulent	Simile	Forebode
Miraculous	Sibilance	Oxymoron
Sumptuous	Onomatopoeia	Horrendous
Horizon	Atmosphere	Isolation
Debris	Adjective	Derelict

Keyword Spellings and Definitions:
Remember to use your 'memory method' techniques to remember 100% of your key terms.

The 5 Senses

Task: can you think of ambitious adjectives to describe each sense?
Challenge: choose an object in your house and describe it using the 5 senses.



1. Look, cover, spell.
 2. Add the definition of each word in the box.
- Challenge:** can you write an interesting sentence using some of the key words from your spellings?

Ellipses: An ellipsis is used for 3 main reasons
A: An ellipsis can be used to acknowledge missing words in a text when quoting:
'School held a minute's silence... it was respected by everybody'
B: An ellipsis can be used to indicate a pause in speech:
'Just remember your Olympic values: Determination... courage... and just a little inspiration.'
C: An ellipsis can be used at the very end of a sentence so words trail off into silence:
'He gripped the scalpel tightly in his right hand and slowly advanced...'
Task: can you write 3 sentences of your own using an ellipsis?

Etymology - the study of the origin of words
Homophone - Greek *homos* = same + *phone* = sound.
Synonym/Antonym - Late Latin/Greek *Syn* = same *Ant* = opposite + *onym* = name.
Ellipsis - Latin from Greek *elleipsis* meaning 'leave out'.
Personification - From French *personne* meaning 'to represent'.
Cyclical - 1817, of a line, "returning into itself," from **cyclic** + **-al**
Simile - from Latin = similar; a like thing; a comparison.

WHY DO CHAPTER 1 AND 6 HAVE THE SAME SETTING?



CHAPTER 1



CHAPTER 6

Cyclical Structure
 Cyclical structure is often said to be cyclical when the conditions at the end are in the same way the same as they are at the beginning. In the novel 'Of Mice and Men' the structure is cyclical, as it ends in the same setting at it begins.
Challenge: what is the purpose of a cyclical structure?



Show Don't Tell



Showing not telling: the ability to describe something rather than directly say what it is, which makes writing more interesting.

Task: can you think of ways of *showing* each of the emotions below?

Tell	Show
I was angry.	My cheeks flushed red; a warm rage crawled from the bottom of my spine to my throat. I clenched my fists together tightly, as my teeth grinded together.
The girl was embarrassed.	
The footballer was happy.	
The old man was upset.	
The child was scared.	

Level Up Your Vocabulary

Beautiful

- Alluring** - very attractive or tempting
- Bewitching** - enchanting, as if magic has made you like it
- Enticing** - to attract someone
- Exquisite** - a special or rare beauty
- Radiant** - emitting rays of light or bright with joy and hope

Sad

- Dismal** - causing gloom, unhappiness
- Grieved** - to feel great sadness/sorrow
- Melancholy** - a depressed or gloomy state of mind
- Mournful** - a feeling of grief or mourning the dead
- Sorrowful** - a feeling of sadness caused by loss

Fear

- Abhorrence** - a feeling of extreme dislike and loathing
- Aversion** - a strong dislike or opposition
- Foreboding** - a strong sense something bad is about to happen
- Timid** - lacking courage or confidence
- Tremor** - a shaking of the body caused by fear

Loneliness

- Alienation** - being an outsider, the feeling of being isolated
- Isolated** - separated from other persons or things
- Reclusive** - a person who lives on their own and dislikes company
- Secluded** - sheltered or hidden from view
- Solitude** - living alone

Ugly

- Appalling** - causing dismay or horror
- Grisly** - causing a shudder or feeling of horror
- Loathsome** - causing feelings of disgust
- Nefarious** - something extremely wicked
- Repugnant** - not to a person's taste

Ambitious adjectives: *absurd, deafening, epic, excruciating, heartfelt, lavish, miraculous, nimble, stringent, swamped, thrilling, vulnerable*

Ambitious verbs: *amplify, beam, capture, collide, demolish, devour, envelop, gravitate, illuminate, lurch, recoil, transform, unearth, weave*

Ambitious adverbs: *adoringly, boldly, brutally, competitively, extravagantly, foolishly, promptly, sympathetically, urgently, utterly, wearily, worriedly*

Use 4 different colours to highlight the following in the paragraph:

1. Adjectives

2. Similes

3. Personification

4. Triplets

The path was dark, damp and dangerous. The abundance of soggy leaves covered the dirt and stones almost entirely. Twigs snapped in the distance as though someone followed slowly, carefully. The branches waved like arms as if they were warning you to turn back. The wind screamed and howled as it danced between them. Ahead, the moonlight illuminated the gate that would lead to freedom. In the distance, a tall shadowy figure waited. Like a messenger from beyond the grave.

Task: what happens next? Add your own ending to the description.

Challenge: can you use a cyclical structure in your description by linking the end back to the beginning?



Accept 1:

Write a PLAN for a description of a place you know very well.

Remember your 5 senses!
Have a clear structure!

Challenge 1:

Write a description of a place you know very well.

Remember your 5 senses and to use ambitious vocabulary, as well as a range of descriptive writing methods.

Extend 1:

Look at one paragraph of your description.

How would this description change if you went FORWARDS by 8 hours?
Re-write your description in the past tense.

Accept 2:

Write a PLAN for a description of somewhere you wish you could go.

Remember your 5 senses!
Have a clear structure!

Challenge 2:

Write a description of somewhere you wish you could go.

Remember your 5 senses and to use ambitious vocabulary, as well as a range of descriptive writing methods.

Extend 2:

Look at one paragraph of your description.

How would this description change if you went BACKWARDS by 8 hours?
Re-write your description in the past tense.

Hot and Cold Questions:

True or false?

1. An ellipsis can be used as a pause in a sentence.
2. Personification is giving human qualities to an inanimate object.
3. *Timid little girl* is an example of a triplet.
4. A cyclical structure is a structural technique where the writer links the end back to the beginning.
5. *Her hope was a fragile seed* is an example of a metaphor.
6. *Her tears were a tsunami flooding down her face* is an example of a simile.
7. There are 5 senses.
8. Adjectives are a person, place or object.
9. *The trees almost whispered my name* is an example of personification.
10. *The man was angry* is an example of 'showing' the reader an emotion.

Task: look at the descriptive sentences. Highlight any literary devices you can find.

Challenge: can you up-level some of the vocabulary in the sentences using a thesaurus?

Re-read the extract on the previous page and answer the following questions:

1. How has the writer built tension in the description?
2. What other techniques has the writer used in the extract? Support with evidence.
3. How could the writer improve the description?
4. What type of atmosphere has been built in the extract? Support with evidence.
5. "The writer hints to the reader that the woods is dangerous" A-C-E?

Descriptive Sentences:

1. 'She found, in addition to various common but pretty ferns and leaves, and armful of strange blue flowers with velvety ridges and a sweet suds bush full of the brown, fragrant buds.'
2. 'The lighthouse defiantly stood proud of the jagged rocks; a broken jaw of granite.'
3. 'All his movements were large and perfectly balanced, like those of a wild animal, and when he appeared in a room like this, he seemed a wild animal in a cage too small for it.'
4. 'Lord Asriel was a tall man with powerful shoulders, a fierce dark face, and eyes that seemed to flash and glitter with savage laughter.'
5. 'Before he pushed the loaded supply boat out in to the sound, he turned his back to the wind, reached in to his waistcoat pocket and delicately drew out a folded square of paper.'

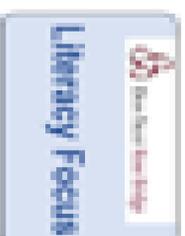
Challenge: match up the sentence to the technique:

The radio sprang to life.	Metaphor
Her face was like that of a porcelain doll.	Simile
I was lost in a sea of nameless faces.	Personification
Her skin was smooth, pale and delicate.	Onomatopoeia
The floorboards creaked heavily beneath my feet.	Triplet



Keyword Spellings and Definitions

STC3



Remember to use your 'memory method' techniques to remember 100% of your key terms

Angle - the space between two lines at the point at which they touch each other.

Base - the bottom line of a shape such as a triangle.

Bisect - to divide into two equal parts.

Construction - to draw a shape, line or angle accurately using a compass and straightedge (ruler.) Sometimes you are also allowed to use a protractor.

Loci - The plural of locus; the set of all points that share a property e.g. a circle is "the locus of points that are a certain distance from a central point".

Midpoint - the middle of; the point halfway along a line.

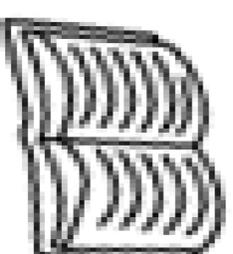
Perpendicular bisector - the line that divides something into two equal parts at a 90° angle.

Side - one of the lines that make a 2D shape.

LEARN THIS!



100%

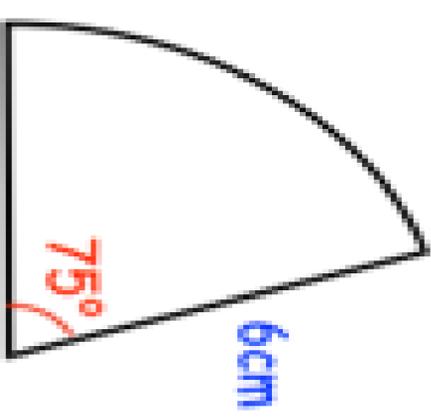


Maths Year 8
Unit 18 - Construction

Unit intent: Pupils should be able to construct accurate drawings using a set of compasses, a protractor and a ruler.

					<p>A locus is a series of points that satisfy a particular condition. Loci is the plural and will often involve several conditions.</p>
<p>Accurately draw the sector below:</p>					

CHALLENGE



STC5

Constructing a Triangle When Given Angle, Side, Angle

Constructing a Triangle When Given Side, Angle, Side

Constructing a Triangle When Given Three Sides

Loci - Distance from a Point

Loci - Distance from a Line

Bisecting a Line

Skills check

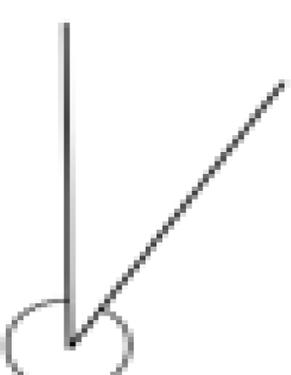
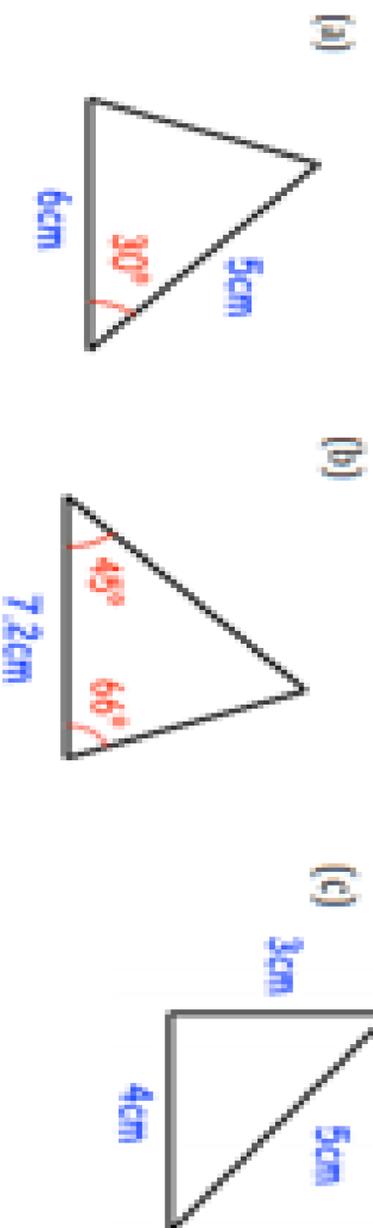
Are you 100% ready to answer these questions based on your learning so far? And Can you get 100% right?

STC4

ACE question

STC5 Accurately draw the following triangles:

Fred is asked to bisect the reflex angle shown below:



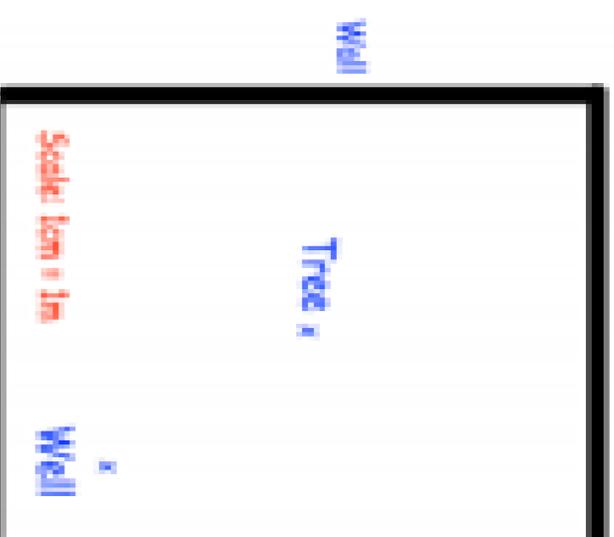
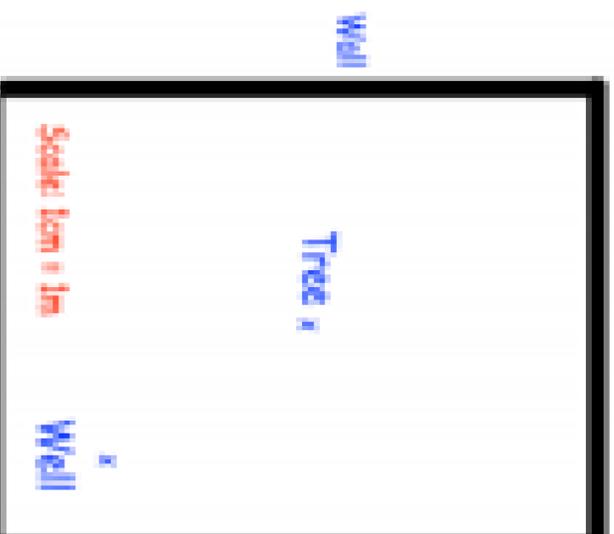
STC2

The diagram shows Lindsey's garden. Lindsey is deciding where to place a bench. Show the possible positions of the bench for each rule below.

Fred says he can't do this because you can only bisect angles that are less than 180° .
Use ACE to analyse his response.

- a) The bench is 1m away from the wall
Fence
- a) The bench is 2m away from the tree
Fence

A



C

E

STC5

Draw an 8cm line and construct its perpendicular bisector.

Remember to use your 'memory method' techniques to remember 100% of your key terms

Biased - where one outcome of an event is favoured and more likely to occur than others.

Equally likely - outcomes that have the same chance of happening.

Event - an outcome of an experiment.

Experimental probability - probability based on the results of an experiment.

Intersection - the intersection of two sets has only the elements common to both sets.

Mutually exclusive - events that can't happen at the same time

Outcome - a possible result of an experiment.

Probability - the chance that something will happen; how likely it is that some event will occur. Can be described using a word, a percentage, a decimal or a fraction.

Probability scale - the possible values that a probability can take. It ranges from 0 (impossible) to 1 (certain.)

Random - happening by chance; not able to be predicted.

Set - a collection of "things" (objects or numbers, etc.)

Union - the set made by combining the elements of two sets.

Venn diagram - a diagram that shows sets and which elements belong to which set by drawing regions around them.



Maths Year 8

Unit 19 - Probability

Unit intent: Pupils should be able to calculate probabilities including from statistical diagrams.

The 'OR' rule (mutually exclusive)

$$P(a \text{ or } b) = P(a) + P(b)$$

$$P(2 \text{ or } 4) = \frac{2}{8} + \frac{1}{8} \Rightarrow \frac{3}{8}$$

Add each probability

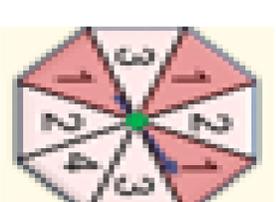
The 'AND' rule (independent)

$$P(a \text{ and } b) = P(a) \times P(b)$$

Flip a coin twice

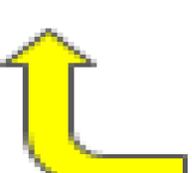
$$P(2 \text{ tails}) = \frac{1}{2} \times \frac{1}{2} \Rightarrow \frac{1}{4}$$

Multiply each probability



LEARN

THIS!



CHALLENGE

The probability that a train is late on Monday morning is 0.25. The probability that the train is on time on Tuesday morning is 0.85.

If I catch the train on both Monday and Tuesday, what is the probability that the train is delayed at least once?

Maths Knowledge Organiser Year 8 Unit 19 - Probability

The Probability Scale

Calculating the Probability of an Event Occurring Including Exhaustive Events

Identifying Outcomes

Probabilities from Two-Way Tables

Probabilities from Venn Diagrams

The And/OR Rule

Skills check

Are you 100% ready to answer these questions based on your learning so far? And Can you get 100% right?

STC5

There are 12 red roses, 5 yellow roses and 3 white roses in a vase. Felix takes a rose, at random, from the vase.

- Write down the probability that he takes a white rose.
- Write down the probability that he takes a red or a white rose.
- Write down the probability that Felix takes a rose that is not red.

STC2

Starter	Main	Dessert
Soup	Curry	Ice Cream
Fish	Pizza	Danish
	Burger	

Marco visits a restaurant with his friends. Shown is the menu. Marco chooses one starter, one main and one dessert. List all possible outcomes.

STC2

	Rugby	Football	Hockey	Total
Class 9A	7		6	24
Class 9B		3		
Total	12			40

The two-way table shows the sports that students play.

Complete the two-way table and calculate the probability that a student chosen at random is a 9B student that plays hockey.

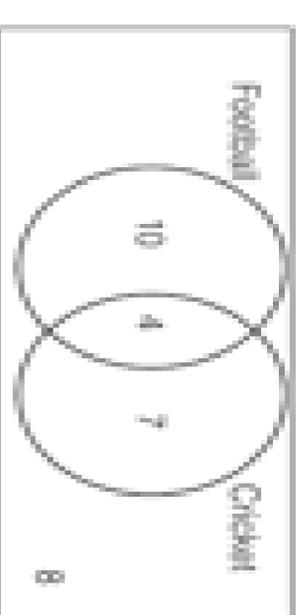
STC4

ACE question

John is given some information about a class.

4 students like both football and cricket.
In total, 10 students like football and 7 students like cricket.
8 students don't like either sport.

John represents this information in a Venn diagram as shown below.



Use ACE to analyse his answer.

A

C

E

Remember to use your 'memory method' techniques to remember 100% of your key terms

Average - a calculated "typical" value of a set of numbers.

Axes - plural of axis; reference lines drawn on a graph (you can measure from it to find values).

Bar chart - a graph drawn using rectangular bars to show how large each value is.

The bars can be horizontal or vertical.

Biased - a question that is likely to get one answer more than others.

Dual bar chart - a bar chart that has two bars for each item; used to compare two data groups.

Estimated - to find a value that is close to the right answer by rounding.

Frequency - how often something happens

Key - used to identify information from a graph or chart.

Label - tells us what is being measured in a graph or chart.

Line of best fit - a line on a scatter graph showing the general direction that a group of points seem to follow; used to estimate and identify correlation.

Mean - the value that each piece of data would take if they were all the same value; "add them up and divide by how many there are."

Median - the middle value when data is in numerical order.

Mode - the most common value in a set of data.

Pictogram - a chart that uses pictures or symbols to show the value of the data.

Questionnaire - a list of questions that several people are asked so that information can be collected about something.

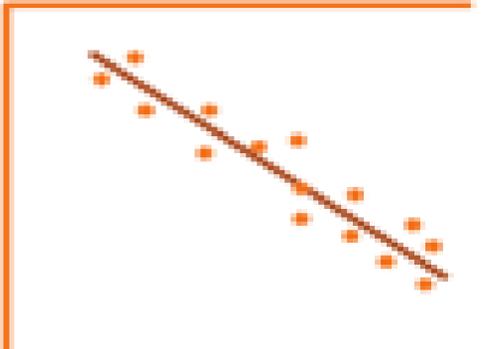
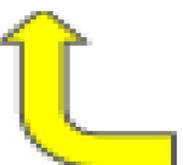
y-axis

y-axis

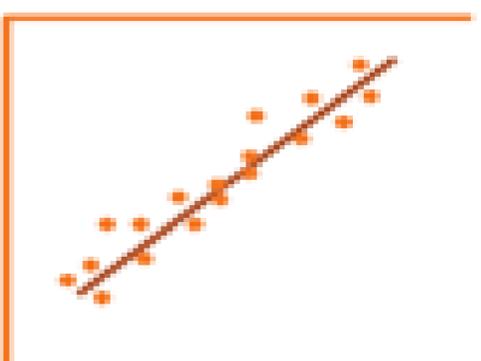
y-axis

Types of Correlation

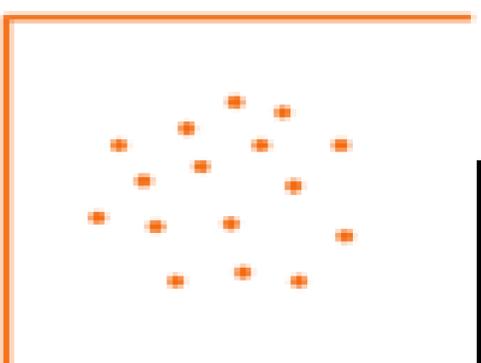
LEARN
THIS!



Positive correlation

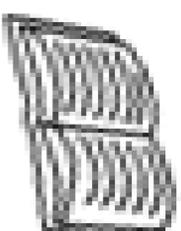


Negative correlation



No correlation

100%



Maths Year 8 Unit 20 - Collecting and Displaying Data

Random - a sample where every possible selection has the same chance of being chosen.

Range - the difference between the lowest and highest values.

Sample - a selection taken from a larger group (the population.)

Scatter diagram - a graph of plotted points that show the relationship between two sets of data.

Sector - A "pie-slice" part of a pie chart; the area between two radiuses and the connecting arc of a circle.

Tally - a way of keeping count by drawing marks. Grouped in fives.

Tally chart - a chart that uses tallies to count how many there are of something.

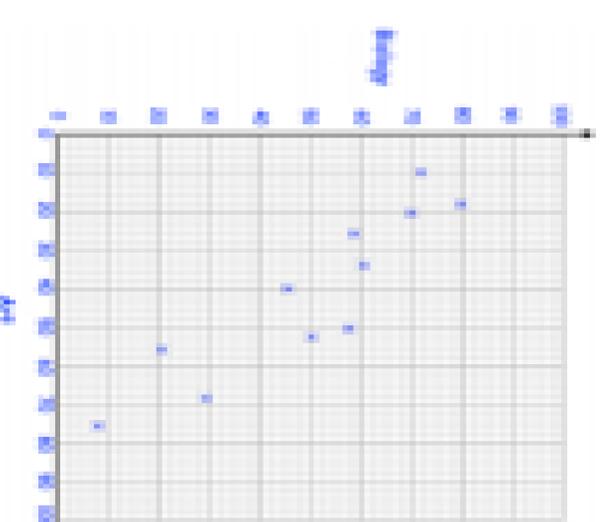
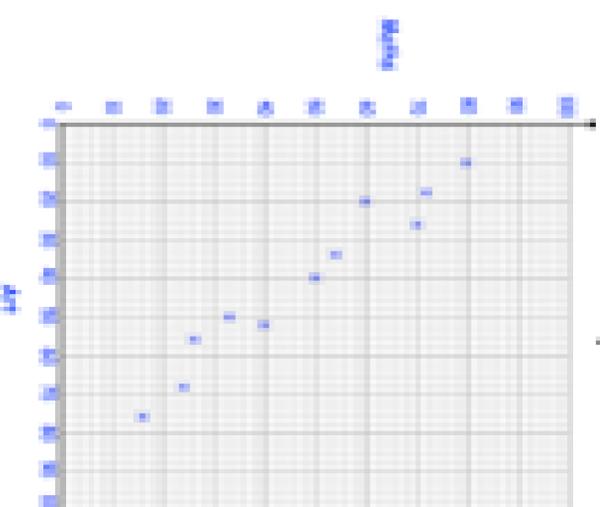
Variable - one of the measures of data when drawing a scatter diagram e.g. the value of a car and its age.

Unit Intent: Pupils should be able to collect, interpret, compare and display data.

C
M
A
L
L
E
N
&
E

Eleven students sit examinations in Art, Maths and Biology. Information about the results are shown in the scatter graphs below. Describe the correlation between the biology scores and maths scores

3TC2



Maths Knowledge Organiser Year 8 Unit 20 - Collecting and Displaying Data

Sampling

Questionnaires

Calculating the Mode, Median and Range

Calculating the Mean

Comparing Data Using Averages

Tally Charts

Maths Knowledge Organiser Year 8 Unit 20 - Collecting and Displaying Data

Mean from a Frequency Table

Pictograms

Bar Charts

Dual Bar Charts

Pie Charts

Scatter Graphs

Skills check

Are you 100% ready to answer these questions based on your learning so far? And Can you get 100% right?

STC6

Parker wants to take a random sample of people who live in his street. Describe a method Parker could use to take his random sample.

STC1

Calculate the mean, median, mode and range for each of the sets of data below. You may use your calculator.

STC5

- a) 4, 9, 7, 10, 5
- b) 2, 8, 6, 3, 12, 7, 4
- c) 9, -3, -6, 5, 0
- d) 1.4, 2.8, 2.4, 2.5, 2.8, 3.1, 1.1

STC1

A teacher asked his class how long they spent revising for a test, to the nearest hour. By calculating the mean, compare the amount of time the boys and girls spent revising.

STC2

Boys

Girls

STC4

George wants to find out how much money people spend on DVDs. He uses this question:

STC6

How much do you spend on DVDs?

- £5 - £10
- £10 - £30
- £30 - £50
- Over £50

Identify two mistakes that George has made.

STC6

Hours	Frequency
0	0
1	2
2	3
3	4
4	5
5	1

Hours	Frequency
0	2
1	7
2	2
3	2
4	1
5	1

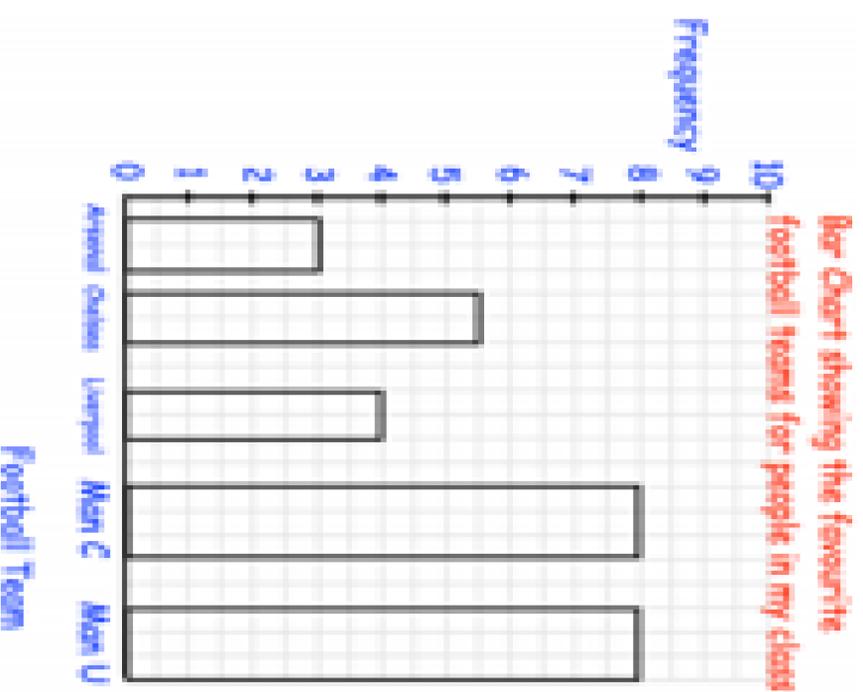
Skills check

Are you 100% ready to answer these questions based on your learning so far? And Can you get 100% right?

STC4

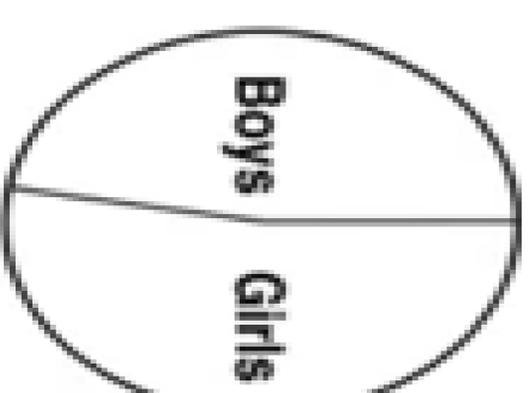
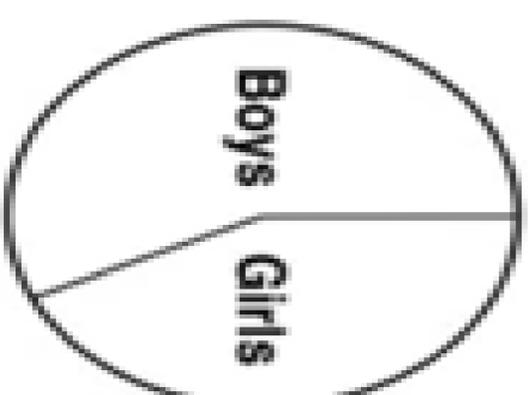
Shannon has drawn a bar chart to show the favourite football teams of the people in her class. Shannon has made some mistakes. Explain what her mistakes are.

Football Team	Frequency
Arsenal	3
Chelsea	5
Liverpool	4
Man City	8
Man United	8



STC4

ACE question



Geri looks at these pie charts and says "there are more boys in year 10 than in year 11."

Use ACE to analyse her statement.

A

C

E

STC5

Complete the tally chart below and draw a pictogram for the data.

Day	Tally	Frequency
Monday		12
Tuesday		
Wednesday		7
Thursday		
Friday		10



Unit Intent: This unit covers reproduction in plants, both sexual and asexual, although the former is of chief importance. Classification and biodiversity are also covered. The theme that is threaded through the unit is the various uses that we have for plants.

Key Definitions: Remember to use your 'memory method' techniques to remember 100% of your key terms.

Biodiversity—the range of different species of organisms in an area.

Characteristic—a feature of an organism

Classify—to sort things into groups.

Extinct— an organism that no longer exists is extinct.

Genus—a group of similar organisms. It is the first word in the scientific name for a species.

Plant kingdom—a group of organisms that have cells with cell walls made of cellulose and that are able to photosynthesise.

Species—a group of organisms that can reproduce with each other to produce off spring that will also be able to reproduce.

Accuracy—a measure of how close a value is to its real value.

Estimate—an approximate answer.

Population—the number of a certain organism found in a certain area.

Quadrat—a square frame, thrown randomly on the ground, which is used to sample plants in an area.

Random—when there is equal chance for one event occurring as there is for any other events in the same set.

Random error—an error that can be different for every reading.

Sample—to take a small part of something to investigate. You use a sample to draw conclusions about what the larger whole is like.

Asexual reproduction—producing new organisms from one parent only.

Key Definitions:

Gamete—a cell used for sexual reproduction.

Hybrid—an organism produced when members of two different species reproduce with each other.

Inherited—a feature that an organism gets from a parent is inherited.

Inherited variation—differences between organisms passed on to offspring by their parents in reproduction.

Runner—a stem that grows from certain plants (e.g. strawberry), from which new new plants grow using asexual reproduction.

Sexual reproduction—reproduction that needs two individuals to produce a new organism of the same type.

Tuber—the swollen part of an underground stem used as a storage organ and as a method of asexual reproduction in some plants.

Variation—the differences between things.

Zygote—another term for fertilised egg cell.

Cross-pollination—when pollen is transferred from one plant to a different plant of the same species.

Pollen tube—a tube that grows from a pollen grain down through the stigma and style into the ovary.

Pollination—the transfer of pollen from an anther to a stigma.

Self-pollination—when pollen is transferred from a flower on a plant to a stigma in the same flower or to another flower on the same plant.

Cell division—the splitting of a cell to form two identical cells.

Competition—there is competition between organisms that need the same things as each other.

Egestion—when faeces are pushed out of the anus.

Embryo—the tiny new like that grows by cell division from a fertilised egg cell.

Faeces—waste food material produced by the intestines.

Fertilisation—fusing of the male and female gametes.

Fruit—something used to carry the seeds of flowering plants.

Germinate—when a seed starts to grow.

Seed—a small part of a plant formed by sexual reproduction that can grow into a new plant.

Key Definitions:

Seed dispersal—the spreading of seeds away from the parent plant.

By product— a substance produced by a chemical reaction that is not the desired product of the reaction.

Chloroplast - a green disc containing chlorophyll. Found in plant cells. Where the plant makes food, using photosynthesis.

Dormant—if something is dormant its life processes are very slow.

Enzyme—a substance that can speed up some processes in living things.

Germinate— when a seed starts to grow.

Interdependent—organisms that depend on one another are said to be interdependent.

Life cycle—the series of changes in an organism as it grows, matures and reproduces.

Mineral salt (biology) - a compound containing an important element that is needed in small quantities for health (e.g. calcium). Plants get their mineral salts from the soil, animals get them from food.

Respiration—a process in which energy is released from substances so it can be used by an organism. All organisms respire.

Starch—a type of insoluble carbohydrate found in plants.

All living organisms can be **classified** (organised into groups based upon similar characteristics).

Scientific Names – in Latin

A species always 2 part names → **genus** then **species**

e.g. **Homo sapiens** (humans)

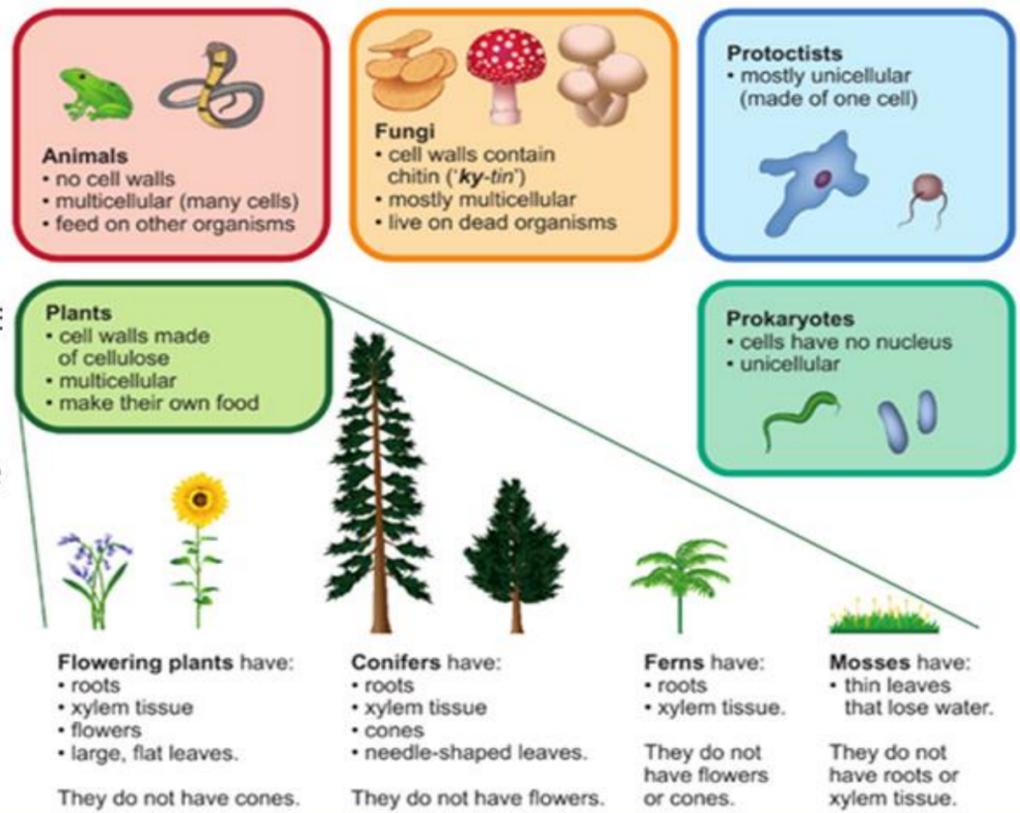
Biodiversity = number of different species (animal & plant) in a particular area

Extinct = died out (none left on planet Earth).

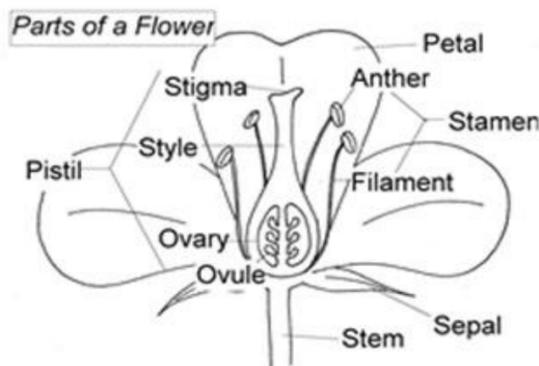
Sexual Reproduction = requires gametes (sex cells), two organisms of the same species breed and produce new organisms that can also produce offspring.

Hybrids = offspring from members of two different species. Offspring cannot reproduce sexually; they are not fertile.

Asexual reproduction = does not need gametes, part of the parent plant form the new plant. Offspring are genetically identical to parents.



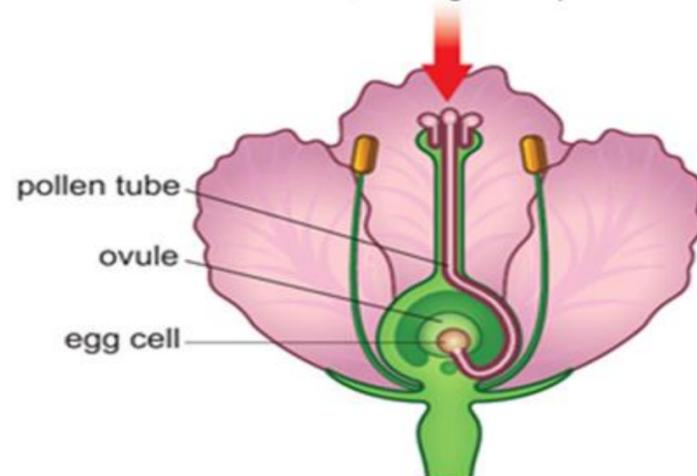
Reproductive System of a Plant:



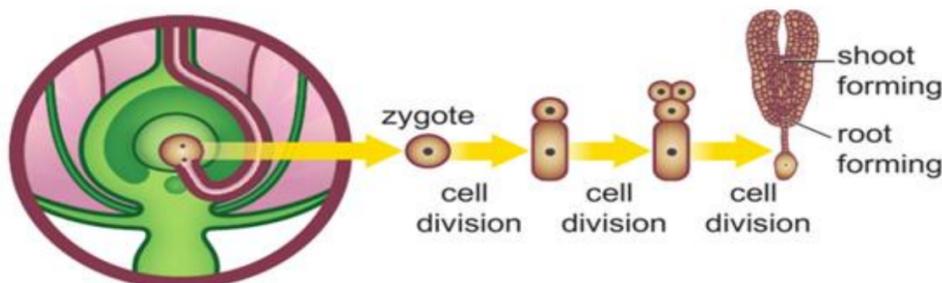
- Sepals** - protect the unopened flower
- Petals** - may be brightly coloured to attract insects
- Stamens** - the male parts of the flower (each consists of an anther held up on a filament)
- Anthers** - produce male sex cells (pollen grains)
- Stigma** - the top of the female part of the flower which collects pollen grains
- Ovary** - produces the female sex cells (contained in the ovules)
- Nectary** - produce a sugary solution called nectar, which attracts insects

During plant reproduction, **pollen grains** (the male sex cell) needs to move from the **anther** (male part of the plant) of one flower to the **stigma** (female part of the plant) of another flower. This is called **pollination**. Insects can pollinate flowers, and so can the wind.

Pollen grains are carried to the stigmas of flowers. If the pollen grain is from the same species as the flower, it will grow a pollen tube.



Once the pollen tube has reached the ovary, the next stage is fertilisation. Fertilisation is where an egg cell and pollen cell nuclei fuse (join) into one. A fertilised egg cell is called a **zygote**. The zygote then splits into two via cell division. The cell keeps dividing until it forms an **embryo**. The embryo develops a tiny root and shoot.



Germination = root and shoot start to grow from the seed.

The seed will use the embryo food store for energy (by aerobic respiration) during growth. Germinating seeds need water, warmth, oxygen and glucose.

The ovule becomes the seed. Inside the seed is the embryo, with a store of food (e.g. starch). A hard seed coat forms around the seed to protect it. The ovary swells up and becomes the fruit around the seed.

Seeds need to be dispersed away from the parent plant to avoid competition for resources. Seeds can be dispersed by animals eating them, digesting them then egesting (pass out) via faeces. Seed can also be dispersed by the wind, in water, some seeds explode and some are carried in animals fur.

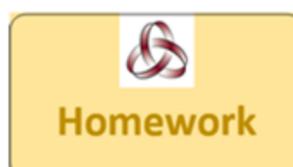
Keyword Spellings:



classification	genus	species	biodiversity	extinct
hybrid	asexual	sexual	germination	dispersal
stigma	style	embryo	zygote	pollination

Are you ready to answer these questions based on your learning so far? Can you get 100% correct?

Cold Questions:



1. Define what the term classification means.
2. How many groups are in the plant kingdom?
3. Name the part of a plant that a pollen grain lands on.
4. Define what pollination is and the different ways this can happen.
5. What grows when a pollen grain lands on a plant of the same species?
6. Define what a zygote is.
7. Why do seeds need to be dispersed?
8. Describe the ways can seeds be dispersed?
9. What is germination.
10. Why do seeds have a hard seed coat?

Hot Questions:

1. ACE the statement 'We need to protect the rainforests as they hold the areas which the greatest biodiversity. This will help to reduce extinction of species and help these habitats recover quicker after a natural disaster.'
2. Explain how a plant can stop self-pollination and suggest why it is important.

Careers corner

Earn yourself [50 classchart points](#) by researching a career linked to your current science topic. Examples include:

**Horticultural therapist, Farmer,
Plant breeder.**

You can use <https://www.startprofile.com> to find out about lots of different science related careers.



Websites:

Pearson Active Learn:

<https://www.pearsonactivelearn.com/app/Home>

BBC Bitesize:

<https://www.bbc.co.uk/bitesize/guides/zs7thyc/revision/1>

Seneca Learning:

<https://www.senecalearning.com/>

Unit Intent:

This unit uses the context of metals used in building to review common physical properties of metals, and to introduce their main chemical properties. The idea that reactions can occur at different speeds is also illustrated and this leads to the introduction of the general reactivity series of metals.

Key Definitions:

Remember to use your 'memory method' techniques to remember 100% of your key terms.

Catalyst—a substance that speeds up a reaction, without itself being used up.

Chemical property—how a substance reacts with other substances.

Composite material— a material made up of two or more substances. It has significantly different properties from the substances from which it is made.

Physical property— a description of how a material behaves and responds to forces and energy. Hardness is a physical property.

Corrosion—when something, such as stone or metal, reacts with chemicals in the air or water and gets worn away.

Formula (chemical) - a combination of symbols and numbers that shows how many atoms of different kinds are in a particular molecule.

Rusting—the corrosion of iron or steel (water and oxygen must be present for rusting to occur).

Reactive—a substance that reacts with many other substances or reacts very easily is reactive.

Reactivity—a description of how quickly or vigorously something reacts.

Reactivity series— list of metals that shows them in order of their reactivity, with the most reactive at the top.

Accurate—a measurement that is close to the true value.

Anomalous—something that does not fit the pattern.

Range—the difference between the highest and lowest values in a set of data (usually ignoring any anomalous result).

Reliable—results that are repeatable and reproducible.

Key Definitions:

Repeatable—results that are similar when repeated by the same experimenter.

Reproducible—results that are similar when repeated by different experimenters.

Effervescence—the production of a gas in a reaction in a liquid.

Salt— compound (other than water or hydrogen) formed during the neutralisation of an acid with a base (or the reaction of a metal with an acid).

Alloy—a metal with one or more other elements added to improve its properties.

Boiling—when there is liquid turning into a gas in all parts of a liquid, creating bubbles of gas in the liquid.

Boiling point—the temperature at which a liquid boils.

Malleable—able to be beaten and bent into shape.

Melting point—the temperature at which a solid turns into a liquid.

Mixture—two or more substances jumbled together but not joined to each other. The substances in mixtures can often be separated from each other.

Pure— a single substance that does not have anything else in it.

The physical properties of metals

Metals	Non-metals
good conductors of heat and electricity	poor conductors of heat and electricity
shiny	dull
solids with a high melting point (except for mercury)	most are low melting point solids or gases
flexible and malleable	brittle (break easily instead of bending)

Chemical properties of metals

The chemical properties of metals refers to their reactions with other substances. For example, metals can react with many non-metals:

e.g. $\text{calcium} + \text{chlorine} \rightarrow \text{calcium chloride}$

(Note: When naming a compound the ending of the non-metal is changed to **_ide**). Metals can also react with air (**oxygen**), water and acids. Some metals react very quickly, they are **reactive**. Calcium is a reactive metal. Other metals do not react quickly; they are **unreactive**. Gold is a very unreactive metal.

Reactivity series

Some metals are very unreactive. This means they do not easily take part in chemical reactions. For example, platinum does not react with oxygen in the air, even if it is heated in a Bunsen burner flame.

Some metals are very reactive. They easily take part in chemical reactions to make new substances.

Other metals may be more reactive than magnesium, or in between magnesium and platinum. If we put the metals in order of their reactivity, from the most reactive down to the least reactive, we get a list called the **reactivity series**.

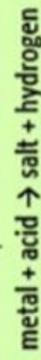
Metals + water

All the alkali metals react vigorously with cold water. In each reaction, hydrogen gas is given off and the metal hydroxide is produced. The speed and violence of the reaction increases as you go down the group. This shows that the reactivity of the alkali metals increases as you go down group 1.

Metals + acids

Acids react with most metals and, when they do, a salt is produced. But unlike the reaction between acids and bases, we do not get water. Instead we get hydrogen gas.

This is the general word equation for the reaction:



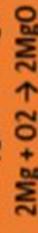
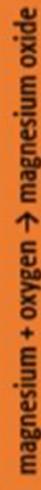
Uses of metals

Metals have many uses depending on their different properties. For example, copper is used in electrical wires as it is flexible and a good conductor of electricity. It is also used for roof sheets as it is malleable and doesn't react quickly with water.

Some metals act as catalysts. These are substances that speed up chemical reactions without being used up themselves. Catalysts have many uses, for example, platinum is used in catalytic converters in cars.

Metals + oxygen

Combustion and rusting /corrosion are examples of a type of reaction called oxidation. In an oxidation reaction, a substance gains oxygen. Metals react with oxygen in the air to produce **metal oxides**. For example, magnesium reacts with oxygen to produce magnesium oxide when it is heated in air:



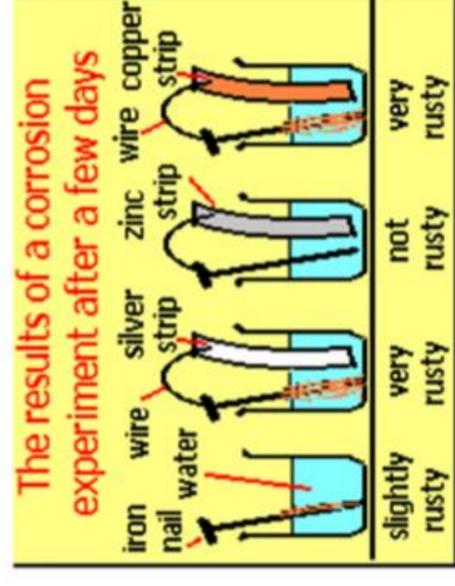
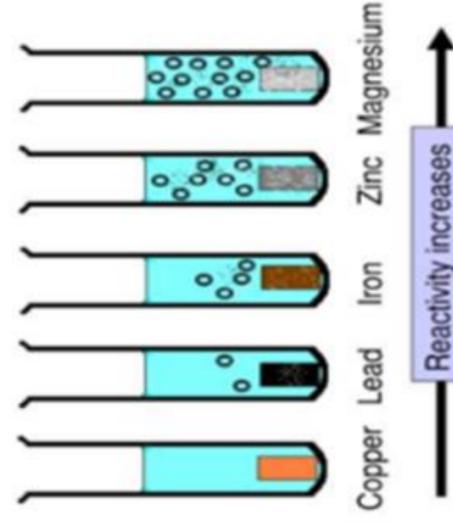
Some metals like sodium react quickly with water and oxidise immediately when scratched. Other metals do not react easily, for example silver changes colour very slowly as it reacts with oxygen.

The corrosion of iron is called rusting. It destroys iron and steel structures because rust is weak and crumbly. Water and oxygen must be present for iron to rust.



Coating iron with paint, plastic, etc, acts as a barrier to oxygen and water and stops iron rusting.

Even though they are all metals and share a lot of common properties, they react to different extents with dilute acid.
Copper does not react at all whereas magnesium is very reactive.



Metal	Acid	Salt formed
iron (Fe)	hydrochloric acid (HCl)	iron chloride (FeCl ₂)
barium (Ba)	sulfuric acid (H ₂ SO ₄)	barium sulfate (BaSO ₄)
sodium (Na)	nitric acid (HNO ₃)	sodium nitrate (NaNO ₃)

Alloys

Mixture of two elements, one which is a metal.

Alloys: harder than the metal they contain.

Alloys contain atoms of different sizes, distorted layers.

This makes it more difficult for the layers to slide over each other, so alloys are harder than the pure metal.

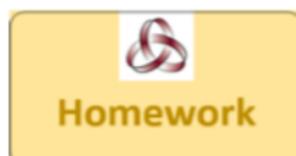


Keyword Spellings:

corrosion	oxidation	rusting	oxygen	oxide
reactivity	effervescence	hydrogen	alloy	properties
malleable	conductor	brittle	reactants	products

Are you ready to answer these questions based on your learning so far? Can you get 100% correct?

Cold Questions:



1. Define the term brittle.
2. Name the key properties of metals.
3. Write a word equation for the reaction of copper and oxygen.
4. What is an alloy?
5. What are the products from the reaction between metals and water?
6. Write a word equation between the metal lithium and water.
7. What is corrosion?
8. What would be the name of the salt produced between sodium and hydrochloric acid?
9. What is the reactivity series?
10. Which metal is used in electrical wires and why?

Hot Questions:

1. Plan an experiment to investigate the reactivity of copper, zinc and magnesium in hydrochloric acid.
2. ACE—Alloys are more beneficial than the pure metal.

Careers corner

Earn yourself **50 class-chart points** by researching a career linked to your current science topic. Examples include:

Metallurgist, Materials engineer, Gemmologist.

You can use <https://www.startprofile.com> to find out about lots of different science related careers.



Websites:

Pearson Active Learn:

<https://www.pearsonactivelearn.com/app/Home>

BBC Bitesize:

<https://www.bbc.co.uk/bitesize/topics/zypsgk7>

Seneca Learning:

<https://www.senecalearning.com/>

Unit Intent: This unit looks at energy transfers by heating in the context of homes. You will learn about the difference between energy and temperature, the methods of energy transfer such as conduction, convection and radiation. It also introduces the idea of power, calculating efficiency and describes how energy is paid for.

Key Definitions:

Remember to use your 'memory method' techniques to remember 100% of your key terms.

Degrees Celsius—a unit for measuring temperature.

Evaporate—when a liquid turns into a gas.

Internal energy—the energy stored in the movement of particles. Sometimes called thermal energy.

Joule (J) - a unit for measuring energy.

Temperature—how hot something is, usually measured in degrees Celsius.

Absorb—to take in

Conduction—the way energy is transferred through solids by heating.

Convection—the way energy is transferred by heating in fluids.

Convection current— a flow of liquid or gas caused by part of it being heated or cooled more than the rest.

Density—the amount of mass that one cubic centimetre of a substance has. Often measured in grams per cubic centimetre (g/cm^3).

Emit—to give out.

Fluid—a gas or a liquid.

Infrared radiation—a way of transferring energy by heating that does not need a medium (material). Infrared radiation can travel through transparent things and a vacuum (area of no particles).

Medium—any substance through which something travels.

Radiation—a way of transferring energy by heating.

Key Definitions:

Reflect—to bounce off a surface instead of passing through it or being absorbed.

Thermal conductor—a material that allows internal (thermal) energy to be transferred through it easily.

Thermal imager— a device like a camera that makes images by detecting infrared radiation.

Thermal insulator—a material that does not allow internal (thermal) energy to be transferred through it easily.

Solar cell—a flat plate that uses energy transferred by the light to produce electricity.

Solar panel—a panel that uses energy from the Sun to heat water.

Accurate—a measurement that is close to the true value.

Precise—measurements that are close to one another.

Random error—an error that can be different for every reading.

Systematic error—an error that is the same for all readings, such as when forgetting to zero a balance before using it to measure a series of masses.

Valid— something is valid if it is doing what it is supposed to do. A measurement is valid if it measures what it is supposed to measure.

Appliance—a machine, usually one powered by electricity and used in the home.

Efficiency—a way of saying how much energy something wastes.

Power—the amount of energy (J) transferred every second. It is measured in watts (W).

Power rating—the number of joules of energy an appliance uses every second.

Sankey diagram—a diagram showing energy transfers, where the width of each arrow is proportional to the amount of energy it represents.

Watt (W) - a unit for measuring power. 1 watt (W) is 1 joule (J) per second.

Kilowatt—hour (kWh) - the amount of energy used by a 1 kilowatt (kW) appliance in one hour. It is equal to 3600 kilojoules (kJ).

Payback time—the time it takes to get back (in energy savings) the money you spent on making an energy –saving change

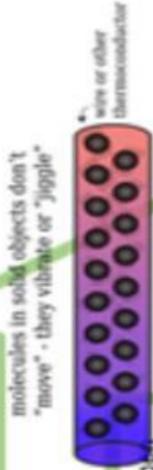
Climate change— changes that will happen to the weather as a result of global warming.

Fossil fuel—a fuel formed from the dead remains of organisms over millions of years (e.g. coal, oil or natural gas).

Energy and temperature

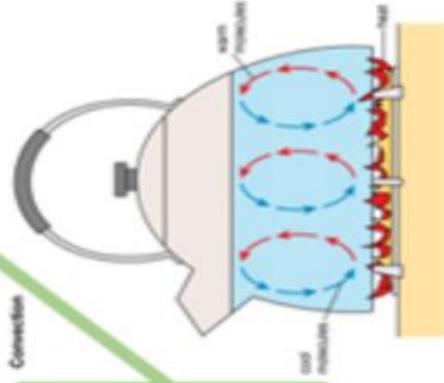
When we know the **temperature** of something, we know how hot it is, not how much **internal energy (thermal energy)** is in it.
 Temperature is measured in **degrees Celsius (°C)**.
 Internal (thermal) energy is measured in **Joules (J)**.
 The amount of thermal energy stored in something depends on:
 how hot it is (its temperature)
 the material it is made from
 its mass.
 When two objects are at different temperatures, energy will be transferred from the hotter one to the cooler one until they are at the same temperature.

Evaporation can take place from a liquid at any temperature. When part of a liquid evaporates, it is the fastest-moving particles that escape to form a gas. The particles that are left are storing less energy as movement and so the temperature of the remaining liquid is lower.



Conduction takes place in solids and can also happen in liquids (although not very well). The particles in a solid are held together tightly. When they gain energy they vibrate faster and further, and the vibrations are passed on. Metals are the best conductors. Most other solids are poor conductors.
 Particles are not as close in a liquid, so conduction is not very good. Particles are a long way apart in gases, so gases hardly conduct heat at all. Something that does not conduct heat very well is a thermal insulator. Liquids, gases, and solids that contain a lot of trapped air are insulators.

Convection takes place in fluids (liquids and gases). When part of a fluid is heated, the particles spread further apart and the fluid becomes less dense. This makes it rise. As it rises it meets cooler fluid and passes the energy on. More cool fluid moves in to replace the rising fluid, setting up a **convection current**.



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Energy Transfers

Power

Power is the rate at which energy is transferred. Power is measured in **watts (W)** or **kilowatts (kW)**. One watt is one joule of energy being transferred each second. $1000\text{ W} = 1\text{ kW}$.

Power

Efficiency

Efficiency

Not all energy is transferred usefully. Wasted energy is often transferred by heating. The percentage of useful energy produced by something is known as its efficiency.

$$\text{efficiency} = \frac{\text{useful energy transferred}}{\text{total energy supplied}} \times 100\%$$

The Sankey diagram shows the energy transfers in a kettle. The width of each arrow shows the amount of energy it represents. The energy stored in the kettle and the surroundings is wasted energy.



Paying for energy

We pay for the amount of energy we use in our homes. Electricity companies use units of **kilowatt-hours** on electricity bills. One kilowatt-hour is the amount of energy transferred when a one kW appliance is used for one hour.
 We can reduce bills by insulating our homes and by using more efficient appliances.

The **payback time** of installing something that makes a home more energy efficient is the time taken for the cost of installation to be matched by the money saved. Sometimes buying a more efficient appliance may not save you energy overall because it costs more to buy than it will save.

$$\text{payback time} = \frac{\text{cost of change}}{\text{savings per year}}$$

Accuracy and precision

A measurement is accurate if it is close to the true value of the thing being measured. Measuring devices that have small divisions can measure more accurately than instruments with larger divisions if they are set up correctly.
 A measurement is precise if several measurements of the same thing give similar results. Precise measurements may not be accurate if the measuring instrument was not set up correctly.



Infrared radiation can transfer energy through empty space and also through transparent materials. Radiation does not require the movement of particles. Any hot or warm object gives off or emits radiation. When something takes in energy from radiation, it is said to absorb it.
 Infrared radiation is similar to light. It can be absorbed or reflected, and it can also be focused.
 Dark, dull surfaces are good emitters and absorbers of radiation. Light, shiny surfaces are good at reflecting radiation. They are poor absorbers and emitters of radiation.

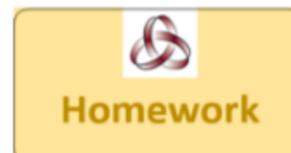
Keyword Spellings:



temperature	thermal	energy	conduction	Convection
infrared	radiation	efficiency	power	watts
absorber	emitter	payback time	accuracy	precision

Are you ready to answer these questions based on your learning so far? Can you get 100% correct?

Cold Questions:



1. Define the term accuracy.
2. How many ways can thermal energy transfer? Name them.
3. What substance does conduction work best in?
4. Why is it important to use energy efficient devices in the home?
5. Why must convection take place in fluids?
6. What are the units of energy?
7. What is power measured in?
8. Define what power is.
9. What is the efficiency of a radio which transfers 30J of electrical energy into 21J of sound energy.
10. Why does hot water rise above cold water?

Hot Questions:

1. Plan an experiment to demonstrate that dull black surfaces are good emitters of infrared radiation compared with a shiny silver surface.
2. Explain how a vacuum flask can keep a hot drink hot for a long period of time.

Careers corner



Earn yourself 50 class-chart points by researching a career linked to your current science topic. Examples include:

Domestic energy assessor, Carbon management officer, Electricity generation worker.

You can use <https://www.startprofile.com> to find out about lots of different science related careers.

Websites:

Pearson Active Learn:

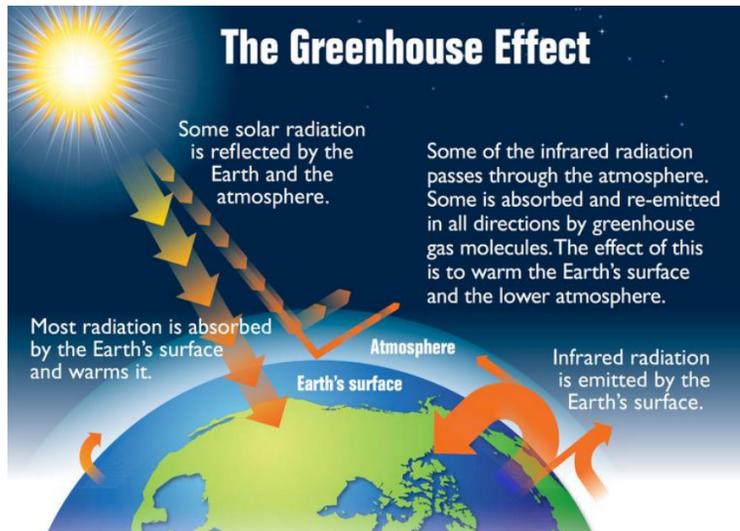
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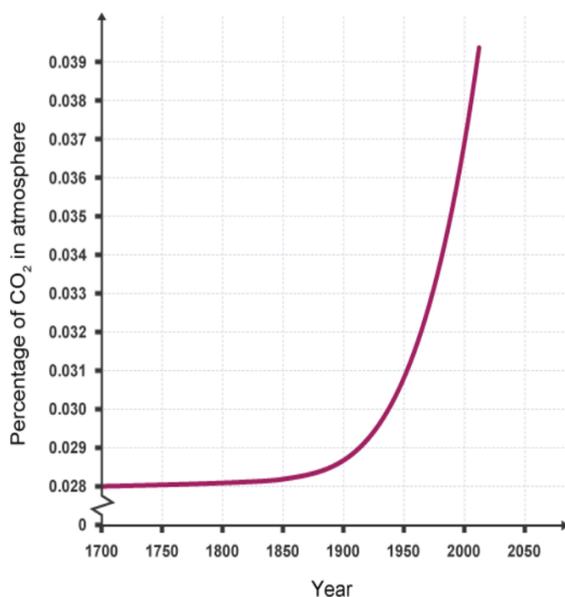
Unit Intent :

Pupils will understand that the greenhouse effect is a natural phenomenon that allows life on earth. However due to human influences this greenhouse effect is becoming more enhanced. Pupils will analyse the impacts of global warming, with a focus on sea level rise in the Maldives. Pupils will understand what they can do as an individual to help prevent climate change, and will evaluate more international strategies.

The Greenhouse effect is a natural phenomenon. Some thermal energy from the Earth's surface escapes into space. If too much thermal energy escaped, the planet would be very cold. However some gases in the atmosphere, called **greenhouse gases**, trap escaping thermal energy. This causes some of the thermal energy to pass back to the surface. This is called the **greenhouse effect**, and it keeps our planet warm enough to sustain life. Carbon dioxide is an important greenhouse gas.

Increasing carbon dioxide levels

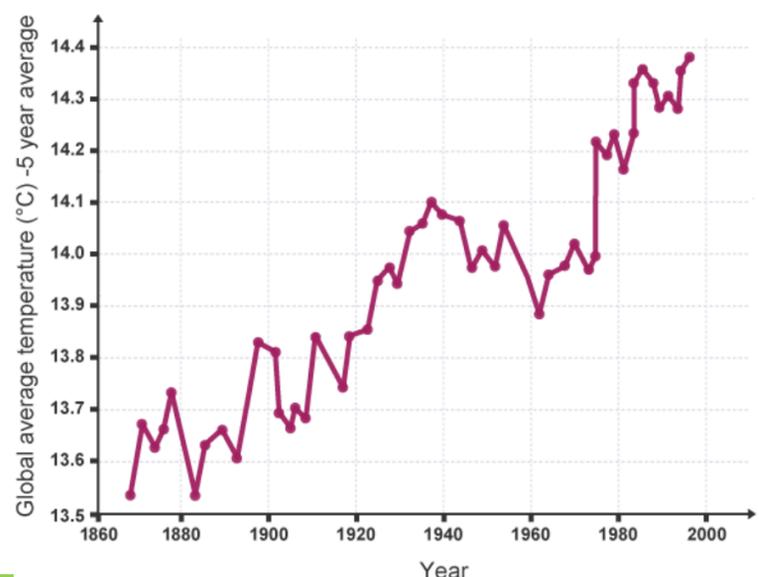
Humans burn **fossil fuels** to power cars and other machines, to generate electricity, and to keep buildings warm. Waste gases are released during combustion, including carbon dioxide. As the human population increases, more fuel is used, and more carbon dioxide is released.



Global warming

Extra carbon dioxide, methane and other greenhouse gases in the atmosphere increases the greenhouse effect. More thermal energy is trapped by the atmosphere, causing the planet to become warmer than it would be naturally.

This increase in the Earth's temperature is called **global warming**.



Human activities have caused the percentage of carbon dioxide in the atmosphere to increase

The majority of climate scientists agree that there is a link between the increasing levels of carbon dioxide and the increasing temperatures. Global warming is having an effect on the world's climates.

Named example – The Maldives

Evidence for Global Warming

Glaciers are **retreating** almost everywhere around the world — including in the Alps, Himalayas, Andes, Rockies, Alaska and Africa.

Global sea level rise

Sea levels have increased about 8 inches in the last century.

Warming Oceans

The oceans have absorbed much of this increased heat, with the top 700 metres (about 2,300 feet) of ocean showing warming of more than 0.4 degrees Fahrenheit since 1969.

- The Maldives are an archipelago of 1,100 small islands in the Indian Ocean.
- 500,000 tourists are attracted to the Maldives a year.
- Most of the land is no more than 1m above sea level.
- In the last century, sea levels rose by 20cm.
- Oceanographers predict that most of the Maldives will be washed away in 30 years unless sea level rise halts.
- This would mean the relocation of inhabitants and the loss of the tourism industry.



Mitigation means to reduce or prevent the effects of something from happening. Mitigation strategies for global warming include:

Alternative energy - using alternative energy such as solar, wind or tidal can reduce the use of fossil fuels. This will reduce the amount of carbon dioxide released into the atmosphere.

Carbon capture - this is the removal of carbon dioxide from waste gases from power stations and then storing it in old oil and gas fields or coal mines underground. This reduces the amount of emissions into the atmosphere.

Planting trees - encouraging **afforestation**, means that there will be more trees to absorb the carbon dioxide in the atmosphere during the process of photosynthesis.

**Keyword Spellings and Definitions:****Remember to use your 'memory method' techniques to remember 100% of your key terms.**

Climate- the average weather of an area, normally over 30 years.	Temperature- A measure of how hot or cold it is	Nitrous oxide- A greenhouse gas emitted from industrial waste.
Greenhouse effect -Is a process that occurs when gases in Earth's atmosphere trap the Sun's heat. The greenhouse effect is one of the things that makes Earth a comfortable place to live	Greenhouse gas- a gas that contributes to the greenhouse effect by absorbing infrared radiation.	Solar radiation- sunlight and energy that comes from the sun.
Methane- a greenhouse gas mostly emitted from agricultural waste.	Carbon dioxide- a heavy colourless gas that is formed by burning fossil fuels	Glacial retreat- the melting of glaciers
Climate change- describes a change in the average conditions — such as temperature and rainfall — in a region over a long period of time.	Extreme weather – weather that is against the norm for that area. E.g. snow storms such as the Beast from the East.	Coastal flooding occurs when normally dry, low-lying land is flooded by seawater.
Sea level rise -average long-term global rise of the ocean surface measured from the centre of the earth	Mitigation – means to reduce or prevent the effects of something from happening	Adaptation the process of adjustment to actual or expected climate and its effects.
Fossil fuel- a natural fuel such as coal, crude oil or natural gas, formed in the geological past from the remains of living organisms.		

Accept the statement

“The greenhouse effect is a positive phenomenon.”

Challenge the statement

“Climate change will bring warmer weather in some countries like the UK This is only going to have negative impacts”.

Extend this answer

“It is important that countries invest in renewable energy as a means to reduce the impacts of global warming.”

Can you get 100% right?**Cold questions**

1. What is the greenhouse effect ?
2. Explain what a fossil fuel is ?
3. List three fossil fuels.
4. Describe the pattern of carbon dioxide levels over time. (TEA)
5. Describe the pattern of global temperature over time. (TEA)
6. Explain what human processes have led to the increase in carbon dioxide levels.
7. Where are Maldives and what impact is global warming having on them ?
8. Name and explain one mitigation strategy of global warming. Explain how it will help.

Hot questions

1. Explain the importance of the greenhouse effect in supporting life ?
2. How are the increase in carbon dioxide levels and global temperature levels linked ?
3. Explain the environmental impacts that global warming has already had, using specific examples. Research more examples.
4. Research what a carbon sink is, and explain why they are so important.
5. Justify the reasons why HIC's will use more carbon dioxide than LIC's.
6. Predict the social impacts to the inhabitants of the Maldives if the islands are lost.
7. Rank the three mitigation processes into which you think would be most effective and why?
8. Research how communities across the world are adapting to climate change



Unit Intent: In this unit we will study the changes and developments of England during the medieval period. We will mainly focus on the skill of change and continuity.

The Triangular Trade



The system in which slaves were traded across the world. Ships were loaded in England with goods such as guns, cloth and salt. This was taken to Africa and traded for slaves. The ships then went on a 2 month journey known as the Middle Passageway to the Caribbean. Here the slaves were sold to work in the cotton plantations and farms. The ship was then loaded with sugar and cotton, to be taken back to England to be sold for huge profits.

Who benefits from the slave trade?

Plantation Owners – They owned large pieces of land which farmed different crops. Plantation owners grew ‘cash’ crops of sugar, tobacco, coffee, spices and cotton for sale in Europe. With the ‘free’ labour and trade owners lived nice lifestyles.

African Tribal Leaders - African Tribe Leaders captured slaves. They would then trade them for weaponry and gunpowder to increase their power. **British Business Men** - The Slave Trade made areas such as, Liverpool and Bristol extremely rich. Factory owners and business men that were involved in the production of weapons and gunpowder, benefitted massively from the selling of goods to African Tribe Leaders.

African Slaves - Some slaves worked in the plantation owner’s house as butlers, cooks or housemaids. They were able to learn new skills, such as cooking and cleaning. They were often dressed in finer clothing and given a better diet than those that worked in the fields.

The Middle Passageway

The Middle Passageway was the longest part of the journey for slaves from Africa to the Caribbean. They suffered through terrible conditions and many died during the journey. Slaves were packed into the ship in very tight quarters and laid down for most of the journey. They were only given little bits of food to keep them going and were severely punished should they disobey orders. Slaves were chained up for the entire journey, meaning that diseases spread quickly and easily from slave to slave. A lot threw themselves overboard in order to avoid their fate as a slave.



Life of a slave

Domestic Vs Plantation - slaves fell into these two different types. Domestic slaves were butlers, cooks and maids, who had to look after the plantation owner, his family and his house. Plantation slaves were those who worked 18 hour days on the plantations growing cotton and tobacco. Domestic slaves were usually treated better than plantation slaves, they were given better food and were clothed.

Accommodation – slaves lived in wooden shacks with mud floors, with up to as many as 15 people sharing 1 room. There was no furniture and old rags would be used to make beds.

Family – Slaves had no legal protection, therefore marriages and families could be broken up lawfully by their owners. Many used this as a threat to control slave behaviour. 32% of slave marriages were dissolved by masters selling slaves away from the family home.

Slave Rebellion

The Underground Railroad. The Underground Railroad grew during the 1800s. ‘Free’ slaves, both those who escaped and those who were set free, joined together to help other slaves escape. It was a dangerous and illegal action, but it offered hope to those who had no other way of escape. They would be then hidden in houses of already freed slaves.

New York City Slave Rebellion--1712--25 slaves armed with guns and clubs burned down houses on the edge of New York City and killed nine whites.

Stono Rebellion--1739--Approximately 80 slaves armed themselves and attempted to march towards Florida from their home area of Stono, South Carolina.

Nat Turner's Revolt--August, 1831 - Turner, a slave preacher,, launched his rebellion by entering his owner's home and killing the entire family, except for a small infant. They moved from one farm to the next, killing all slave-owning whites they found. As they progressed, other slaves joined in the rebellion

Abolition in America

The USA abolished slavery on the 31st January 1865. It declared that all people in the United States were free. However the abolition of slavery was a huge issue in America and even caused the American Civil War between the North and the South states.

Economics – The Northern states hoped that the freed slaves would move there to work in the new industries.

Politics - The North and South also argued over the States of Kansas and Nebraska as to whether or not they should be ‘free’ or ‘slave’ states. Eleven states decided to leave the Union to form their own separate nation called the ‘Confederate States of America’. This resulted in the outbreak of a civil war.

Key Individuals - Abraham Lincoln was elected as president of the United States in 1860. He had spoken out against slavery and the South feared he would try to end slavery.

Abolition in Britain



Britain was one of the first countries to abolish slavery. It introduced the Slavery Abolition Act in 1833.

Politics –Slavery was becoming legally unacceptable. Slaves in Britain went to court to get their freedom. By the early 1800s most judges set these slaves free.

Economics – Sugar plantations were closing as cheap sugar could be bought from Brazil and Cuba. People argued that slaves would work harder if they were freed and paid.

Key Individuals - William Wilberforce campaigned against the slave trade. The first time he introduced the idea he lost the debate by 163 votes to 88 but he never gave up.

Useful Websites

<https://www.bbc.co.uk/bitesize/guides/zy7fr82/revision/1>

https://www.ducksters.com/history/civil_rights/history_of_slavery_in_the_united_states.php

<https://kids.britannica.com/kids/article/slavery/353782>

Keyword Spellings and Definitions:

Remember to use your 'memory method' techniques to remember 100% of your key terms.

trade - the action of buying and selling goods and services.	slave – a person who is the legal property of another and is forced to obey them	plantation – an estate on which crops such as coffee, sugar, and tobacco are grown	master – a man who has people working for him, especially servants or slaves	native – a person who lives where they were born
mistreatment – the action of poor treatment	abolition – abolishing or getting rid of something	rebellion – the action or process of resisting authority or control	revolution – trying to overthrow someone in charge, in favour of a new system.	prejudice – dislike, hostility, or unjust behaviour to a particular group

ACE Questions – Are you 100% ready to answer these questions based on your learning so far?

Accept	Challenge	Extend
<p>“The triangular trade was crucial to world trade”</p> <p>How could you accept this statement?</p>	<p>“The treatment of all slaves was poor and unjust”</p> <p>How could you challenge this statement?</p>	<p>“Slavery in America was not the ending of mistreatment of Black people in America”</p> <p>How could you extend this statement?</p>

Can you get 100% right?

Cold Questions:

1. What three continents were involved in the triangular trade?
2. How long did the Middle Passage last?
3. List the four types of people who benefitted from the slave trade.
4. Where was the Middle Passage journey to and from?
5. What did many on the Middle Passage do to avoid slavery?
6. What were the two different types of slaves?
7. When was the New York City slave rebellion?
8. Which US President abolished slavery?
9. When was slavery abolished in Britain?
10. Who campaigned against slavery in Britain?

Hot Questions:

1. How did people around the world benefit from the slave trade? Explain your answer.
2. Why were the conditions on the slave ships so poor for the African Americans?
3. Why do you think slave owners were able to get away with mistreating the slaves the way that they did?
4. Why do you think 'free' slaves wanted to help to free other slaves? Explain your answer.
5. How do you think slave owners felt about the abolition of the slave trade?

Unit Intent: This unit of work focuses on the topic of school. By the end of the unit you should be able to ask and answer questions about where you go to school, what it is like and also discuss your opinions on the school uniform and school rules. You will also look at how life at a Spanish school compares to an English school and present your opinion on which school system you prefer and why.

¿Qué se llama tu instituto? What is your school called?	¿Qué tipo de instituto es? What type of school is it?	¿Cómo es tu instituto? What is your school like?	¿Cuáles facilidades hay? What facilities are there?		¿Qué (no) se puede hacer? What are you (not) allowed to do	¿Llevas uniforme? Do you wear a uniform?	
Mi instituto se llama... My school is called...	Es un instituto masculino It is a boys school	Mi instituto es... My school is Enorme massive muy grande very big pequeño small moderno modern antiguo old bonito nice (looking) feo ugly Mi instituto está situado en... my school is situated in... El centro de la ciudad the city centre las afueras on the outskirts Cerca de la estación de trenes close to the train station la costa on the coast	en mi instituto hay... in my school there is...		Se puede... you can No se puede... you cannot Se debe... you must No se debe... you must not Está prohibido... it is forbidden Comer chicle en clase chew gum in class Fumar smoke Gritar en el aula shout in class Hacer cola que up Hacer los deberes do your homework Levantar la mano raise your hand Llegar tarde a clase arrive late to class Llevar piercings have piercings Llevar uniforme wear a uniform Tirar basura al suelo throw rubbish on the floor	Los chicos llevan... Boys wear... Las chicas llevan... Girls wear... Una blusa a blouse Una camisa a shirt Una chaqueta a blazer Una corbata a tie Una falda a skirt Una gorra a hat Una sudadera a jumper	A lunares spotty A rayas stripy Amarilla yellow Azul blue Bermellón maroon Blanca white Multicolor multicoloured Negra black Roja red Rosa pink Verde green Violeta purple A lunares spotty A rayas stripy Amarillo(s) yellow Azul(es) blue Bermellón(es) maroon Blanco(s) white Multicolor multicoloured Negro(s) black Rojo(s) red Rosa(s) pink Verde(s) green Violeta(s) purple
	Es un instituto femenino It is a girls school		un campo de fútbol a football pitch un comedor a dining hall un gimnasio a gym un patio a playground	Antiguo old Bonito nice Equipado equipped Feo ugly Grande big Moderno modern Pequeño small			
	Es un instituto mixto It is a mixed school		una biblioteca a library una clase de informática an ICT class una piscina a pool	Antigua old Bonita nice Equipada equipped Fea ugly Grande big Moderna modern Pequeña small			
	Es un instituto privado It is a private school		unos laboratorios some laboratories	Antiguos old Bonitos nice Equipados equipped Feos ugly Grandes big Modernos modern Pequeños small			
Es un instituto público It is a public school	unas clases some classrooms	Antiguas old Bonitas nice Equipadas equipped Feas ugly Grandes big Modernas modern Pequeñas small	Un pantalón a pant	Unos calcetines some socks Unos zapatos some shoes			

Task 1: Look, Cover, Write, Check (column 1-3)

- Write out 5 sentences using column 1-3 (example 'mi instituto se llama DTRB, es un instituto mixto y publico, es pequeño y antiguo y esta en la costa')
- Translate each sentence to English.
- Test yourself on each sentence until you **100%** know it.

Hot and Cold Questions: Can you get 100%?

Are you ready to answer these questions? **Cold Questions:** Traduzca al ingles.

- Mi instituto se llama Dean Trust Rose Bridge.

- Mi instituto es un instituto masculino.

- Mi instituto **no es femenino** es un instituto mixto.

- Mi instituto es mixto y es privado, **por lo tanto, no es público.**

- Mi instituto esta en el centro de la ciudad **y está cerca de la estación de trenes.**

Can you 100% answer these questions?

Hot Questions: Fill in the gaps with the correct conjugation.

- Mi instituto es _____ (enorme) y _____ (feo)
- Mi instituto esta _____ (situated) en la _____ (costa)
- Mi instituto esta situado en las _____ (outskirts) cerca de la _____ (coast)
- En mi instituto hay _____ (a library) pero no hay _____ (pool)
- En mi instituto hay un _____ (playground) enorme, sin embargo no hay _____ (campo de futbol)

Task 4: Look, Cover, Write, Check (column 3-7)

- Write out 5 sentences using column 1-3 (example 'mi instituto se llama DTRB, es un instituto mixto y publico, es pequeño y antiguo y esta en la costa')
- Translate each sentence to English.
- Test yourself on each sentence until you **100%** know it.



En España, <u>usualmente</u> los alumnos no <u>llevan</u> uniforme	In Spain, usually the pupils do not wear a uniform
Sin embargo, en Inglaterra en todos los <u>colegios</u> <u>llevan</u> uniforme.	However, in England in all the schools they wear a uniform.
En España <u>hay</u> dos días diferentes, y depende del <u>colegio</u>	In Spain there are two days different, and it depends on the school
Un día <u>empieza</u> a las <u>nueve</u> y termina a las dos, no <u>hay</u> <u>recreo</u> para el <u>almuerzo</u> .	One day starts at the nine and finishes at the two, there is no break for dinner.
El otro día <u>empieza</u> a las <u>nueve</u> y termina a las cinco, <u>hay</u> un <u>recreo</u> de dos horas y media.	The other day starts at the nine and finishes at the five, there is a break of two and a half hours.
En Inglaterra el día <u>empieza</u> a las <u>nueve</u> y termina a las tres con <u>recreos</u> <u>también</u> .	In England the day starts at the nine and finishes at the three with breaks also.
En España el <u>año</u> escolar <u>empieza</u> en <u>septiembre</u> y termina en el <u>medio</u> de <u>junio</u> .	In Spain the year school starts in September and finishes in the middle of June.
Del otro lado, en Inglaterra el <u>año</u> escolar <u>empieza</u> en <u>septiembre</u> y termina en el fin de <u>julio</u>	On the other side, In England the year school starts in September and finishes at the end of June
A mi modo de ver <u>prefiero</u> el sistema escolar <u>Español</u> .	The way I see it, I prefer the system school Spanish.
Porque el día es más corto o <u>hay</u> un recreo muy largo	Because the school day is much shorter or there is a break very long
<u>También</u> en mi <u>opinión</u> es más flexible y menos estricto	Also in my opinion it is more flexible and less strict.
Además no <u>hay</u> uniforme que es mas bueno	In addition there is no uniform which is more good.

El Uniforme



La Jornada



Start	1	2	Break	3	4	Dinner	5	6
8:40	9:05-9:55	9:55-10:45	10:45-11:05	11:05-11:55	11:55-12:45	12:45-01:20	1:20-2:10	2:10-3:00

El Sistema



- **Compulsory /free:** 5 to 16 years of age.
- **Supported by:** Dept. for Education /Dept. for Business, Innovation and Skills.
- **Estructure:**

YEAR	AGE	CURRICULUM STAGE
NURSERY	3	
PRIMARY SCHOOL	4	
	5	Key Stage 1
	6	
	7	Key Stage 2
	8	
9		
SECONDARY SCHOOL	10	
	11	Key Stage 3
	12	
	13	Key Stage 4
	14	
	15	Sixth Form Collage
16		
17		
18		
TERCIARY SCHOOL	18+	



- **Compulsory /free:** 6 to 16 years of age
- **Supported by:** Government in each region.
- **Estructure:**

YEAR	AGE	COURSES	CYCLES
PREE-SCHOOL	3		
	4		
	5		
	6		
PRIMARY SCHOOL	7	1º Primary	First Cycle
	8	2º	
	9	3º	Second Cycle
	10	4º	
	11	5º	
	SECONDARY SCHOOL	12	6º
13		1º ESO	First
14		2º	
15		3º	
COMPULSORY SECONDARY EDUCATION	16	4º	Second
	17	1º	
POST-COMPULSORY SCHOOL	18	2º	



Empieza	1	2	Recreo	3	4	Recreo	5	6
9:00	9:00-9:45	9:45-10:30	10:30-10:45	10:45-11:30	11:30-12:15	12:15-12:30	12:30-1:15	1:15-2:00

Empieza	1	2	Recreo	3	4	Recreo	5	6	7
9:00	9:00-9:45	9:45-10:30	10:30-10:45	10:45-11:30	11:30-12:15	12:15-2:45	2:45-3:30	3:30-4:15	4:15-5:00



El año

3 terms (approx. 14 weeks each)

September 2nd – December

January – April

April – July 22nd



3 terminos (11 semanas cada uno)

Septiembre – Diciembre

Enero – Marzo

Marzo - Junio

Accept Challenge Extend



Below are descriptions of your school uniform. In questions 1-6 you need to 'Accept' or 'challenge' the sentences and in questions 7-10 you need to extend the sentences.

1. En mi instituto los chicos llevan una chaqueta negra.

2. En mi instituto las chicas llevan una falda gris

3. En mi instituto los chicos llevan unas camisas blancas.

4. En mi instituto los chicos y chicas llevan zapatos verdes.

5. En mi instituto las chicas no llevan corbata.

6. En mi instituto los chicos llevan una corbata multicolor.

7. En mi insituto los chicos llevan pantalones _____

8. Las chicas llevan una falda _____

9. Los chicos y las chicas llevan zapatos _____

10. Las chicas llevan calcetines _____

Extend Further: Write a description of your school with as much information as you can but you must use the words in the word bank.

Muy (very) Bastante (quite) en la costa (on the coast) un poquito (a little) modern (modern) multicolour (multicoloured) lunares (spotty) a rayas (stripy)

Unit Intent

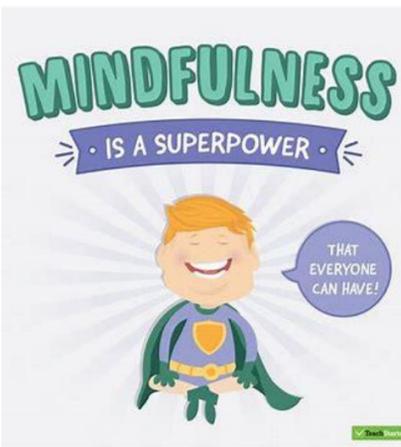
During this unit you will improve your performing skills as a member of an ensemble with focus on how to rehearse effectively. You will discover what makes a successful ensemble performance through listening activities and create your own arrangements of a song.



Ensemble skills

As you know, there are many different types of ensembles in many different genres. Working in ensembles requires a lot of **self discipline**, **organisation** and **preparation**. Playing in an ensemble allows you to develop **team work** skills coming together to achieve a common goal, it allows you to develop your **listening skills** learning to listen to **other parts** and **balance** your sound and improve your **intonation**, you learn to develop your **non-verbal communication** skills to create a successful performance and improve your **self confidence** and **motivation** to succeed.

Well being



Being part of an ensemble not only improves your musical and personal skills it's well known for improving your well being. Research shows that making music can lower blood pressure, reduce stress, lessen anxiety and improve your mindfulness. When you're strumming a guitar, playing the piano or singing, you enter this mindful state without even knowing it because you have to be **100% focused** otherwise you will get it wrong.

Rehearsals

Rehearsals are integral to a successful performance. You need to plan and prepare for rehearsals to allow you to stay 100% focused and make as much progress as possible. Having a simple rehearsal plan is necessary to make progress.

A rehearsal plan is a working document, this means it can be changed at any point to help you meet the end goal but, it is something that must be created and agreed by all members of the ensemble so everyone knows what they are expected to do.

<u>Time/Date/Duration</u>	<u>Aim of rehearsal</u>	<u>What you achieved</u>	<u>Preparation for next rehearsal.</u>

This side needs to be completed **before** all rehearsals showing what you intend to achieve in each rehearsal.

Could you create a better action plan?

This side needs to be completed **after** all rehearsals reflecting on your progress and identify things that need to be worked on more.

Rehearsals must focus on;

Tempo	Balance of sound
Accuracy	Structure
Dynamics	Texture

Live performances to listen to.



1. New Rules by Dua Lipa – Live at the BRIT awards
2. Little Things by One Direction – Live Royal Variety Performance



What are successful about each of these performances? What elements could you add in to your rehearsals for your performance?

How to practice

- Think of a piece of music in sections, breaking it down in to smaller chunks.
- Focus on one or more of these chunks during a practice session adding in the musical elements.
- Don't always start at the beginning, this will make you bored and not want to practice.

Remember to use your 'memory method' techniques to remember 100% of your key terms.



Ensemble - a group of musicians (more than 1) playing together.	Interpretation – a particular adaptation of a piece of music for performance
Rehearse - to practise something for a public performance	Reflection – serious and careful thought of what has gone well or what needs to be improved.
Genre – a style or category of music eg, classical genre.	Tempo – The speed of a piece of music and what all musicians have to follow when in an ensemble.
Intonation – the accuracy of pitch in playing an instrument or singing.	Structure – the layout of a piece of music, this important to know when you are learning new parts in an ensemble to make it easier to direct a rehearsal.
Harmony – where 2 or more pitches are added on top of each other.	Practice – is a noun, its an action rather than a thoughty Practise – is a verb, perform an activity or exercise repeatedly to improve.

ACE Questions

Are you 100% ready to answer these questions based on your learning so far?

<u>Accept the statement</u>	<u>Challenge the statement</u>	<u>Extend this answer</u>
<p>'Playing in an ensemble means you have to be the best musician on your instrument'</p> <p>Are you able to justify your answers?</p>	<p>'The only important thing in ensemble rehearsals is to be accurate at your own part'</p> <p>Are you able to give examples of music to support your answer?</p>	<p>'The rehearsal process is the key to a successful performance'</p> <p>Give musical examples to support this statement.</p>

Can you get 100% right?

COLD Questions

1. What makes an ensemble?
2. List three different types of ensembles.
3. Identify what skills are needed to practice effectively.
4. Why is texture important in an ensemble performance?

HOT Questions

1. Explain what musical interpretation means.
2. Explain why a rehearsal plan is so effective.
3. Justify the reasons why everyone needs to be ok with the rehearsal plan.
4. Describe what nonverbal communication means.
5. Explain how music affects your well-being.



Music Careers

There are endless opportunities and different paths you could take in the music industry, here are a few:

Performer/live events productions/music journalism/songwriting/music management/sound engineer/music producer/music therapist/blogger/music teacher.

**Keyword Spellings and Definitions:****Remember to use your 'memory method' techniques to remember 100% of your key terms.**

Epic Theatre: Brecht's style of production—audiences being engaged with a drama and constantly reminded that they are watching a play.	Multi-role: When performers play more than one role in the same performance. The audience would see the same performer play multiple characters, and so would be reminded that the performance is not real.	Facial Expressions: A facial expression conveys an emotion that tells us about the character and the way they react to the situation. It may also tell us something about that situation, eg if the character is very shocked when something happens.	Body language: The movements or positions of your body that show other people how you are feeling, without using words.	Characterisation: Creating a character through your movement, facial expression and vocal expression.
Direct address: Speaking directly to the audience. This fits into the style of Epic theatre as it helps to the audience to realise they are watching a play.	Narrator: A narrator is like a storyteller informing the audience about the plot. Narration is useful in making a story more understandable for the audience. It also makes the drama stylised.	Placards: A placard is a sign or additional piece of written information presented onstage. Using placards might be as simple as holding up a card or banner. Multimedia or a PowerPoint slideshow can also be used for this effect.	Speaking the stage directions This device was used by Brecht more frequently in rehearsal than performance. It helps distance the actor from the character they're playing. It also reminds the audience that they're watching a play and forces them to study the actions of a character in objective detail.	Projection: Projection is speaking loudly and clearly to make sure your voice is heard. Projection is essential in a large theatre in front of an. if the actor is inaudible in a large theatre, this is a big problem.

**ACE Questions – Are you 100% ready to answer these questions based on your learning so far?
“Theatre in Education fits in well to the style of Epic Theatre because it helps to get the important message across to the audience.”**

Accept

Why would you accept this viewpoint? Explain your answer.

Challenge

Why would you challenge this viewpoint? Explain your answer.

Extend

How would you extend this viewpoint? Explain your answer.

Can you get 100% right?**Cold Questions**

1. What is the main aim of Theatre in Education?
2. What does Brecht want the audience to realise when they are watching his style of theatre?
3. How would you use direct address to enhance your performance?

Hot Questions:

1. In your own words summarise the Epic Theatre techniques of: multi-role, direct address and placards. How could you use them?
2. Read through the BBC Bitesize revision page for Brecht and Epic Theatre and complete the test- aim for 10 correct answers.
3. Choose one of the following topics that you could use TIE to educate your audience about and create a storyboard with 4-6 images and short descriptions that show the plot of performance.

- Stranger danger
- Internet safety
- Peer pressure – smoking, alcohol, drugs
- Stereotypes
- Health & Fitness
- Stress



Topic: MAXIMUM LEVELS **Duration:** 6 weeks **Assessment Focus:** Introducing & Developing

Unit Overview:

In this unit, pupils will develop and improve further their running, jumping and throwing skills for events in order to improve performances. Pupils will continue to develop different techniques across all disciplines, and will judge against the bronze, silver and gold award thresholds. Pupils will engage in performing and improving personal bests in relation to speed, height and distances.

Language for Learning:

 Literacy Focus	Accelerate	Trajectory	Execution	Angle	Speed	Approach
	Rhythm	Preparation	Follow through	Release	Power	Distance

Track Events

These are running events typically ran on a 400m track.

Sprints

These are quick races that use your maximum speed. Most of these are done anaerobically (without oxygen).

100m, 200m, 300m, 400m.

Usain Bolt is an example of a sprinter. He holds the world record for 100m sprint at 9.58 seconds!



Long Distance events

These are endurance events, they are still completed pretty quickly but rely on pacing and stamina. These are done aerobically (using oxygen).

800m, 1500m.

Mo Farah is an example of a long-distance runner.



Field Events

These are throwing and jumping events.

Throwing events

Howler throw: This is the school version of javelin. The howler is a long thin object that makes a howling noise when thrown correctly.

Shot Put: This is a push not a throw. It uses a weighted ball that is pushed from the shoulder

Discus: imagine a heavy Frisbee. This heavy disc shaped weight is thrown to get the furthest discus.



Jumping Events

Long Jump: At school we do standing long jump which is two feet to two feet for distance. At sports day we will practice with a run up to increase distance.

Triple Jump: This is a hop, step and jump. Three jumps that link together to make a bigger jump. Again, we do this with a run up into a sand pit on sports day.

High Jump: This is a test of vertical jump power. You have to try to jump up over a bar. The technique for this is the Fosby flop. Named after the first man to go backwards over the bar.



School Awards to aim for: you will get a certificate for each one of these you can achieve!

EVENT	GIRLS			BOYS		
	BRONZE	SILVER	GOLD	BRONZE	SILVER	GOLD
100m (seconds)	18.50	16.50	14.70	17.50	15.00	13.40
200m (seconds)	40.00	36.00	31.00	38.3	32.60	28.80
800m (minutes)	4.20	3.40	3.00	3.45	3.10	2.40
1500m (minutes)	9.00	7.30	6.15	7.10	6.20	5.25
Long Jump (standing metres)	1.40	1.60	1.80	1.60	1.80	2.00
Triple Jump (standing metres)	5.50	6.00	6.60	5.80	6.50	7.00
Shot Put (metres)	4.30	5.70	6.80	4.80	6.50	8.60
Discus (metres)	9.00	13.00	17.00	12.00	17.00	22.00
Howler (metres)	15.00	30.00	40.00	30.00	40.00	50.00

Key Word and Definitions:

Athletics

Remember to use your 'memory method' techniques to remember 100% of your key terms.



Accelerate	An increase in speed or work rate. This would be used in all events, particularly towards the end.
Rhythm	A repeated pattern of movement. This is especially evident in events like triple jump or track events.
Trajectory	An object moving under force.
Preparation Phase	This is how you prepare for the event, typically used in field events. How can you set your body to ensure the throw or jump is perfect?
Execution Phase	This is what you actually do at the time of the throw or jump, how should your body look during this time?
Follow Through	How does your body finish? This is really important at this will determine your overall distance and direction.
Angle	A particular angle or flight of movement. For example, releasing an angle of 45 degrees during javelin.
Release	To allow an object to move freely.
Speed	$\text{Speed} = \text{Distance} / \text{Time}$
Power	$\text{Power} = \text{Speed} \times \text{Strength}$

Are you **100%** ready to answer these questions based on your learning so far?



 **ACE Question**

Accept	Challenge	Extend
<p>“Rhythm is especially important within jumping and running events.”</p> <p>How could you accept this statement?</p>	<p>“Power is required the least within track events, as no objects are being moved or cleared.”</p> <p>How could you challenge this statement?</p>	<p>“The follow through of any skill is just as important as the execution of it.”</p> <p>How could you extend this statement?</p>

Cold Questions
1. Identify a middle-distanced track event.
2. What is the equation for power?
3. Name an event that requires rhythm.
4. What time is needed for 100m gold for both boys and girls?
5. What are the names of 3 jumping based events?
Hot Questions
1. Explain the importance of follow-through when performing a throwing event.
2. Explain why achieving a <u>45 degree</u> angle when throwing javelin will help to improve your performance.
3. At what part(s) of a 400m track race would you expect to see acceleration and why?
4. How do you think grip can affect your performance during throwing events?
<p>5. CHALLENGE ME Q: What advice would you offer a performer who is struggling to achieve rhythm in the triple jump event?</p>

Unit Intent: In this half term you will develop your observational drawing skills further in relation to still life objects and images.

In this project you will...

- Develop your knowledge of observational drawing, when working with still life objects.
- Develop your knowledge of tonal skills and mark-making.
- Develop your written annotation skills by adding comments to your work regarding your successes and areas for improvements.
- Develop your knowledge of how to accurately use different mediums.



You will create...

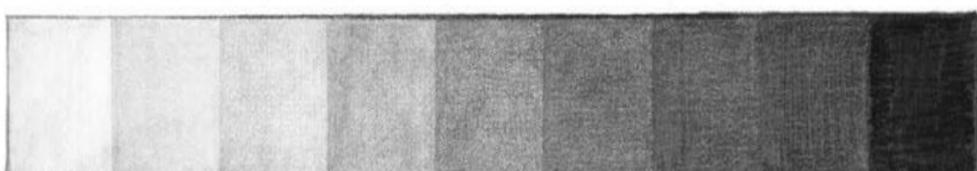
- 2 or more drawings of still life set-ups
- To create your still-life set up place 3-6 objects together in an arrangement.
- The objects can be found around the house and relate to each other in theme if you want.
- Each still-life drawing must be in a different medium, for example: colour pencil, shading pencil, biro, fine liner.
- Try to add as much detail to your drawings as possible.
- Make use of tone to make your shape look more 3D.
- When using pen or fine liner, try different mark-making techniques such as hatching and cross hatching.

Examples



Tonal Shading:

Tonal shading refers to the lightness or darkness of an object. It is created by using different pressures with your pencils to gain light and dark areas on your object. Consider putting an arrow where the light would be coming from and this will help you to understand which areas should be darker and which should be lighter.



Mark Making:

When referred to in art Mark-Making is a term used to describe the lines, patterns and textures that are made from your medium. Individual mediums such as a pen can create multiple different kinds of marks such as circular motions or straight lines.



Keyword Spellings and Definitions:

Remember to use your 'memory method' techniques to remember 100% of your key terms

Mediums: The material or form used by an artist to create their work.	Observational drawing: Observational drawing is drawing what you can see in front of you as accurately and as true as possible.	Still life: A painting or drawing of an arrangement of objects, typically including fruit and flowers.	Controlled: Using your mediums in a controlled way is when you use them accurately and to the best of your ability.
Presentation: How a piece of work or pieces of work are shown or explained to the intended audience. The way in which the work is arranged.	Annotation: A line or paragraph explaining or commenting on a piece of work, technique or skill.	Inspiration: The process of being mentally stimulated to feel something or do something, specifically when it is something creative.	Detail: A small, elaborate part of a piece of artwork including painting, drawing or crafts.

ACE Questions – are you 100% ready to answer these questions based on your learning so far?

Accept	Challenge	Extend
<p>“Observational drawing must be created from an object you can see.”</p> <p>Why would you accept this viewpoint? Explain your answer.</p>	<p>“When drawing an outline you should press extremely hard in order to see the lines.”</p> <p>How would you challenge this viewpoint? Explain your answer.</p>	<p>“Still Life is a painting or drawing of an arrangement of objects.”</p> <p>How can you extend this view point? What other data can you access? Explain your answer.</p>

Can you get 100% right?

Cold Questions

1. What does annotation mean?
2. What does inspiration mean?
3. What does Still life mean?
4. What is a medium?
5. What is detail?
6. What is an observational drawing?
7. What does presentation mean?
8. Can you take inspiration from multiple artists work?

Hot Questions

1. Why is it important to use control when working with different mediums?
2. Why is it important to add annotation to your work?
3. Why is it important to take inspiration from artists work?
4. How does effective presentation improve the overall look of your work?

Challenge Me Question

Can you add further detail, texture and tone to one of your drawings using a different medium?

Creative Careers Corner

Art and Design

Artist / Architect / Book Illustrator / Curator / Cinematic Artist / Fashion Designer / Art Director / Brand Designer / Animator / Make up Artist / Art Therapist / Conservator / Set Designer / Costume Designer / Art Teacher



Unit Intent: In this unit we will learn about natural timber and manufactured boards and how they are used.

Types of Wood

There are two main types of wood: **Hardwood** and **Softwood**. **Hardwoods** also known as **Deciduous Trees** are generally harder than softwoods and come from broad-leaved trees like Oak, Elm and Beech which lose their leaves in winter.

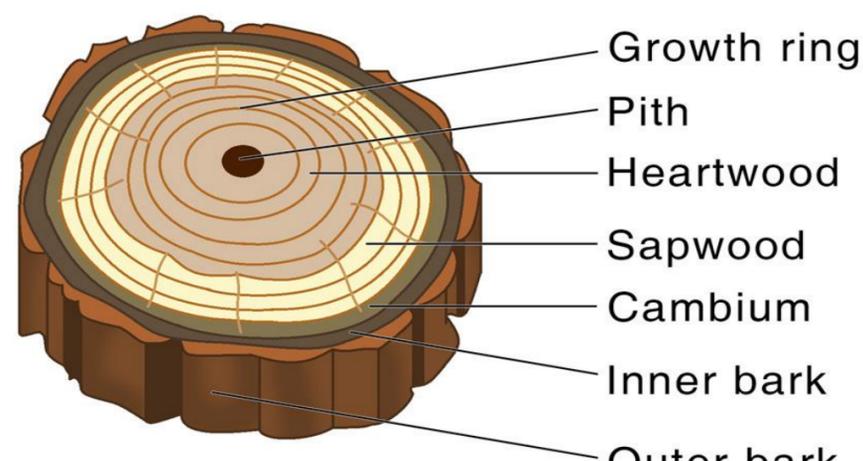
Softwoods also known as **Coniferous Trees** are softer than most hardwood trees and come from conifers like Pine and Redwoods who keep their leaves (needles) all year round.



Growth of a Tree

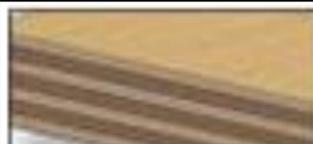
Trees use sunlight, carbon dioxide, minerals and water to grow. Each year a new layer of growth is added under the bark called an Annual Ring. This ring tells us how old the tree is. New growth is called Sapwood which over time is turned into Heartwood.

The Bark on the tree protects the inner layers from damage and disease.



- Growth ring
- Pith
- Heartwood
- Sapwood
- Cambium
- Inner bark
- Outer bark

Manufactured Boards

Picture	Name	Manufacturing Process	Properties	Uses
	Plywood	Thin strips of wood glued together with the grain running in opposite directions.	Very strong, constant thickness.	Furniture, toys, building construction.
	Chipboard	Tiny chips of timber mixed with glue and compressed into sheets	Cheap, not very strong, easily damaged by moisture	Kitchen worktops when protected with a covering.
	Blockboard	Strips of softwood glued side by side then covered with veneer on both sides	Very strong and stable board	Furniture, table tops.
	MDF Medium Density Fibreboard	Very small particles of wood and dust glued together then compressed into sheets	Cheap, solid and stable board, easy to cut and shape.	Furniture, kitchen units, flooring.
	Hardboard	Wood pulp made into fibres, mixed with glue and pressed into sheets, rough on one side smooth on the other	Cheap board, flexible so needs supporting	Cupboard backs, draw bases, sub-floor insulation

Keyword Spellings and Definitions:

Remember to use your 'memory method' techniques to remember 100% of your key terms

Deciduous: Trees that lose their leaves in winter.	Coniferous: Trees that don't lose their leaves in winter. They keep them all year round.	Hardwood: Wood that comes from broad leaved trees, trees that are slow growing.	Softwood: Wood that come from conifers, trees that grow quickly.
Manufactured Board: Sheet materials which have been made using industrial processes.	Heartwood: The inner and oldest part of the tree.	Sapwood: The new growth of the tree.	Outer Bark: The protective layer round the tree which protects the inner growth.

ACE Questions – are you 100% ready to answer these questions based on your learning so far?

Accept	Challenge	Extend
<p>“Damage to the outer bark injures the tree.”</p> <p>Why would you accept this viewpoint? Explain your answer.</p>	<p>“Trees are not essential for a healthy environment.”</p> <p>How would you challenge this viewpoint? Explain your answer.</p>	<p>“It is better to use recycled or manufactured wood in construction rather than natural timber.”</p> <p>How can you extend this view point? What other information can you provide? Explain your answer.</p>

Can you get 100% right?

Cold Questions

1. Is Plywood strong?
2. What is Pith?
3. What is a Manufactured Board?
4. What is MDF?
5. What is MDF made from?
6. What is Chipboard mainly used for?
7. What does an Annual Ring indicate?

Hot Questions

1. What is the difference between Hard and Softwood?
2. What do trees require to grow?
3. How do you tell the age of a tree?
4. Why do we need trees for a health planet?
5. Explain the main difference between Deciduous and Coniferous trees?

Challenge Me Question

Can you use the website www.technologystudent.com to find out how Plywood is manufactured?

Creative Careers Corner

Design Technology



Architect / Brick Layer / Cabinet Maker / Carpenter / Electrician / CAD Designer / Lighting Technician / Locksmith / Engineer / Plasterer / Plumber / Set Designer / Window Fitter / Offshore Roustabout / Gardener / Mechanic / Construction / Model Maker

Unit Intent: Understand what a balanced diet is and what macro and micro nutrients are.

In this unit you will understand what a balanced diet is and how it help you to stay healthy. You will be able to identify the nutrients and how they help the body. You will also understand what and why we should reduce certain things in our diet.

A Balanced Diet

A balanced diet is a diet that contains the right amount of nutrients the body needs to allow it to grow and develop,

It is important to drink water, and reduce the amount of salt, sugar and saturated fat in our diet as this can lead to problems like diabetes, heart disease, obesity or high blood pressure

Macro Nutrients – Fat, Protein & Carbohydrates, the body needs these nutrients in large amounts.

Micro Nutrients – Vitamins and Minerals, the body only needs these in small amount these include iron and calcium

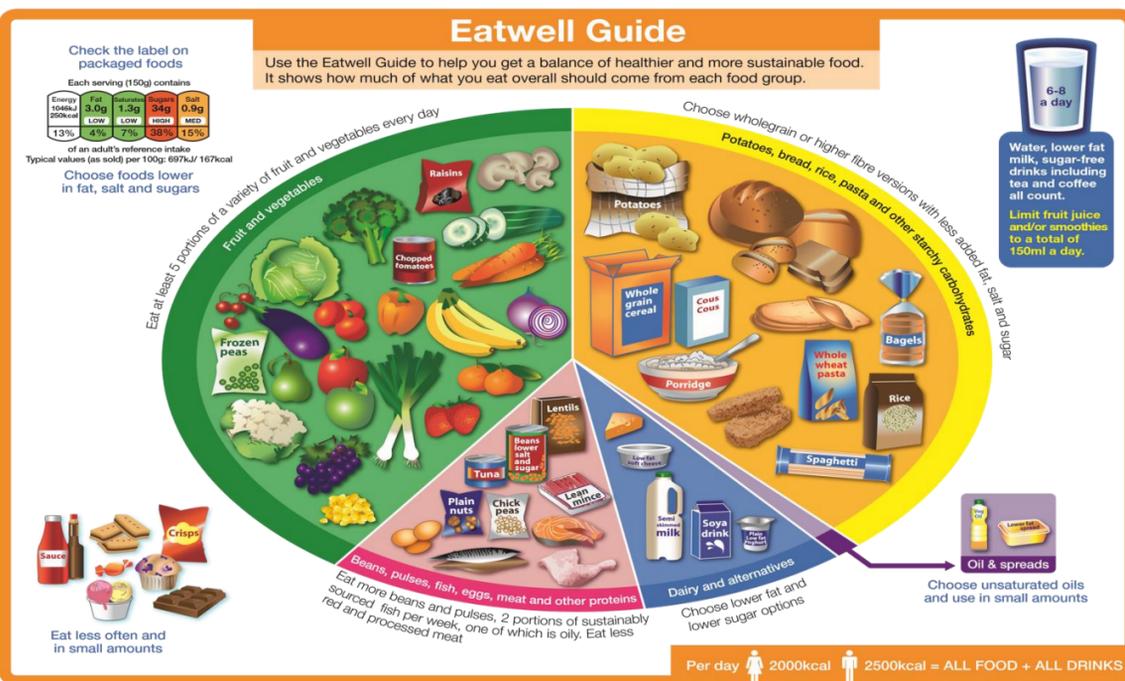


The Eatwell Guide is an excellent place to start when deciding what should be included in a balanced diet. This guide shows the different types of food we should eat – and in what proportions – to have a healthy, balanced diet.

People should be encouraged to choose a variety of foods from the four largest groups every day to ensure that they obtain the wide range of nutrients their bodies need to grow, develop and/or function properly and stay healthy. Foods from the largest groups should be eaten most often and foods from the smallest group should be eaten least often

Guided Daily allowance – GDA/RI

This chart provides information for a daily amount of each nutrients, this is different for men and women also for children. If you can remember the daily allowance for some of the nutrients like salt this will help you to read the traffic light system that is on packaging to show you if that product is high in a certain thing.



Guideline Daily Amount Values			
Typical values	Women	Men	Children (5-10 years)
Calories	2,000 kcal	2,500 kcal	1,800 kcal
Protein	45 g	55 g	24 g
Carbohydrate	230 g	300g	220 g
Sugars	90 g	120 g	85 g
Fat	70 g	95 g	70 g
Saturates	20 g	30 g	20 g
Fibre	24 g	24 g	15 g
Salt	6 g	6 g	4 g



Keyword Spellings and Definitions:

Remember to use your 'memory method' techniques to remember 100% of your key terms

Balanced diet: The right amount of nutrients your body needs to be healthy.	Nutrients: Natural chemical substances in foods that are essential for body growth, function and health.	Macro Nutrients: Nutrients we need in large amounts (fat, carbohydrates and protein.)	Micro Nutrients: Nutrients we need in small amounts e.g. vitamins and minerals (iron, calcium).
Nutrition: The study of what people eat and how all the nutrients in foods work together in the body.	Guided Daily Allowance: The recommended amount of calories per day. Simply a set of guidelines that tell us the approximate maximum amount of nutrients and energy we need each day in order to achieve a healthy, balanced diet.	Portion control: The right amount of each food type.	Starch carbohydrates: Provides the body with slow release energy and contains macronutrients making it a balanced nutrient

ACE Questions – are you 100% ready to answer these questions based on your learning so far?

Accept

Challenge

Extend

“By using the Eatwell Guide it is easier to stay healthy.”

“You should reduce fat in your diet as all fat is bad for you’

“As your body grows and develops your daily intake of nutrients will change.”

Why would you accept this viewpoint? Explain your answer.

How would you challenge this viewpoint? Explain your answer.

How can you extend this view point? What other information can you include? Explain your answer.

Can you get 100% right?

Cold Questions

1. Why is water important in our diet?
2. What is recorded on the traffic light food label?
3. What three things should we try to reduce in our diet?
4. What does the body need calcium for?
5. What does the body need carbohydrates for?

Hot Questions

1. Explain the difference between starchy and sugary carbohydrates.
2. Why does the body need some fat?
3. What happens to the body if it doesn't have enough water?
4. Explain what a balanced diet means.
5. What sources provide us with vitamins and minerals?

Challenge Me Question

Pick your favourite restaurant or takeaway and select a starter or side, and a main meal from the menu.

How are the meals you have selected nutritionally balanced?

Creative Careers Corner

Hospitality & Catering

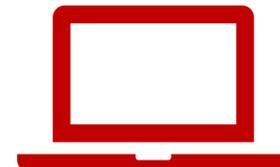
Head Chef/ Sous chef/ Head Waiter/ Waiter/
Kitchen porter/ General manager/ Concierge/
Front of house manager /Front desk receptionist/
Maintenance/Barista/ Housekeeping/
Bar staff/Sommelier/Publican/ Wedding Planner



Year 8: Computer Science Personal Project

Unit Intent: In this half term you will analyse other apps available, research and design your own unique app making sure it would do well on the market.

About this Topic



In this project you will...

- Research other apps available and be able to describe their purpose.
- Develop your knowledge of what makes an app popular
- Develop your knowledge of why target audiences are important.
- Develop your written skills by adding comments on your work of what areas can be improved upon and how your work was successful (evaluate).



You will create...

- Three designs of unique apps which you think is missing from the market and choose your favourite.
- Within these designs add your intended target audience and describe how it meets that audience.
- A description of why you think it is lacking from the market and why it will be sellable to the public.
- A description of how your app will work in detail and what it will do (annotate)
- Add how it can be improved in the future.

App Examples



Research:
This is where you are getting your ideas from, evidencing your ideas. What apps are already available? Which ones do you like? What are their intended audience? If you were to design and make an app what would it be and how would it work? Who would it be aimed at?

Create:
Design three different and unique apps. Add detail and describe how they will work? Choose your favourite. Many apps are recognised by its logo. How will your look. See examples above.

Developments:
This is the point you analyse what you have done so far. What do you think is good about your design? What can you improve? How does it need the target audience? This is where you identify your strengths and develop these further into your work!

Final Outcome:
This is the end point of your project, your 'answer' to the starting point, your response to what is missing from the market. This outcome should be your best work, showcasing your developed skills.

Keyword Spellings and Definitions:

Remember to use your 'memory method' techniques to remember 100% of your key terms

Design: plan or drawing produced to show the look and function or workings of apps.	Research: a detailed study of a subject, especially in order to discover (new) information or reach a (new) understand.	Evaluate: to judge the quality of your work,	Target audience: a particular group at which a product is aimed at.
Presentation: How a piece of work or pieces of work are shown or explained to the intended audience. The way in which the work is arranged.	Annotation: A line or paragraph explaining or commenting on a piece of work, technique or skill.	Apps: an application, especially as downloaded by a user to a mobile device.	Detail: A small, elaborate part of a piece of work, such as design which includes colour to be used, font style and colour.

Accept	Challenge	Extend
<p>“Researching other available apps helps you gain a more realistic outcomes and produce a useable and popular app.”</p> <p>Why would you accept this viewpoint? Explain your answer.</p>	<p>“You should only add annotation to your design when something goes wrong.”</p> <p>How would you challenge this viewpoint? Explain your answer.</p>	<p>“Evaluating your work is important.”</p> <p>How can you extend this view point? What other data can you access? Explain your answer.</p>

Can you get 100% right?

Cold Questions

- 1) What does annotation mean?
- 2) What is an app?
- 3) What does target audience mean?
- 4) What is a Research?
- 5) What is design?
- 6) What is a development?
- 7) What is a final outcome?
- 8) How can you make sure your app meets with your chosen audience?

Challenge Me Question

Can you write a paragraph explaining what can you do to make sure your app will be success? (Clue, social media)

Hot Questions

- 1) Why is it important to look at different apps?
- 2) Why do you need to research?
- 3) How can you make sure your design is unique?
- 4) How do you know your app will be acceptable?
- 5) Why is the designing three different apps important to the process?

Creative Careers Corner

Computer Science

Computer Hardware Engineer/Computer Network Architect /Computer and Information Research Scientists /Database Administrator /IT Project Manager / Games Developer /Programmer / Software Developer/ Teacher/Web Designer