

# STUDY SKILLS

## 4 ways of transforming knowledge

Example knowledge box from English

### 3. The Globe Theatre



- Plays were performed during daylight hours as there was no electricity.
- The Globe could hold up to 2500 people.
- The stage at The Globe was open on three sides.
- There was a trapdoor in the stage where ghosts or witches could appear.
- The stage was called an apron stage because it stuck out into the audience.
- The balcony above the stage was used for musicians or as a balcony in plays such as *Romeo and Juliet*.
- Women and girls were not allowed to act. Female characters were played by male actors.

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### Keywords Quizzing The Globe

- The Globe → a theatre that was round in shape
- Trapdoor → a wooden hole in the stage where spooky characters would appear
- Apron stage → the name of the part of the stage that juts out
- Balcony → a high up balcony used for romantic scenes e.g. *Romeo and Juliet*
- Actors → women were not permitted to perform on the stage

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### Self-Quiz The Globe

- Why were plays performed during daylight hours?  
*There was no electricity.*
- What supernatural characters would use the trap door?  
*Ghosts and witches*
- Why was the stage called an 'apron stage'?  
*It stuck out.*
- What famous Shakespearean play featured a balcony?  
*Romeo and Juliet*
- Who was not permitted to act on the stages?  
*Girls or women*

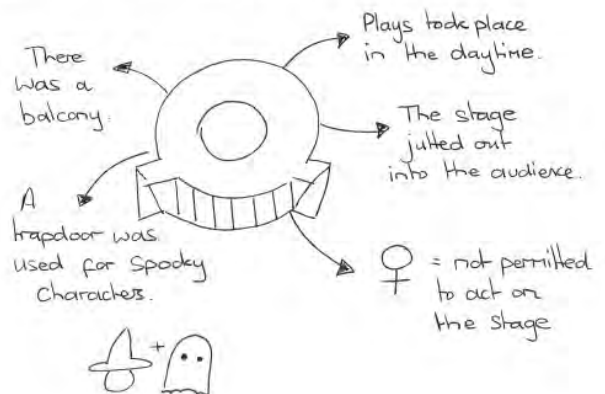
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### Summarising The Globe

The Globe Theatre was given its name due to its round shape. The stage inside the theatre was an unusual shape and jilted out into the audience. This would have made the performances of Shakespeare's plays very intimate. Within the stage floor, there was a trapdoor. This was used for scary characters such as ghosts and witches to emerge. Perhaps this represented a version of Hell. A balcony was used, usually by musicians but also for key scenes. Most famously, it was used in *'Romeo and Juliet'*.

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### Illustrate it The Globe



## 1. Your Planet Needs You! Concepts and Ideas.



Key Word	Definition
rhetoric	The art of effective persuasive writing or speaking.
persuasion	The act or process of persuading someone to do or believe something.
advocacy	Any action that speaks or acts in favour of others.
activism	Campaigning to bring about social or political change.
lobbying	To seek to influence somebody on an issue.
oracy	The ability to express oneself fluently in speech.
climate change	Long term shifts in temperatures and weather patterns.

## 2. Climate Change Effects



### CLIMATE CHANGE EFFECTS



HOTTER TEMPERATURES



MORE SEVERE STORMS



INCREASED DROUGHT



A WARMING, RISING OCEAN



LOSS OF SPECIES



NOT ENOUGH FOOD



MORE HEALTH RISKS



POVERTY AND DISPLACEMENT

## 3. Persuasive Techniques I need to learn.



Technique	Definition
rhetorical question	A question asked to create dramatic effect and make a point rather than to get an answer
fact	A thing that is known or proved to be true.
statistic	A fact or piece of data obtained from a study of a large amount of numerical data.
anecdote	A short story illustrating a point.
direct address	Talking directly to an individual or a group. Usually demonstrated by using the personal pronoun "you".
repetition	When a single word or phrase is used multiple times to make a point.
emotive language	Language that makes a reader respond emotionally perhaps sharing somebody's point of view.

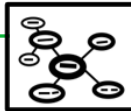
#### 4. Ambitious vocabulary



detrimental	emissions	sustainability
crisis	renewable	biodiversity
transformative	ecosystems	radiation

Find the meanings of and learn 5 of these words.

#### 5. What might you already know about Shakespeare?



LEARN how to spell SHAKESPEARE. Use the **look, write, cover, check** method.

**MACBETH** is the play that opens with three witches.

**ROMEO AND JULIET** is the play where Juliet speaks to Romeo from the balcony.

**HAMLET** is the play where Hamlet speaks to a skull of a man called Yorick.

Shakespeare wrote three types of play:

**TRAGEDIES:** plays that end in death and destruction.

**COMEDIES:** plays that are often about love and mistaken identity.

**HISTORIES:** plays that are based on kings from history.



#### 6. Shakespeare's life and times

##### Can you learn these Shakespearean insults?

"Away, you mouldy rogue, away!"

"You cankerblossom!"

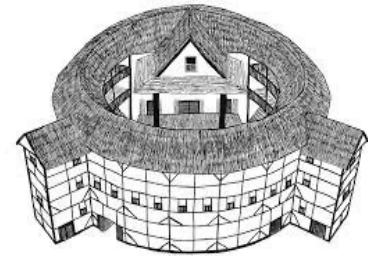
"Thou damned and luxurious mountain goat!"

##### Learn these facts:

- Shakespeare was born in Stratford-upon-Avon on 23<sup>rd</sup> April 1564.
- Shakespeare married Anne Hathaway.
- Shakespeare's only son, Hamnet, died, aged 11.
- Shakespeare died on his birthday at the age of 52.
- Shakespeare wrote at least 37 plays.
- Shakespeare wrote 154 sonnets.
- A sonnet is a poem with 14 lines. Each line has 10 syllables. It is written with a rhythm called iambic pentameter.

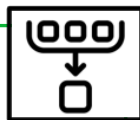


#### 7. The Globe Theatre



- Plays were performed during daylight hours as there was no electricity.
- The Globe could hold up to 2500 people.
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## 8. The Puritans



The **Puritans** did not approve of entertainment, theatres or holidays.

The **Puritans** were extreme **Protestants** who did not want the English church to have any Catholic influences.

The **Puritans** wanted everybody to put God first by spending their time praying and reading the bible, not going to theatres.

Theatres attracted huge crowds: up to 3000 people. **The Puritans** did not like this.

**The Puritans** were worried about the undesirable people who went to the theatre: thieves, beggars and gamblers.

To keep the **Puritans** happy, theatres were banned within the boundaries of the City of London. However, lots of theatres popped up around the edges.

## 9. The Seven Ages of Man

A **monologue** is a long speech by one actor in a play or a film that expresses their thoughts and feelings.

In Shakespeare's play **As You Like it**, a character called Jacques reads a famous monologue that has become known as **The Seven Ages of Man**.

The opening line is "All the world's a stage."

Can you learn the seven ages?

- (1) "At first the infant" (baby)
- (2) "the whining school-boy" (child)
- (3) "the lover" (teenager)
- (4) "a soldier" (young man)
- (5) "the justice" (middle age)
- (6) "an old man" (old age)
- (7) Dying and then death.



## 10. Shakespeare's Language

Here are some words that Shakespeare commonly uses:



Shakespeare	Definition
afear'd	afraid
anon	soon, shortly
apparel	clothes
chide	to tell off
false	traitorous
forsooth	in truth
ill	bad
methinks	It seems to me.
oft	Often
perchance	perhaps

## 11. Thinking about Year 8.

In Year 8, we begin with an exciting unit on **Dystopian fiction**. Here are some of the conventions of a dystopian piece of writing:

a place of great suffering  
ruled by an oppressive leader  
lack of freedom  
harsh punishments  
high levels of surveillance

bleak settings  
environmental disasters  
poor living conditions  
people living in fear

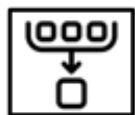


## Challenge!

Can you find the names of three dystopian novels and write a paragraph about what each one is about?

## 1. History of Folk Music 1

Folk Music is **TRADITIONAL** music of the people performed by the people themselves and played within their own communities. Folk Music was passed on **ORALLY** (through speech or song) from one generation to the next – the **ORAL TRADITION** (passed down by word of mouth), and many Folk Songs were not originally written down. The Industrial Revolution of the 18th and 19th Centuries destroyed communities so many of the traditional Folk Songs were lost. Attempts were made to collect these songs and Cecil Sharp published a ‘written down’ collection of English Folk Music in 1907 which had taken a lifetime to collect.



## 2. History of Folk Music 2

During the 1950’s a great **FOLK MUSIC REVIVAL** began and bands in the 1970’s ‘mixed together’ Folk and Rock (**FOLK ROCK**) as a type of musical **FUSION** e.g., *Lindisfarne*, *Steeleye Span*. Other musicians created more modern and commercial **ARRANGEMENTS** of Folk Songs such as *Ralph McTell’s “Streets of London”* in 1975. Folk Music influenced bands such as *The Beatles*, *Paul Simon*, *The Corrs* and *Ed Sheeran*



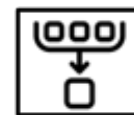
## 3. Types of Folk Music

People from different countries and cultures have their own **FOLK MUSIC**.

**FOLK SONGS** are often included in **WORK SONGS**, including **SEA SHANTIES**, songs about **EVERYDAY LIFE**, **THE SEASONS, BATTLES AND WARS, SHEPHERD’S SONGS** and **LULLABIES** (cradle songs).

People also sang Folk Songs to help them forget their aches and pains e.g., *shepherds sang about their sheep and lambs and the bitter weather to help keep their spirits high.*

Folk Music can also be **INSTRUMENTAL**, often used for dancing, entertainment, celebration, and religious ceremonies. Dancing to Folk Music still happens such as **MORRIS DANCERS** or **MAYPOLE DANCING**.



## 4 Tonic Pedal

**TONIC PEDAL - A (BASS) PEDAL (POINT/NOTE)** is a note of long duration, often held in the bass part (lower down the keyboard) which uses the **TONIC** note, over which the melody line and chords will “fit” e.g.



## 5. Harmony in Folk Music – Intervals

**ACCOMPANIMENT** – Music that accompanies either a lead singer or melody line. This can be instrumentally performed by members of a folk band, but also vocally, often known as the “backing,” provided by backing singers.

**HARMONY** – The effect produced by two or more pitched notes sounding together at the same time *e.g.*, a chord or triad creates harmony or a lead singer and backing singers sing different melodies or parts ‘in harmony’ (**COUNTER MELODY**)

**INTERVAL** – The distance between two musical notes. The intervals of a **FOURTH** and **FIFTH** are common in Folk Music.



## 6. Instruments, Timbres and Sonorities of Folk Music

Many **FOLK SONGS** are often performed **UNACCOMPANIED** (with no instrumental accompaniment) = **A CAPPELLA**. However, the following instruments are often used in Folk Music:

**Penny/Tin Whistle**



**Accordion**



**Fiddle**



## 7. Major chords

A **chord** is when we play three or more notes together. There are two main type of chords we use in music.

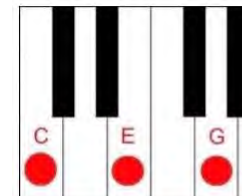
### Major Chords

These tend to sound bright and cheerful and can be used to represent happiness.

Made up of Root note

+ 4 Semitones

+ 3 Semitones



C, E (4 semitones up from C) and G (3 semitones up from E)

### Minor Chords

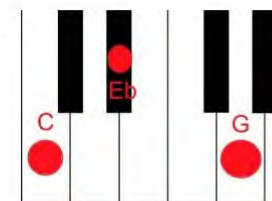


These tend to sound dark and mysterious and can be used to represent anger or sadness.

Made up of Root note

+ 3 Semitones

+ 4 Semitones

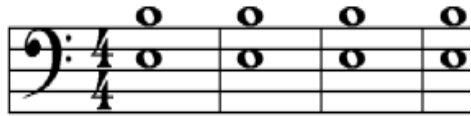


C, E flat (3 semitones up from C) and G (4 semitones up from E flat)

## 8. Drone



**DRONE** - A form of musical accompaniment consisting of continuous sounding pitched notes, usually a **FIFTH** apart (5 notes), again, often in the bass part *e.g*



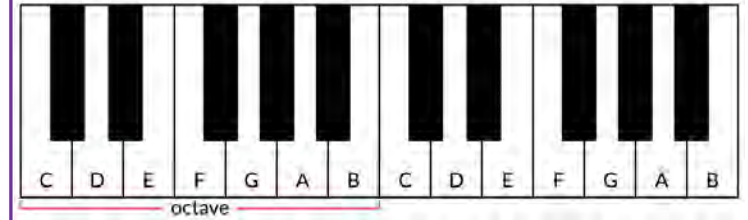
## 9. Ostinato



**OSTINATO** – A repeated musical pattern as an accompaniment, often using notes of the **CHORD** and rhythm patterns from the song *e.g*.



## 10. Layout of a Keyboard



## 10. Left hand/Right hand 1-5



Left Hand

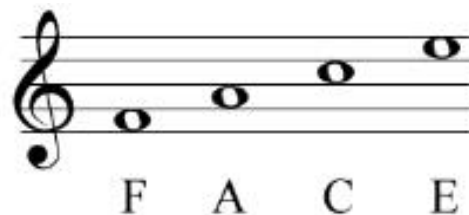
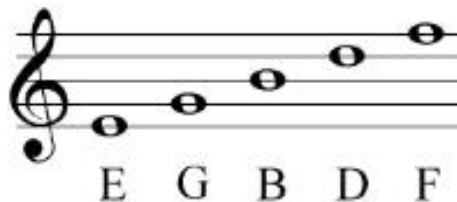
Right Hand



## 11. Staves and Staffs



A **STAVE** or **STAFF** is the name given to the five lines where musical notes are written. The position of notes on the stave or staff shows their **PITCH** (how high or low a note is). The **TREBLE CLEF** is a symbol used to show high-pitched notes on the stave and is *usually* used for the right hand on a piano or keyboard to play the **MELODY** and also used by high pitched instruments such as the flute and violin. The stave or staff is made up of 5 **LINES** and 4 **SPACES**. Every **Green Bus Drives Fast**. Notes in the **SPACES** spell “**FACE**”

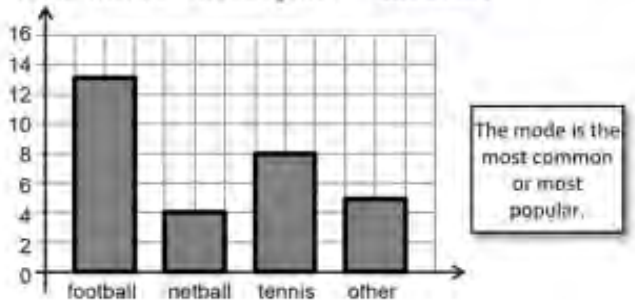


### 1. Data 1



**28d** Recognise the **mode** from a list of data or a **bar chart**

Sian did a survey into the favourite sports of people in her class. The results are shown in the graph below.  
What was the modal sport? Football



**30d** Calculate the **range** from a list of data or a **bar chart**

Simone records the number of minutes she spends on her mobile phone over 7 days.

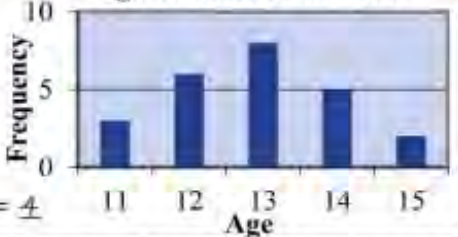
8 5 13 6 24 19 10

Work out the **range**.  $24 - 5 = 19$

Range = largest value - smallest value

**Ages of children in a club**

Work out the **range** of the children's ages.



$15 - 11 = 4$

The question asks for the range of the children's **ages** so look at the **ages only**. The **highest age** is 15 and the **lowest age** is 11.

### 2. Data 2



**31d** Calculate the **median** from an odd or even list of data

Here is a list of 5 numbers.

4 10 6 9 11

Write down the median. 1) Put the numbers in order.

4 6 9 10 11

Median = 9

2) Underline pairs of numbers from each end.

3) The number left in the middle is the median.

Here is a list of 8 numbers.

9 2 7 2 4 1 7 8

Write down the median.

1 2 2 4 7 7 8 9

$4 + 7 = 11$

$11 \div 2 = 5.5$

Median = 5.5

If there are **two numbers** in the middle of the list find the median by adding the two numbers and divide the answer by 2.

**42d** Calculate the **mean** from a list of data and compare which is the **best average** to use.

A teacher surveys a group of students. She asks how much pocket money they receive each week.

They respond: £5, £8, £4, £50, £6.

a) Work out the **mean**.

The **mean** is the **sum** of all the values **divided** by how many there are.

Sum all of the values...

$£5 + £8 + £4 + £50 + £6 = £73$

$73 \div 5 = £14.60$

Mean = £14.60

...and **divide** the answer by how many numbers there are.

b) Which average, the median or the mean, is most suitable for this data?

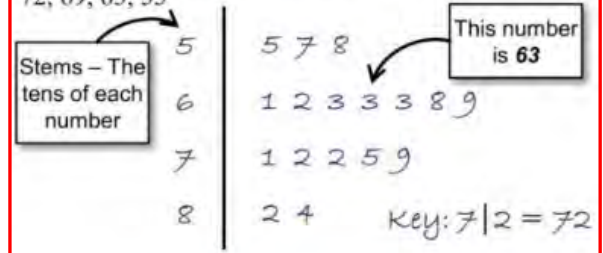
The median is most suitable, as there is an outlier of £50 which brings up the value of the mean.

### 3. Data 3



**38d** Draw a **stem and leaf diagram** and use it to find **mode, median or range**

Create a stem and leaf diagram for these values  
58, 71, 62, 84, 79, 82, 63, 63, 61, 75, 57, 68, 72, 72, 69, 63, 55



Mode The number that appears most = 63

Median The middle number = 68

Mean Add and then divide = 68

**60d** Use **averages** to work out the values of missing data



If the mean is 9, what must the fourth number be?

$13 + 9 + 10 = 32$

$9 \times 4 = 36$

$36 - 32 = 4$

1. Find the total of the numbers given.
2. Multiply the mean by the count of numbers to find what the total should be.
3. Subtract to find the missing number.

## 4. Data 4



**59d** Calculate the **mean**, **mode** or **median** from a **frequency table**

Calculate the mean, median and mode for the data below.

Shoe Size	Frequency	SS x F	Cumulative Frequency
4	3	12	3
5	5	25	8
6	9	54	17
7	5	35	22
8	3	24	25

Mode = 6

The mode is the shoe size with the highest frequency, **NOT** the frequency itself.

Median is the 13<sup>th</sup> value which lies within size 6.

Mean

$$150 \div 25 = 6$$

1. Add a column to multiply shoe sizes by their frequencies.
2. Add totals to the column created and the frequency column.
3. Divide the totals to find the mean

1. Add a cumulative frequency column to the data
2. Work out where the position of the median value lies.

**40d** Distinguish between types of data: **discrete**, **continuous** and **categorical**

**Qualitative**

- Categorical - descriptive data, not numerical (e.g. colours, pets)

**Quantitative**

- Discrete - counted, taking on set values (e.g. shoe size, number of pupils in each tutor group)
- Continuous - measured, taking any value in a range (e.g. height, birth weight)

## 5. Data 5



**41d** Complete a **grouped frequency tally chart**

Thomas records the heights of the students in a class. His results are given below.

155 141 160 132 156 156 167 150 145  
162 152 159 168 159 145 154 166 140

Complete the tally chart.

This interval represents heights between 130 and 140, **not including 140.**

Underline each number as you fill in the Tally. This should stop you from missing numbers.

Height (cm)	Tally	Frequency
$130 \leq h < 140$		1
$140 \leq h < 150$		4
$150 \leq h < 160$		8
$160 \leq h < 170$		5

140 will go in this interval.

Represent every fifth tally with a slanted line. Frequency means how many. Sum the tally.

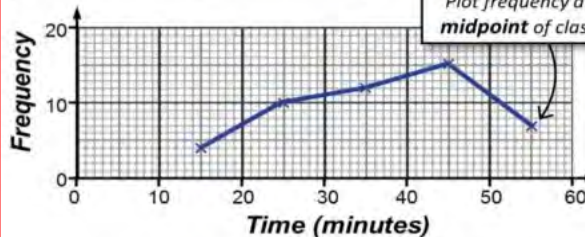
**62d** Plot **frequency polygons** and state the **modal class** or the class containing the **median** from a **grouped frequency table**.

Time (t mins)	Frequency
$10 < t \leq 20$	4
$20 < t \leq 30$	10
$30 < t \leq 40$	12
$40 < t \leq 50$	15
$50 < t \leq 60$	7

median is  $\frac{48}{2} = 24$ <sup>th</sup> employee so is in  $30 < t \leq 40$

modal class is the class with highest frequency

Plot frequency at midpoint of class



## 6. Probability 1



**29d** List the possible **outcomes** of an **experiment**

William is going to roll a 6 sided dice and flip a coin. The dice can land on 1, 2, 3, 4, 5 or 6. The coin can land on heads or tails. List all the possible outcomes.

H = heads

T = tails

Come up with **abbreviations** and make it clear to the examiner what they stand for.

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

Be systematic when you are listing the outcomes.

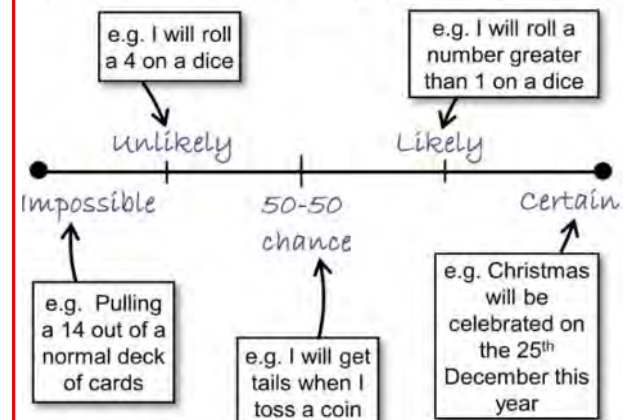
George is going to flip a coin three times. List all the possible outcomes.

(H, H, T) (H, H, H) (T, H, H) (H, T, H)  
(T, T, H) (T, T, T) (H, T, T) (T, H, T)

**32d** Describe **likelihood** using the **language of probability**

Place the following words on the scale

50-50 chance, likely, unlikely, certain, impossible

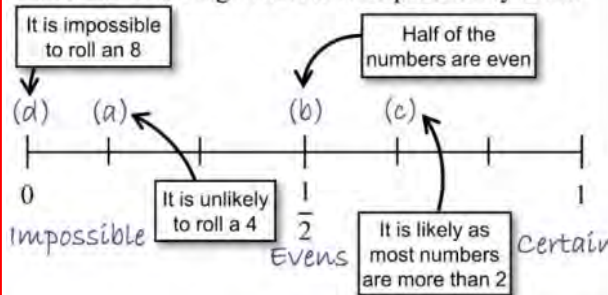


## 7. Probability 2



**34d** Understand and use the **probability scale** from 0 to 1 and place events roughly on a **probability line**

Place the following events on this probability scale.



- (a) Rolling a 4 on a normal die.
- (b) Rolling an even number on a normal die.
- (c) Rolling a number more than 2 on a normal die.
- (d) Rolling a 8 on a normal die.

**37d** Decide if events are **random** or not or **fair** or not

**Random** means each outcome is equally likely to happen.

A die is **fair** if all the outcomes are **equally likely** (have the same chance of happening)

Are the following fair and why?



No this spinner is biased, you are more likely to get a 1

(b) I need 4 pupils for a quiz. Put all the names on pieces of paper in a box and take 4 without looking.

Yes this is fair because each name is equally likely to be picked out of the box.

## 8. Probability 3



**39d** Calculate **probability** based on **equally likely** outcomes

*Outcomes are equally likely when every 'pick' has the same chance of happening*

A bag contains three red, two blue and five green counters. A counter is taken out of the bag at random. Write the probability of these events happening.

Number of counters = 10

$$\text{Probability} = \frac{\text{successful outcomes}}{\text{total outcomes}}$$

- a) Taking a red counter  $\frac{3}{10}$
- b) Taking a blue counter  $\frac{2}{10} = \frac{1}{5}$
- c) Taking a counter that is NOT green  $\frac{5}{10} = \frac{1}{2}$

Number of counters that aren't green

## 10. Probability 5



**45d** List possible **combinations** and use your list to calculate **probabilities**

There are 3 boys and 3 girls on a school council.

Boys	Girls
Alfie	Denise
Brian	Emily
Cliff	Freya

A teacher wants to choose one of the boys and one of the girls to go to a meeting. List all the possible combinations the teacher can choose.

We know there are  $3 \times 3 = 9$  combinations.

(A, D) (A, E) (A, F) (B, D) (B, E) (B, F)

(C, D) (C, E) (C, F)

What is the probability of picking Brian and Freya?

*One combination out of 9 total so 1/9*

What is the probability of picking Denise?

*3 combinations include Denise so 3/9*

## 9. Probability 4



**44d** Use the fact that **probabilities sum to 1**

A bias 4 sided dice is thrown. The probabilities are shown in a table below.

Outcome	1	2	3	4
Probability	0.28	0.4	0.15	

Work out the probability that a 4 is thrown.

$$0.28 + 0.4 + 0.15 = 0.83$$

Probabilities always add to 1

$$1 - 0.83 = 0.17$$

## 11. Probability 6



**50d** Define **mutually exclusive** and calculate the **probability** of either event happening

A bag contains a large number of balls. This table shows the probability of selecting each colour. Find the probability of selecting a ball that is blue

Colour	red	white	blue	green
Probability	0.3	0.1		0.2

Two events are **mutually exclusive** if when one happens the other one cannot happen. You are then able to add their probabilities for one or the other happening.

$$P(\text{red or white or green}) = 0.3 + 0.1 + 0.2 = 0.6$$

$$P(\text{blue}) = 1 - P(\text{red or white or green}) = 1 - 0.6 = 0.4$$

## 1. Overview



**Plays** have been written down by people since the time of the Ancient Egyptians 4000 years ago.

A play is **laid out** to show:

- The characters
- The lines (dialogue)
- The action (stage directions)
- Technical information (descriptions of the set, lighting, costumes and sound).

In this scheme of learning, you will work on a play as a group and take it “**from page to stage**”.



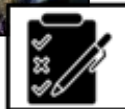
## 2. Reading & Casting

A play ‘**reading**’ is when the actors read the play out loud. Usually, one person reads each character. Someone reads the stage directions.

**Stage directions** – information in the script that describes the action e.g. “*BERYL hides the burger under the table.*”

**Casting** the play means choosing which actor should play which part. Casting can be done ‘to type’, meaning that the actor that most closely matches the description of the character is chosen. Or, you can cast ‘against type’ which is the opposite.

Gwyneth Paltrow was cast in a male role for the film *Shakespeare in Love*



## 3. Blocking

**Blocking** is when you first start to plan where the actors should stand and move.

Normally, there isn’t much focus on character detail or voices. The aim is to get a **rough** idea of where everyone needs to be.



You should consider:

- Entrances and exits
- The size and shape of your space
- Any set or furniture
- The position of the audience

## 4. Line learning tips

1. **Highlight** or underline your lines
2. Read your lines aloud
3. **Write your lines out by hand**
4. Practice with a partner
5. Make an audio recording you can listen back to
6. Learn your cues (the line before you speak)



### HOW TO LEARN LINES

#### ACT I SCENE 1

*Set in 1950's style diner, "McDenny's", in the present day England. BERYL is sitting at the back of a "u" shaped booth. She is tucking into a large burger and reading a gas bill*

*Enter LYNDA, SUSAN and RODERICK*

**LYNDA:** *(speaking to SUSAN and ROD as they make their way over to BERYL)*  
...put your back into it man, I said, use some elbow grease, don't just tickle it, I want to see my face in it... Hi Beryl...

*BERYL hides the burger under the table*

**BERYL:** Oh hi

**SUSAN:** *(sits at the table at the left side of BERYL)* He was doing his best.

## 5. Vocal skills

**Volume** – Loud/quiet speaking

**Accent** – Where you are from

**Pace** – quick/slow speaking

**Clarity** – how clear the words are



## 6. Movement skills

**Use of space** – close together, far apart

**Face the audience** – they need to see your face

**Stillness** – control your limbs

**Gestures** – use your hands



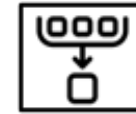
## 7. Performing skills

When you **perform** your scripted play, your teacher will be looking for:

- Line learning**
- Awareness of audience**
- Sound effects**
- Freezes**
- Narration**
- Comedy**
- Timing**
- Vocal skills**
- Movement skills**
- Interaction with others**



## 8. Feedback



You should **evaluate** the drama that you **made**. What were the strengths and weaknesses in your scripted performance?

You should also give **feedback** to others after they have performed their play. Refer to their use of performing skills e.g.

*“You knew all of your lines and said them at the right time”*

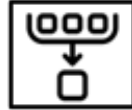
*“You made sure the audience could see the action in that scene”*

*“The sound effect of the door opening was effective”*

*“The freezes could have been clearer”*



## 9. Overview

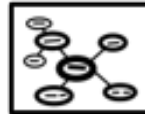


**What is devising?** Creating drama ourselves. We use a **stimulus** to start our ideas and devising techniques

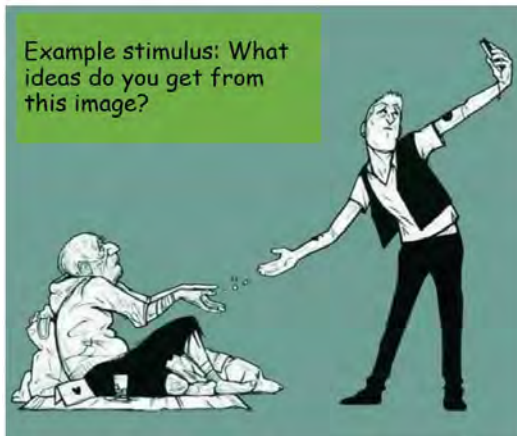
**Stimulus** - An image, quote or song that inspires us

**Devising techniques** – ways to create scenes as a group

## 10. Stimulus



This **picture** could be a stimulus for a devised play about homelessness, social media or bullying.



## 11. Drama Techniques

1

### BRAINSTORM

As a group, discuss the themes that you want to explore in the play. Brainstorm stories that involve the characters experiencing each theme.



2

### CHARACTERS

Start by creating the characters. Too many devised pieces fail because the characters have not been carefully thought out. Name each character and talk about their personality and relationships.



3

### FREEZE FRAMES



Create freeze frames that depict crucial moments in the character's life. These can then be incorporated into your play later on.

4

### MUSIC



Find a piece of music that represents your theme, either lyrically or through the dynamics or texture. Use the music to create a movement sequence that shows the mood of a character.

5

### STRUCTURE

Create a flow chart of the story and highlight the key scenes. Experimenting with the structure may help you create a more imaginative and original play.



6

### IMPROVISE

Improvise a scene in every rehearsal. Don't just talk things through. Try to improvise a scene using different styles. A scene may work better as a comedy even though it was originally a drama.



7

### MONOLOGUE



In a group, think of one word each that describes your character. Then on your own, use the list of words (in the order they were said) to write a monologue for your character.

8

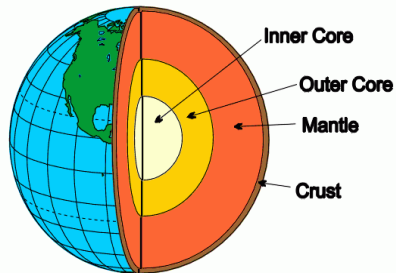
### REFLECT



At the end of a rehearsal, reflect on what you have achieved and what needs to be done next. Set aims and assign jobs for the next session. Create a rehearsal schedule and stick to it.

### 1. Earth Structure

From inside to outside, describe the concentric model of the Earth	Inner Core, Outer Core, Mantle, Crust
What state of matter is the Inner Core?	Solid
What state of matter is the Outer Core?	Liquid
What state of matter is the Mantle	Semi-molten
What state of matter is the Crust?	Solid



### 2. Igneous Rock formation

What is magma?	Liquid rock below ground
What is lava?	Liquid rock above ground
What forms when magma cools?	Crystals
If magma cools quickly, will the crystals that form be big or small?	Small
If magma cools slowly, will the crystals that form be big or small?	Big
What name is given to rocks that form from magma cooling?	Igneous
What happens to igneous rock when it is subject to high temperature and pressure?	Crystals line up and form metamorphic rock

### 3. Chemical and Physical Change

What is a physical change?	A change that affects the way particles are arranged in a substance (no new materials formed).
What is a chemical change?	A change that results in new materials being formed (atoms rearrange to form new substances).
What is a chemical property?	The way a material behaves or reacts in a chemical reaction.
What is a physical property?	A characteristic of a material that can change without a chemical reaction e.g melting
Give an example of a physical change	Melting, boiling, evaporating, condensing, freezing, subliming, depositing, dissolving, crushing, grinding
Give an example of a chemical change	Burning, combustion, oxidation, neutralisation, decomposition

### 4. Chemical Reactions



What is a reactant?	Substance(s) that reacts to form a new substance during a chemical reaction.
What is a product?	The new substance(s) formed in a chemical reaction.
What is the first stage of a chemical reaction?	Bonds between molecules break
What is the second stage of a chemical reaction?	Atoms rearrange.
What is the third stage of a chemical reaction?	New bonds form to create new substances with different properties.
Draw a diagram to represent a chemical reaction	Should show bonds breaking, atoms rearranging and new bonds forming

**Challenge!**  
Make 3D models of the structure of the Earth.

### 5. The Solar System

Mercury	My
Venus	Very
Earth	Easy
Mars	Method
Jupiter	Just
Saturn	Speeds
Uranus	Up
Neptune	Naming (planets)

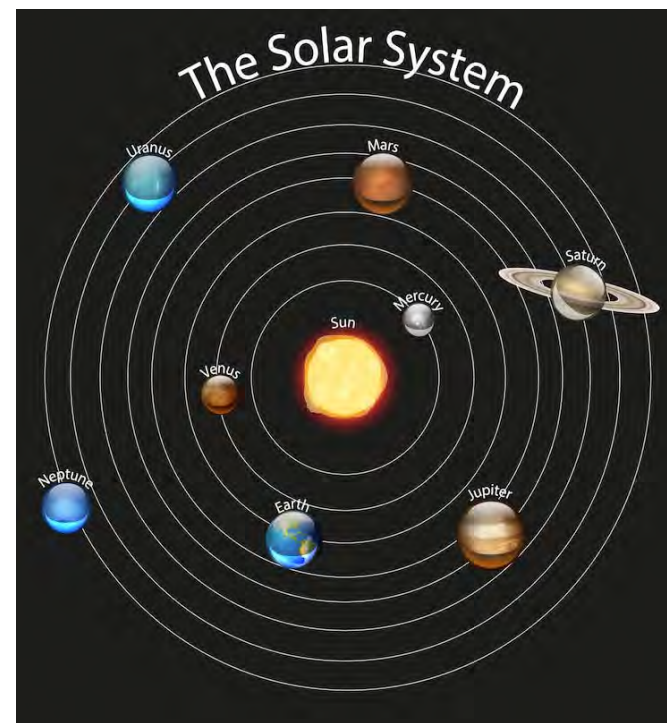
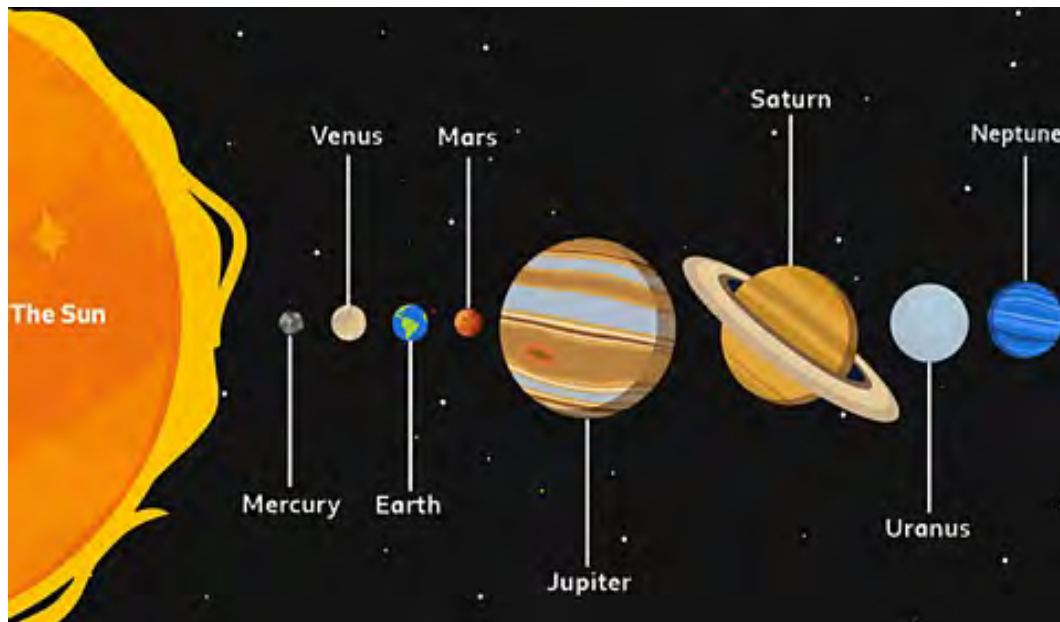
### 6. Space

Gravity	Non-contact force of attraction between masses. The larger the mass the larger the pull of gravity
Asteroids	Rock and ice in orbit around a star
Meteorites	Smaller asteroids that brake orbit and fall onto a planet. They are broken up in the atmosphere
Meteors	Larger asteroids that brake orbit and fall onto a planet. They reach the planet or moon's surface



### 7. Keywords

Comets	Rock and ice in orbit around a star with a highly elliptical orbit
Solar system	Planets, asteroids, comets and moons in orbit around a star
Galaxies	Contains many solar system
Universe	Contains many galaxies



## 8&9. Keywords

<b>Adaptations</b>	The features that plants and animals have to help them live in a particular place.
<b>Community</b>	All the plants and animals that live in a habitat.
<b>Environment</b>	The conditions around a certain organism caused by physical environmental factors.
<b>Habitat</b>	The place an organism lives in (e.g. woodland).
<b>Quadrat</b>	A square frame, thrown randomly on the ground, which is used to sample plants in an area.
<b>Food chain</b>	A way of showing what eats what in a habitat.
<b>Food web</b>	Many food chains linked together.
<b>Producer</b>	Organism, usually a plant, that makes its own food through Photosynthesis.
<b>Consumer</b>	Organism that eats producers or other consumers.
<b>Carnivore</b>	Organism that only eats other consumers (always at least a 2 <sup>nd</sup> consumer)
<b>Herbivore</b>	Organism that eats only producers (always a 1 <sup>st</sup> consumer).
<b>Omnivore</b>	Organism that eats both producers and consumers.
<b>Predator</b>	Organism that hunts and eats other animals.
<b>Prey</b>	Organism that is hunted and eaten by a predator.

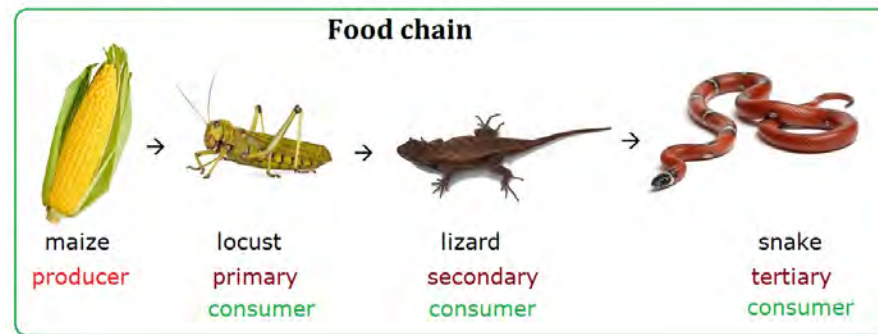


## 10. Food Chains and Webs

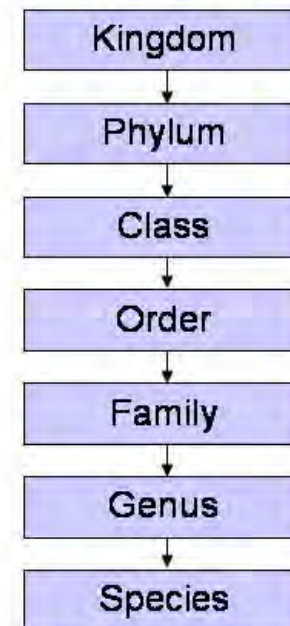
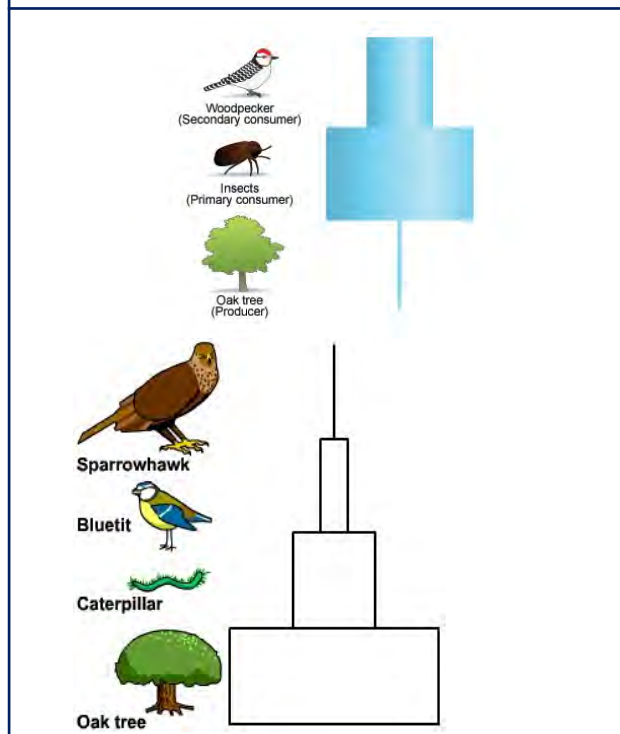


Food chains and Food Webs show who eats what in an ecosystem.

Arrows in a food chain show the flow of energy....



## 11. Classification and Biomass



## 1. Health

**Health** is a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity.

### **Physical Health Benefits:**

- improves heart function
- improves efficiency of the body systems
- reduces the risk of some illness
- able to do everyday tasks
- to avoid obesity.

Mental Health benefits:



## 2. Mental health

### **Mental Health benefits:**

- Helps reduce levels of stress
- Can result in the release of serotonin (feel-good hormone)
- Able to control emotions

### **Social benefits:**

- Opportunities to socialise/make friends
- Cooperation
- Teamwork
- Have essential human needs



## 3. Components of skill related fitness

### **Power:**

Strength x Speed

### **Coordination:**

The ability to use two or more body parts together smoothly and efficiently

### **Reaction Time:**

Time taken to start responding to a stimulus



AGILITY



SPEED



REACTION TIME



BALANCE



POWER



COORDINATION

## 4. Components of skill related fitness

### **Agility:**

The ability to change direction quickly whilst maintaining Control

### **Balance:**

The ability to hold the body stable by maintaining the centre of mass over the base of Support

### **Speed:**

The maximum rate at which an individual is able to perform a movement or cover a distance in a period of time.



## 5. Components of health-related fitness

The ability to meet the demands of the environment.

Components of health related fitness:

### **Cardiovascular/Aerobic endurance:**

The ability of the heart and lungs to supply oxygen to the working Muscles.

### **Muscular endurance:**

The ability of a muscle or group of muscles to undergo repeated contractions, Avoiding fatigue.



## 6. Components of health-related fitness

### **Muscular Strength:**

Ability to overcome resistance.

### **Flexibility:**

The range of movement possible at a joint.

### **Body Composition:**

The percentages of fat, bone, water and muscle in the body.



## 7. Barriers to participation 1

As we have become more technologically advanced, we have more reasons to be inactive.

Barriers include:

### **Cost:**

The cost of participating in physical activity and sport is a major barrier. Particularly to those of lower incomes.

### **Access:**

Sometimes it can be difficult to access a particular sport or physical activity due to geographical reasons for example living in a rural area with fewer clubs and venues. For individuals with limited transportation, resources and limited varieties of activities available this could prevent them from being physically active.



## 8. Barriers to participation 2

### **Time:**

One of the biggest reasons for individuals not being active is 'not having enough time'. This could be due to other commitments such as family, school and work.

### **Personal:**

Individuals can have several personal reasons why they chose not to take part in physical activity and sport. Including:

- Poor body image
- Lack of self-confidence
- Parental or guardian influence

### **Culture:**

Some religions and cultures have laws and expectations which make it more difficult to participate in sport and physical activity.



## 9. Methods of training

### **Continuous training**

'Steady- state low- moderate intensity'

A minimum of 20 minutes sub-maximal work.

Target heart rate range between 60% - 80% maximum heart rate

Disadvantage - some participants find longer sessions to be boring.

### **Fartlek training**

'Continuous steady state aerobic exercise with random higher intensity periods'

Most appropriate for games players as it simulates match play. Aerobic and anaerobic work can be done in the quantities that suit the performer.

Disadvantage - some urban areas have little variety of incline and Terrain.



## 10. Methods of training

### **Interval Training**

Periods of exercise followed by periods of rest used by both aerobic and anaerobic performers.

A wide variety of fitness types can be developed.

Structured in reps and sets.

Disadvantage - maximal nature of intervals can be too challenging for some participants.

### **Circuit Training**

A series of exercise stations arranged in a specific order to usually alternate muscle groups. An interval form of training. Stations are set out that train one or more components of fitness.



## 11. Methods of training

### **Weight Training**

A series of exercises organised into repetitions with an intensity and recovery time specific to the individual.

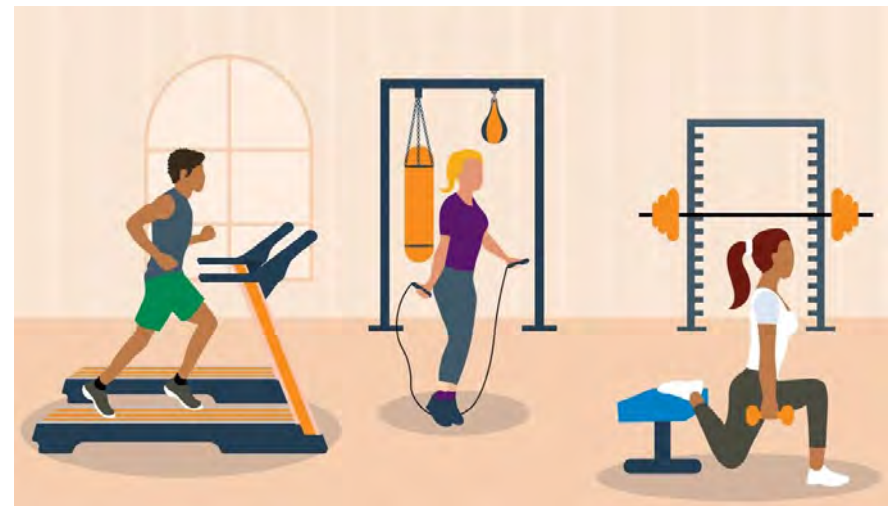
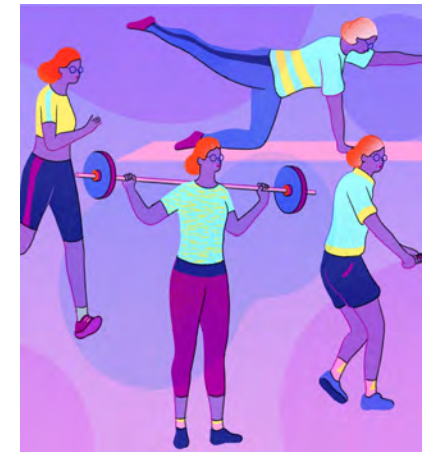
Huge range of possible lifts combining machines, free weights and body weight exercises.

Disadvantage - many performers use poor technique while striving for an even heavier weight.



## Challenge!

Create a 6-week training programme to improve on a component of fitness. Include diagrams and picture examples.

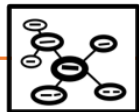


## 1. Marriage

Marriage is an important rite of passage in Christianity, For Christians, marriage is traditionally accepted as being between a man and women, and is seen as the correct context in which to have a sexual relationship and children.

The Christian purposes of marriage:

1. To provide companionship, friendship and support between a husband and wife
2. To enjoy a sexual relationship within marriage and to have children and raise a family
3. To make a life-long commitment to create a stable environment to raise a family. Christian beliefs about marriage: Most Christians believe marriage is a sacrament – a ceremony where God is involved (this shows that marriage is sacred and binding) o Marriage is believed to be a gift from God o Provides security and a stable environment for children o Although it is important, God does not want everyone to be married. Jesus himself wasn't married and some priests will not marry as they have a vocation from God.



## 2. Types of families

Family life has changed over the past 50 years as society has modernised.

Types of families:

1. Nuclear family- two parents (man and women) and their children living together
2. Blended family – Stepfamilies that have joined together through remarriage
3. Extended family – parents, children, grandparents, aunts, uncles and cousins.
4. Single parent family – One parent and children
5. Family with same sex parents – Two same-sex parents and children.



## 3. Marriage



- Christianity teaches that the Church should be the foundation of family life.
- As part of the wider Christian family, the local parish will offer support to families, recognising the needs that families have in life.
- Most Christians believe marriage is important, but there are different views about divorce and remarriage within the religion.
- Some Christians believe the *Bible* teaches God made male and female to complete each other and *procreate*.
- The Bible teaches that all humans are equal, but views differ on the roles of men and women in Christian worship.

## 4. Key Words

**Monogamy:** marriage is only to one person at a time.

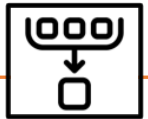
**Cohabitation:** Living together in a sexual relationship without being married.

**Sacraments** – an outward ceremony through which God's grace is given.

**Diocese** – a Church area under direction of the visit

**Gender prejudice** - believing one sex is superior to another.

**Gender discrimination**- putting prejudice into action and treating one sex differently because of their sex.



## 5. Key Quotes

'A man will leave his father and mother and be united to his wife, and the two will become one flesh' (Mark 10:6-9)

'You shall not commit adultery' (Exodus 20:14)

'Do you not know that your bodies are temples of the Holy Spirit' (1 Corinthians 6:18-20)

'Children are a heritage from the Lord, offspring are a reward from him' (Psalms 127:3)

'Therefore what God has joined together, let no one separate.' (Mark 10:9)

**Unity:** "Therefore a man shall leave his father and his mother and hold fast to his wife, and the two shall become one flesh," — **Genesis 2:24**

**Divine Union:** "What therefore God has joined together, let not man separate." — **Mark 10:9.**

**Sacrificial Love:** "Husbands, love your wives, just as Christ also loved the church and gave Himself for her."



## 6. Purpose of Marriage

Christians believe that family was God's intention for humans when he created them. Christians believe the purpose for a family is: Provide the right place for a marriage couple to have children, to teach morals, to raise children into the Christian faith.

For most Christians, the family is an important institution and can include traditional *nuclear families*, stepfamilies, extended families and same-sex parents.

Christian teachings refer to God as the Father, creator, and sustainer of all living things. Many Christians see this as evidence that family relationships reflect God's parental care for all humanity and the family unit is important for society, as well as the Christian faith.

Christians can look to the Bible for guidance on relationships with their family members. For example, the *Ten Commandments* instructs Christians to appreciate and respect their parents:



## 7. Divorce

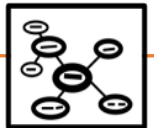
Divorce is the legal termination of a marriage, and different Christians hold different views about it. Attitudes to divorce have significantly changed in recent years. What Catholic Christians believe: Divorce is not recognised because marriage is for life. Jesus said divorce is wrong. Marriage is a sacrament.

What liberal Protestants believe: Divorce is not be encouraged but may sometimes be necessary. Divorce must be acceptable as the UK law allows it.

Humanists and Atheist views: Humanists believes that the breakdown of a marriage can cause problems within the family.

Christian views on divorce generally emphasize that marriage is a lifelong covenant, with many traditions discouraging or prohibiting it. While viewed as a sin or last resort by some, others allow divorce in cases of sexual immorality or abandonment.

Perspectives vary from strict prohibition (Roman Catholic) to allowance under specific circumstances (Protestant)



## 8. Gender discrimination

Men and women were both made in the image of God.

Some parts of the Bible suggest that God made women as a 'helpmate' for man. A literal interpretation could be men are the head of the household with women looking after the home and children.

Catholics accept men and women were created in the image of God but given different roles. Gender discrimination in the Church: Catholic Christians only accept men to hold the position of bishops, priests or deacon and pope. They believe the roles represent Jesus. Who as male. Promoting gender equality: Many Christian organisations promote gender equality, including gender equality, including Christian Aid and Tearfund, which believe that gender inequality goes against human rights.



## 9. Rites of passage

Rites of passage celebrate key points in a person's life. They include occasions such as birth and marriage. The Church recognises the importance of these key events as a family. Relatives and friends may attend a baptism or marriage ceremonies as well as members of the wider Church community.

## 10/11. Roles of families

Roles within the family are important to Christians. Each member within the family is seen to have a special role that they believe God expects them to fulfil.

Christian parents have a responsibility to raise their children as Christians – getting them baptised or christened and introducing them to the Christian community.

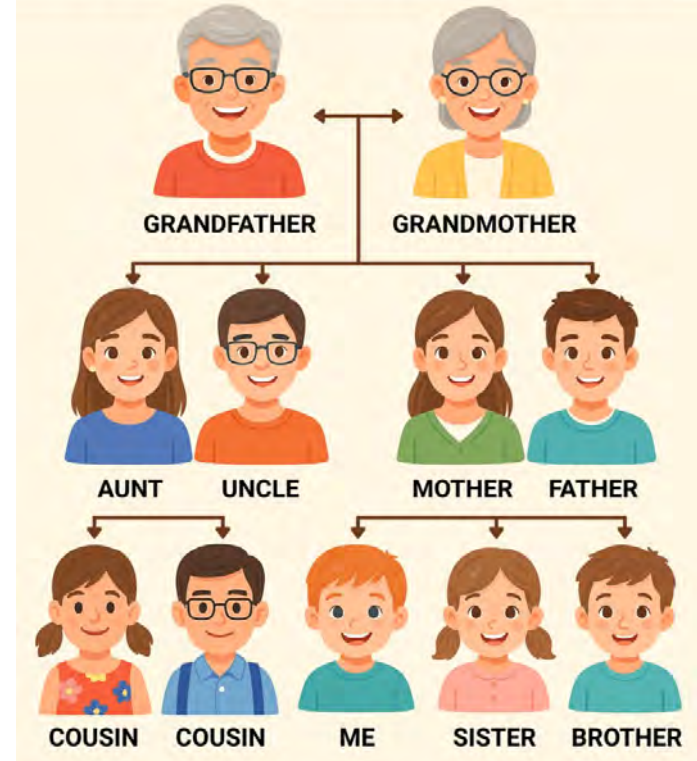
Children: - The Bible teaches that children should honour; obey and respect their parents - Children are expected to care for their parents in old age.



## Challenge!

Why are rites of passage important within Christianity?

## FAMILY MEMBERS

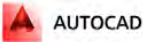


## 1. Keywords spelling/definition test.

<b>C.A.D</b>	C.A.D stands for <b>Computer Aided Design</b> , this means that a design is drawn in either 2D or 3D using a computer program such as 2D design, AutoCAD, Onshape or any other software that allows you to create a drawing using a computer.
<b>C.A.M</b>	C.A.M stands for <b>Computer Aided Manufacture</b> . Computer aided manufacture (CAM) involves using computers to control machines to produce 3D parts or products. By using CAM, designs can be created using CAM machines such as laser cutters, 3D printers and milling machines.
<b>C.N.C</b>	<b>Computer Numerical Control</b> (CNC) machining is a manufacturing process in which pre-programmed computer software tells computer operated machinery what to do and what to cut or engrave. This means that the computer does all the work rather than a person. This can save time and money but takes skilled users to write the computer program. The process can be used to control a range of complex machinery, from grinders and lathes to mills and CNC routers.



## 2. Advantages and disadvantages of C.A.D



Advantages of CAD	Disadvantages of CAD
Ideas can be drawn and developed quickly	Expensive to set up
Designs can be viewed from all angles and with a range of materials	Needs a skilled workforce
Some testing and consumer feedback can be done before costly production takes place	Difficult to keep up with constantly changing technology
It becomes easier to design and test a range of ideas	Computers can fail



## 3. Advantages and disadvantages of C.A.M



Advantages of CAM	Disadvantages of CAM
Fast and accurate production	Expensive to set up
Machines can run constantly on repetitive tasks	Needs a skilled workforce of engineers
Good for producing on a mass/flow production line	Downtime required for maintenance
Less material wastage	Computers and machines can fail
Machines can run 24/7	Errors can happen if they are not monitored.



#### 4. The laser Cutter

##### Laser Cutter



A laser cutter is a high-precision CAM machine that cuts a wide variety of materials using an extremely powerful laser beam directed onto the material using angled mirrors. The power setting can be varied - if the power is reduced or the speed is too high, then the laser beam will not cut completely through the material and will engrave it instead.

#### 6. The CNC router

##### CNC Router



A CNC router is a type of computer-controlled machine created for milling, drilling and cutting materials. The main functions of a CNC router are to cut, engrave and carve objects out of a work piece, such as Wood, plastic or metal.



#### 5. The 3D Printer

##### 3D Printer



3D printing, also known as additive manufacturing, is a method of creating a three-dimensional object which is made by adding layer-up on-layer of a specific material such as plastic. (PLA) using a computer created design. (CAD)

#### 7. The CNC Plasma Cutter

##### Plasma Cutter



A CNC Plasma Cutting Machine uses electrical current to turn air into plasma, which is the fourth state of matter coming in after solid, liquid and gas. This cutting format uses a plasma stream to transfer energy to conductive work material. This stream is usually formed by forcing gas such as nitrogen, oxygen, argon or air, through a nozzle on the cutting head.



#### 8. The 3D Printer

##### What is G-code?

G-code is a programming language for CNC (Computer Numerical Control) machines. G-code stands for "Geometric Code".

We use this language to tell a machine what to do or how to do something.

The G-code commands instruct the machine where to move, how fast to move and what path to follow.

In case of a machine tool such as lathe or mill, the cutting tool is driven by these commands to follow a specific toolpath, cutting away material in order to get the desired shape.

##### What are xy and z axes?

Definition of x-y-z matrix The x-axis and y-axis represent the first two dimensions; the z-axis, the third dimension. In a graphic image, the x and y denote width and height; the z denotes depth.

### 1. Keywords spelling/definition test.

Branding	The visual identity of a business, including logos, colours, and fonts.
Logo	The visual identity of a business, including logos, colours, and fonts.
Brand identity	How a brand looks, feels, and is recognised by customers.
Target Audience	The group of people a product or shop is designed for.
Vision Board	A page showing colours, images, fonts, and ideas for a brand.
Typeface / Font	The style of text used in a design.
Shop front	The outside of a shop that customers see first.
Net	A 2D shape that folds into a 3D model.



### 2. Branding and Brand Identity

**Branding** is how a business presents itself visually. It helps customers recognise and understand a shop. Branding includes:

- Logo
- Colours
- Fonts
- Images and patterns



These elements work together to create a **brand identity**.

**Brand identity** is how a brand looks and feels. A strong brand identity helps a shop look professional, stand out, and attract the correct target audience.

Designers often begin the branding process by creating a **vision board** (or mood board).

A **vision board** is a collection of colours, images, fonts, and ideas that show the planned style of a brand. Vision boards help designers explore ideas, keep designs consistent, and guide later work such as logos and shop fronts.

### 3. Logos and their purpose

A **logo** is a graphic mark, symbol, or word used to represent a brand. Logos help customers identify a shop or product quickly, even from a distance.

Successful logos usually:

- Are simple and clear
- Use no more than two or three colours
- Work at different sizes
- Reflect the brand's personality

There are different types of logos:

- **Wordmarks** – the brand name written in a distinctive font
- **Symbol logos** – an image or icon
- **Combination logos** – text and image together



**Sainsbury's**

Many strong logos can still be recognised even if the brand name is removed.

## 4. Fonts and Typography in Branding

A **font** (or typeface) is the style of lettering used in design. Fonts help communicate mood, personality, and meaning.

Common font types include:

- **Sans-serif** – modern, clean, easy to read
- **Serif** – traditional, formal, trustworthy
- **Script / cursive** – elegant, friendly, decorative
- **Display** – bold, creative, eye-catching

Sans-serif

Serif

*Script / cursive*

**Display / decorative**



Designers choose fonts carefully because:

- Fonts affect readability
- Fonts communicate personality
- Fonts help brands feel consistent

Using too many fonts can make a design look confusing or unprofessional.

## 5. Colour Theory in Design

Colour plays an important role in branding because it communicates emotions quickly.

Colours can suggest:

- Energy, fun, and excitement
- Calmness and friendliness
- Luxury and seriousness
- Strength and confidence

Designers often choose:

- One **main colour**
- One or two **secondary colours**
- Optional accent colours

Using colours consistently across logos, shop fronts, and displays helps create a strong and recognisable brand identity.



## 6. Target Audience

A **target audience** is the specific group of people a brand is designed for. Designers do not design for everyone.



**Example:**

**A small toy shop is designed for children and families.** The branding uses:

- Bright colours to feel fun and exciting
- Rounded fonts to look friendly
- Simple images that are easy to recognise

If the same shop were designed for **adults**, the branding might use:

- Softer or darker colours
- Simpler fonts
- A more calm and professional style

This shows how branding choices change depending on the target audience.



## 7. Nets and 3D Design

A **net** is a two-dimensional (2D) shape that folds into a three-dimensional (3D) object.

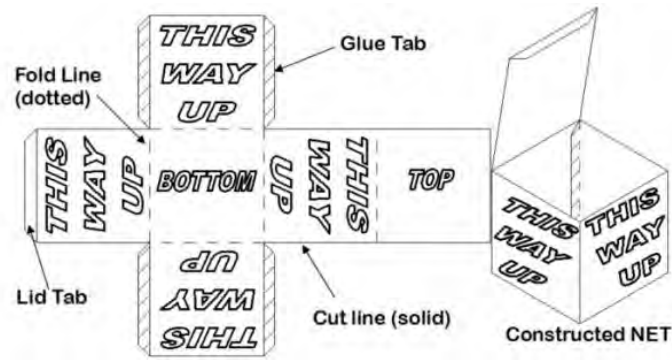
Designers use nets to:

- Plan 3D designs accurately
- Ensure shapes fit together
- Apply designs in the correct orientation

Nets include:

- **Cut lines** (solid lines)
- **Fold lines** (dashed lines)
- **Tabs** for joining pieces together

Accurate nets help designers create strong, neat, and professional-looking models.



We will be developing a net for a shop front. Can you think of what features you might need to include?



## 8. Designing a Shop Front

During this project, you will design a shop front that represents your brand clearly and effectively.

A shop front is the outside of a shop that customers see first. It plays an important role in creating a strong first impression and communicating brand identity.

When designing your shop front, you will consider:

- Logo placement and size
- Colour choices
- Font style
- Overall layout and balance

Your shop front should clearly show:

- What type of shop it is
- Who the target audience is
- The personality of the brand

All design decisions should link back to your brand identity and remain consistent with earlier planning, such as your vision board.

### Challenge question:

How might changing just one element of your shop front (such as colour or font) completely change how your brand is perceived?



## 1. Key vocabulary and definitions



**Tenon saw:** A Tenon saw has a relatively short blade with a reinforced back providing stability. It has hard point teeth and creates a fine finish so is ideal for carpentry as it makes a straight, precise cut

**Scroll saw:** A scroll saw is a small electric saw used to cut intricate curves in wood, metal, or other materials.

**Try square:** A try square or try-square is a woodworking tool used for marking and checking 90° angles on pieces of wood.

**Dowel:** A dowel is a cylindrical shape made of wood, plastic, or metal. In its original manufactured form, a dowel is long and called a dowel rod

## 2. Product analysis

When creating ideas for a new product a designer will look at similar products that are already on the market. This allows them to identify 'gaps in the market' and features that work/don't work.

A: Aesthetics – This is where you would look closely at the way the product looks, thinking about areas you consider successful and areas you would change.

C: Cost – How much is the product being sold for? Is it a suitable price?

C: Client – All products are created with a specific user in mind – has the designer been successful?

E: Environment – Has the product been made with the environment in mind? Can it be repaired? Recycled? Reused? Etc.

S: Size - How big in the product? Is this size suitable?

S: Safety – Is the product safe to use?

F: Function – What has the product been designed to do? Does it do this successfully?

M: Materials – What has the product been made from? Is it a suitable material? Are there alternatives that would be better?



## 3. Health and safety

Everybody is responsible for health and safety.

It is your job to make sure you are following the rules and working as safely as you can. This protects both yourself and others around you.

The following rules must be followed in the workshop:

1. Always listen carefully to instructions
2. Walk calmly around the room
3. Do not shout or raise your voice, a quiet room is a safe room
4. Do not touch any equipment you have not been given permission to use
5. Keep your work area tidy
6. Keep bags on the shelf
7. Hang coats and blazers on pegs
8. Pile stools up out of the way
9. Always wear long hair up when completing practical work
10. Always wear the correct PPE – apron, safety glasses

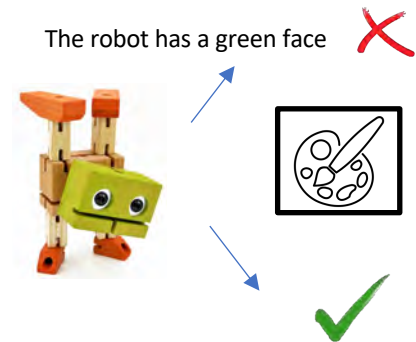


## 4. Annotation

definition: a short explanation or note added to a text or image.

When we design a product, the drawings alone cannot give enough information for others to understand our ideas. It is essential we explain them through annotation.

The purpose of annotation is not to put into words what the viewer can see, but a method used to give more information about the idea.



The robot has a green face because it eats the leaves of the matcha plant. The strong green dye contained within makes his face turn green.

## 5. Timber theory



Softwood is a term used to describe timber sourced from coniferous or needle-leaved trees.

Hardwood is sourced from deciduous and evergreen broad-leaved trees. As a general rule, hardwoods tend to be denser than softwoods, making them sturdier and more weather resistant.

### CEDAR

The most common type of cedar is western red. As this name implies, it is pinky, red in colour. It is relatively soft but straight grained and is mostly used for outdoors for furniture, deck handrails, wall cladding and window frames because it resists rotting in moist environments. Relatively inexpensive.

### ASH

Ash is a white-to-pale brown-coloured wood with a straight, attractive grain. Easy to work, it is commonly used in furniture production where it is a good substitute for white oak.

### OAK

Used for centuries throughout Europe, particularly in England, oak is still one of the most sought-after woods for furniture. Available in red and white, the latter is preferred because it has a more attractive figure than American red oak and is resistant to moisture, which allows it to be used for outdoor furniture. English oak is regarded as superior to American white oak.

## 6. Type of motion

Linear motion moves something in a straight line, eg a train moving down a track:



Rotary motion is where something moves around an axis or pivot point, e.g. a wheel:



Reciprocating motion has a repeated up and down motion or back-and-forth motion, e.g. a piston or pump:



Oscillating motion has a curved backwards and forwards movement that swings on an axis or pivot point, e.g. a swing or a clock pendulum:



## 7. Pine

Advantages of Pine	Disadvantages of Pine
Relatively inexpensive compared to other types of wood	Common Lumber often has Defects
Does Not Require Re-enforcement	Can contain knots and other imperfections that may affect its appearance and structural integrity
Lightweight and easy to work with	Susceptible to Scratches and Dents
Resists Shrinking & Swelling	Can be easily damaged
Good Elasticity	Not as durable as hardwoods
Attractive Grain Options	Prone to warping and twisting if not properly dried and cured
Abundant and readily available	Susceptible to insect damage and rot if not treated or maintained properly
Takes paint and stain well	May yellow over time if exposed to sunlight.
Has a distinctive grain pattern	



## 8. Analysis and evaluation of our own work

It is important to get feedback from others as well as analysing our own work. This enables us to identify areas we could improve as well as areas which are successful.

It is useful to get feedback from at least three people. It is also important for this feedback to be useful and offer ideas on ways to develop an idea further.

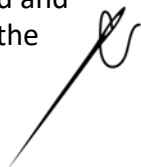
Using feedback from others and your own analysis you can then evaluate your ideas to make a plan on ways you could improve it further.



## 1. Equipment you will use

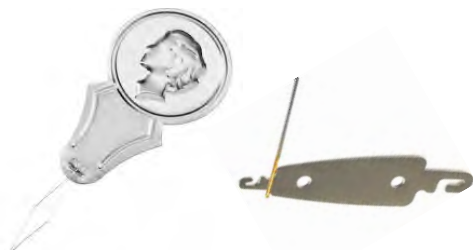
### **Needle:**

A tool used for hand-sewing, it is a long slender tool with a pointed tip at one end and a hole (or eye) to hold the sewing thread.



### **Needle threader:**

Used to help you to thread the needle. There are different types, but they all work the same way. The threader is pushed through the eye of the needle first then the thread is attached to a hook or wire loop. These are then pulled back through the eye of the needle pulling the thread with it.



## 2. Materials and techniques

### **Thread:**

A fine length of twisted fibres used to join fabric together. It comes in different colours. Needle threaders can be used to pass the thread through the eye of the needle.

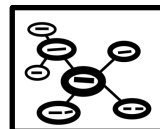
### **Embroidery:**

Embroidery is the craft of decorating fabric or other materials using a needle to apply thread or yarn.



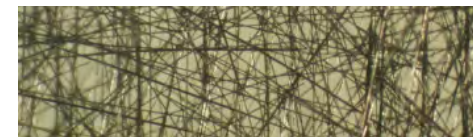
### **Applique:**

Appliqué is a decorative technique in which pieces of fabric in different shapes and patterns are sewn onto a larger piece to form a picture or pattern.



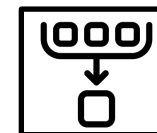
## 3. Fun Felt Facts!

Felt is the oldest known fabric and is known as **non-woven**. **Non-woven** fabrics are materials made from fibres that are bonded together without weaving or knitting, instead they are stuck together using heat, chemicals or mechanical methods. The fibres in non-woven materials run in all directions.



Most types of fleece, such as those taken from the alpaca or the Merino sheep, can be put through the wet felting process. You may also use mohair (goat), angora (rabbit), or hair from rodents such as beavers and muskrats.

Felt comes in a wide range of colours. It is easy to cut with scissors and does not fray. Modern felts are often synthetic made using petroleum-based acrylic or acrylonitrile or wood pulp-based rayon.



#### 4. Woven fabrics



Woven fabrics are made up of Warp and weft threads.

**Warp threads**, also known as surface threads or ends, are stretched vertically on the loom and are therefore made of stronger, coarser fibres than the weft threads.

The term comes from the Old Norse word “varp”, meaning “the cast of a net”.

**Weft**, are the threads woven horizontally. The threads go over and under the warp. They usually run from selvage to selvage.

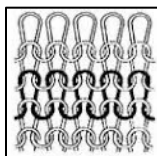
**Selvage**, is a "self-finished" edge of a piece of fabric which keeps it from unravelling and fraying.



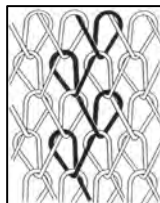
#### 5. Knitted Fabrics

**Knitted fabrics** are made by looping yarn together, either by hand or on a machine, to create a stretchy, flexible material. There are two main types:

**Weft knitting** is where yarn is looped horizontally across the fabric. It's stretchy and can unravel easily (used in jumpers, T-shirts).



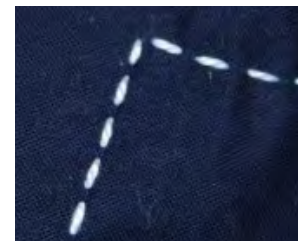
**Warp knitting** is where yarn is looped vertically, making the fabric stronger and less stretchy (used in netting, swimwear).



Knitted fabrics are popular for clothing because they are comfortable, soft and allow for movement.



#### 6. The running stitch



**The Running Stitch**, also referred to as Straight Stitch, is one of the basic hand sewing and embroidery techniques on which most other forms of stitching and embroidery are based.

The length of each stitch may vary depending on the purpose it is used for, but generally the thread is more visible on the right side (Front) of the fabric compared to the wrong side (Back).

It is one of the most popular stitches used for a wide range of purposes starting from garment making to embroidering various articles.

It is also used for appliqué making.

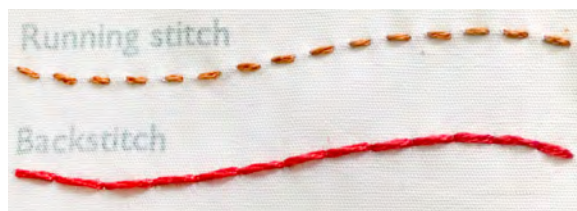


## 7. The back stitch

**Back Stitch** is made by taking the thread backward, rather than the conventional forward motion, and thus the name.

It can take curves well.

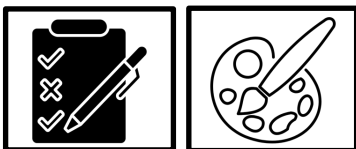
There are no spaces between each stitch, giving it a continuous appearance.



Like the **Running Stitch**, the Back Stitch also lays a foundation for many variations over it.

It is much stronger than the regular Running Stitch, though it uses more thread.

The Back Stitch looks beautiful when it uses small stitches and maintains consistency in the lengths.



## 8. The blanket stitch

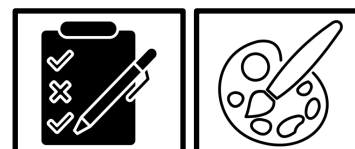
It is called Blanket Stitch, as traditionally, it is used to stitch the edges of blankets. It not only gives the blanket edges a nice look but also secures them.



Blanket Stitch can be sewn from left to right or right to left.

Tips for working the Blanket Stitch on corners. Sharp corners can be tricky work the Blanket Stitch till you approach the corner. For a sharp corner, make one of the stitches to pass through the corner points.

Then, turn and work the rest of the way normally. If your corner seems to slip off (which can happen in big Blanket Stitches), just anchor down the corner with a small stitch.



### 1. Key Words



**Eatwell Guide** – the guide which helps us eat the right sort of foods in the correct quantities.

**Consistency** – how thick or runny a sauce is in cooking (add liquid to make it runnier, boil longer or add something like corn-flour to thicken)

### 2. Knife grips



Bridge hold



Claw grip

Make sure you use the correct coloured chopping board. Hold the ingredient flat against the board so it does not wobble. Cut with either the claw or bridge grip carefully. Push slightly forward and down with the knife.



### 3. Parts of a cooker

Hob →  
Grill & Top Oven →  
Main Oven →



### 4. 4 C's for Food Hygiene



**Avoiding food Poisoning** - it is important to follow the 4C's of food hygiene.

Raw meat is a **high-risk food** – this means it is more likely to give you food poisoning. This is because all living things contain bacteria that can be harmful in large numbers

**Clean:** Wash your hands before cooking, make sure worktops and equipment are clean. **Cook:** Cook food properly to kill germs. **Chill:** Some foods (like meat, fish and dairy) need to be kept in the fridge to slow the growth of bacteria. **Cross-contamination:** Keep raw foods away from cooked foods otherwise bacteria will spread. Use separate chopping boards (**RED** for raw meat, **WHITE** for everything else) and equipment and wash them well after use.

### 5. The Rubbing-In Method

We used this method for the topping on our Fruit Crumble AND for making Scones. We will also use it in Y8 to make pastry.



Cover butter / margarine in flour - rub it between fingers and thumbs until it's 'breadcrumb' sized pieces.



### 6. The Eatwell Guide

The Eatwell Guide was produced by scientists for the UK government to help explain to the public what a healthy diet should be.

**Fruit & Vegetables:** should make up just over a third of the food we eat each day. Aim for 5 portions & a wide variety. Choose from fresh, frozen, tinned, dried or juiced. Fruit juice and smoothies should be limited to 150ml a day. Good source of vitamins, minerals and fibre.

**Starchy Carbohydrates:** should make up a third of the food we eat. Choose higher fibre or wholegrain varieties, such as wholewheat pasta & bread, brown rice, or simply leave the skins on potatoes. Good source of energy and the main source of a range of nutrients in our diet.

**Protein:** Pulses, such as beans, peas and lentils, are good alternatives to meat because they're low in fat and they're a good source of fibre and protein, too. Choose lean cuts of meat and eat less red and processed meat (bacon, ham and sausages). Aim for at least 2 portions of fish every week, 1 of which should be oily (salmon, sardines or mackerel).

**Dairy & alternatives:** Good sources of protein, vitamins & calcium, for bones. Choose lower-fat and lower-sugar where possible. **Fats:** High in energy and should be eaten in small amounts, unsaturated are healthier.



## 7. Healthy Eating

Eatwell Guide. List below everything you eat in 24 hours then added it into the correct section of the Eatwell Guide below.

<b>BREAKFAST</b>
Food & Drinks:
<b>LUNCH:</b>
Food & Drinks:
<b>AFTER SCHOOL SNACKS:</b>
Food & Drinks:
<b>EVENING MEAL:</b>
Food & Drinks:



For more information on the Eatwell Guide search:  
[Eat well \(11-14 Years\) - Food A Fact Of Life](#)

## 8. Utensils and Equipment



Sieve – to sieve flour



Saucepan – to cook food in on the hob



weighing scales – to measure weight in grams



palette knife – to lift pastry off the worktop



baking tray – to place food on to cook in the oven



Pastry Brush – to glaze food with beaten egg

### 1) Key Concept: Cause and Consequence

**Cause:** A reason for something happening.

**Consequence:** A result or effect of something.

- **Trigger:** short term causes that immediately spark an event.
- **Trend:** medium/long term causes that *drift* towards an event.
- **Condition:** the environment in which certain things can happen



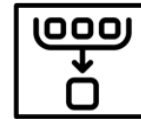
### 2) What was the 'Holy Land'?

Jerusalem was an important land for three important religions:

**Islam** believed that the founder of Islam, the Prophet Muhammad, ascended to the Seventh Heaven in Jerusalem.

**Christianity** believed that it was the place where Jesus was crucified and went to heaven.

Judaism believed that **King David** built an important temple in Jerusalem.

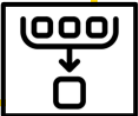


### 3) What changed in the Holy Land?

In 1076, a tribe called the **Turks** took over Jerusalem. They were **Muslims** and stopped other religions from visiting Jerusalem.

In 1095, **Pope Urban II** urged *all* Christians to fight against the Muslim Turks in Jerusalem. He promised that anyone who died fighting would go to heaven.

Thousands of Christians decided to travel from Europe to fight. These wars were called **Crusades**.



### 4) What were the *consequences*?

**Knowledge:** Europeans rediscovered knowledge from the Ancient Greeks and Romans.

**New Products:** Crusaders brought back products from the Holy land. Cotton, silk and slippers changed how people dressed.

**Technology:** Europeans discovered new technology such as mirrors and magnifying glasses.

**Warfare:** Europeans copied Muslim castle designs and weapons such as catapults.



### 5) Key Terms

**Christianity:** The belief that Jesus Christ is the son of God. Their holy book is the Bible.

**Chivalry:** The way a knight was supposed to behave. They were expected to be strong, brave and skilled at fighting.

**Crusade:** A 'holy war' (war of the cross).

**Holy Land:** The city of Jerusalem and the area around it.

**Infidel:** Someone who is non-Christian.

**Islam:** The beliefs in the Prophet Muhammad. Their holy book is the Koran.

**Judaism:** The belief in one God. Their holy book is the Tenakh.

**Motive:** A reason for doing something.



### 7) Key Concept: Cause and Consequence

- **Cause:** A reason for something happening.
- **Consequence:** A result or effect of something.
- **Trigger:** short term causes that immediately spark an event.
- **Trend:** medium/long term causes that *drift* towards an event.
- **Condition:** the environment in which certain things can happen



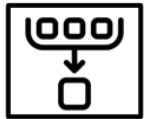
### 8) What was the *impact* of the Black Death?

The Black Death killed 1/3 of the population.

This meant that the remaining peasants had to work *harder* on their farms to make food.

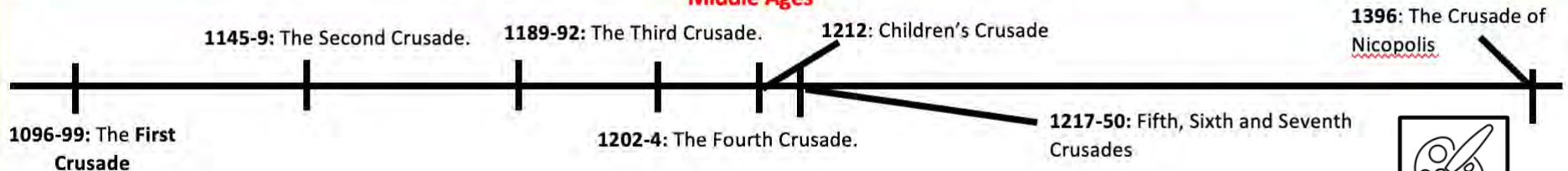
The peasants were promised better wages, but they didn't receive a pay rise for 40 years!

As a result, peasants began to move from village to village looking for better wages...



### 6) Crusades timeline

Middle Ages



### 9) How did the government react?



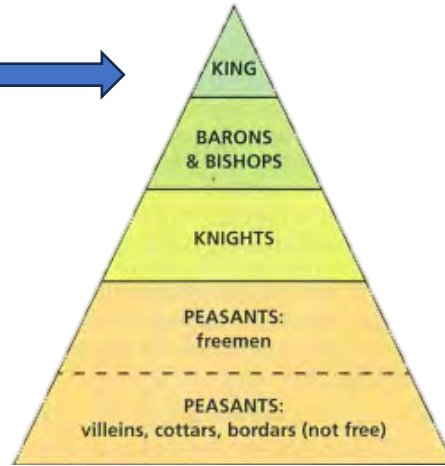
Local **barons** were worried peasants were becoming *too powerful*, and the *feudal system* would break down.

King Edward III passed the **Statute of Labourers** which stopped peasants asking for more money.

Later, in 1377, Richard II introduced a **poll tax** to pay for his **Hundred Years War** with France. Every person had to pay *the same* amount.



### The Feudal System



### 10) How did the government react?

- Many **priests** started to say that peasants should be treated better.
- **John Ball** was arrested for saying that God created everyone equally and there should be no such thing as rich and poor.
- The Roman Catholic church was very powerful, and many peasants believed what the Church told them.
- This meant that peasants felt they were treated unfairly by **barons** and landowners.

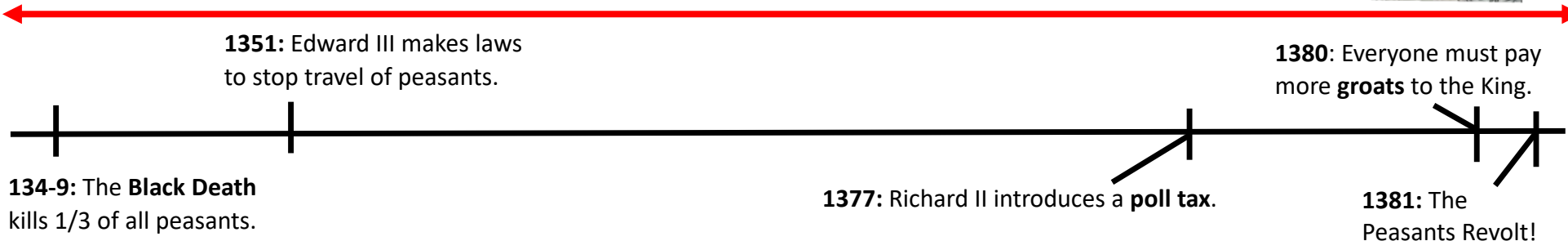


### 11) Key Terms

- Baron:** A rich landowner.
- Feudal System:** A system where people promise money or loyalty in return for land.
- Groats:** A type of grain like wheat or oats.
- Peasant:** A poor farmer who does *not* own land.
- Poll Tax:** A tax where everyone must pay the same.
- Revolt:** Taking violent action against a leader or ruler.



## The Middle Ages



**134-9:** The **Black Death** kills 1/3 of all peasants.

**1351:** Edward III makes laws to stop travel of peasants.

**1377:** Richard II introduces a **poll tax**.

**1380:** Everyone must pay more **groats** to the King.

**1381:** The **Peasants Revolt!**

### 1. Qu'est-ce qu'il y a ... ?

What is there ...?



<b><u>Il y a ...</u></b>	<b>= there is/are</b>
un centre de loisirs	= a leisure centre
un centre commercial	= a shopping centre
un château	= a castle
un marché	= a market
un musée	= a museum
une mosquée	= a mosque
une patinoire	= a skate rink
une piscine	= a swimming pool
des magasins	= (some) shops

<b><u>Il n'y a pas de ...</u></b>	<b>= there is no/not</b>
Il n'y a pas de café	= there is no café
Il n'y a pas d'église	= there is no church

<b><u>Le prix</u></b>	<b>= the price</b>
un euro	= 1 euro
trois euros cinquante	= 3 euros 50
un adulte	= an adult
un enfant	= a child

### 2. Où vas-tu le weekend? -

Where are you going this weekend / where do you go at the weekend?

<b><u>Je vais...</u></b>	<b>= I am going/ I go</b>
au bowling	= to the bowling alley
au cinéma/parc	= to the cinema/park
au stade	= to the stadium
à la piscine	= to the swimming pool
à la plage	= to the beach
à l'église	= to the church
aux magasins	= to the shops

#### **Quand? = when?**

le matin	= in the morning
l'après-midi	= in the morning
le soir	= in the evening



### 3. Tu veux aller au café ?

Do you want to go to the café ?



<b><u>Tu veux venir ?</u></b>	<b>= do you want to come?</b>
aujourd'hui	= today
ce matin	= this morning
cet après-midi	= this afternoon
ce soir / weekend	= this weekend

#### **Rendez-vous à quelle heure?**

**= What time will we meet?**

Rendez-vous à ...	= Let's meet at ..
Merci	= Thank you
Bonne idée!	= Good idea!
Oui je veux bien	= Yes, I want to
D'accord	= Ok
Pourquoi pas?	= Why not?
Non, merci	= No thank you
Désolé(e)!	= Sorry!
Je ne veux pas	= I don't want to
Tu rigoles!	= You're joking!

### 4. Vous désirez? - What would you like?

Pardon, madame/monsieur	= Excuse me madam/monsieur
Je voudrais...	= I would like...
Pour moi...	= For me...
Et pour vous?	= and for you?
C'est combien, s'il vous plaît	= How much is it, please?
Ça fait ...	= it comes to ...
Voilà	= Here you are

un Orangina	= an Orangina
une grenadine à l'eau	= a pomegranate cordial
un diabolito menthe	= a mint cordial
un café express	= an espresso
un café crème	= a milky coffee
un coca	= a coke
un croquemonsieur	= grilled cheese and ham sandwich
une crêpe	= a pancake
une glace	= an ice cream



## 6. The Future Tense

You use the near future tense to talk about what is going to happen in the future. It is formed with:

**subject (who) + part of aller (to go) + infinitive**

<b>je</b>	<b>vais</b>	<b>I'm going (to....)</b>
<b>tu</b>	<b>vas</b>	<b>you're going (to...)</b>
<b>Il/elle</b>	<b>va</b>	<b>he/she is going (to...)</b>
<b>nous</b>	<b>allons</b>	<b>we're going (to...)</b>
<b>vous</b>	<b>allez</b>	<b>you're going (to...)</b>
<b>ils/elles</b>	<b>vont</b>	<b>they're going (to...)</b>



Example – *Nous allons prendre des photos = we are going to take photos*

## 7. Qu'est-ce que tu vas faire à Paris:

What are you going to do in Paris



Je vais...

= I am going

- |                            |                             |
|----------------------------|-----------------------------|
| • visiter la cathédrale    | = to visit the cathedral    |
| • visiter la tour Eiffel   | = to visit the Eiffel tower |
| • aller au musée du Louvre | = to go the Louvre          |
| • aller aux catacombes     | = to go to the Catacombs    |
| • prendre des photos       | = to take photos            |
| • acheter des souvenirs    | = to buy souvenirs          |
| • admirer la Joconde       | = to admire the Mona        |
| • faire une pique-nique    | = to do a picnic            |

## 8. Future tense revision



Je vais...

= I am going

jouer au basket	= to play basketball
jouer au foot	= to play football
jouer au laser-tag	= to play laser tag
manger un gâteau	= to eat a cake
manger une pizza	= to eat a pizza
manger une glace	= to eat an icecream
aller au zoo	= to go to the zoo
aller au centre de loisirs	= faire un tour en Segway
faire les magasins	= to go shopping
faire du sport	= to do sport

## 9. Common Verb infinitives



- |             |              |
|-------------|--------------|
| • manger    | = to eat     |
| • jouer     | = to play    |
| • prendre   | = to take    |
| • visiter   | = to visit   |
| • aller     | = to go      |
| • faire     | = to do/make |
| • acheter   | = to buy     |
| • admirer   | = to admire  |
| • partager  | = to share   |
| • retrouver | = to meet    |
| • regarder  | = to watch   |
| • voir      | = to see     |

## 10. Describing a photo

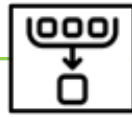


Sur la photo	= In the photo
Il y a...	= there is/are
une fille	= a girl
un garçon	= a boy

il/elle joue	= he/she plays
il/elle fait	= he/she does
il/elle porte	= he/she wears

Il fait beau/mauvais = it's good/bad weather

Au fond	= in the background
À gauche	= on the left
À droite	= on the right
Au centre	= in the middle



## 11. Bastille Day

**History** – French people were deeply unhappy during the reign of Louis XVI. They felt that they worked really hard yet had very little money as they were heavily taxed and were taken advantage of by wealthy landowners, who paid little taxes themselves.

**The Bastille:** The Bastille was medieval fortress on the east side of Paris that became, in the 17th and 18th centuries, a French state prison and a place of detention for important persons charged with various offences. It was a symbol of the King's authority and had an excessive ammunition store.

On the morning of the 14th July 1789, the citizens of Paris decided to storm the Bastille, taking control of it. They released all the prisoners (although there were only seven at the time!) and took all the gun powder. This is seen as the start of the French Revolution and is why French people celebrate the 14th July every year.

**Revolution:** a forcible overthrow of a government or a social order in favour of a new system

**Monarchy:** a form of government with a king or queen as the head.



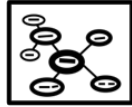
### Extra: The Legacy of Bastille Day

Bastille Day is celebrated as being the start of creating France as a Republic and the end of absolute monarchy in France. France no longer has a royal family and instead has a president, who can be voted in or out.



As part of the revolution, the first rights of man was written '*La déclaration des droits de l'homme et du citoyen*' in 1789. This would be critiqued later by Olympe de Gouges who would write about the rights of women '*la déclaration des droits de la femme et du citoyen*' in 1791. It was the beginning of recognising individual equality before government.

## 1. What are the fundamentals of Colour Theory?



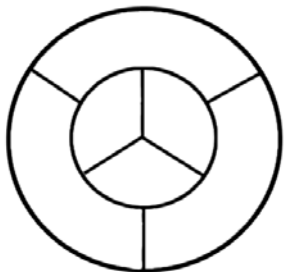
Choices of colour and the relationships between colours have a huge influence on how a piece of art or design looks and feels and the emotions it provokes.

### Keywords:

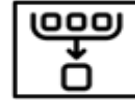
- **Primary colours** – Red, blue and yellow.
- **Secondary Colours** – Green, purple and orange.
- **Complimentary Colours** – Colours opposite each other on the colour wheel.
- **Temperature** – Implies whether a colour appears warm or cool.

### Task:

Draw and colour in the wheel below using the correct colour order, with primary colours in the centre circle and secondary colours in the outer circle.



## 2. Josef Albers

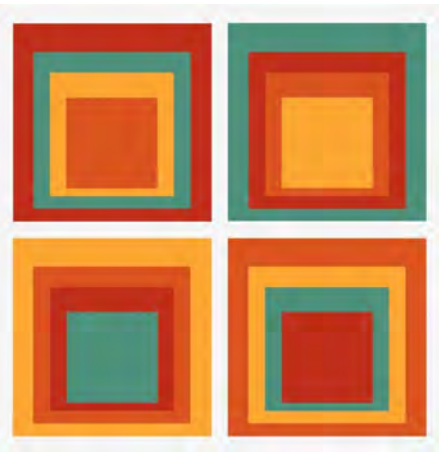


Albers created hundreds of paintings consisting of nested squares that explored the relationships between colours.

- **Receding Colours:** Colours that appear to be in the distance or in the background.
- **Advancing Colours:** Colours that appear to come forward and be on top.

### Task:

In the Josef Albers artwork below, which colours appear to be receding and advancing?



## 3. Mixing Colour in Paint



- **Hue:** Means original colour.
- **Tint:** When white is added to a hue (colour).
- **Shade:** When black is added to a hue (colour).

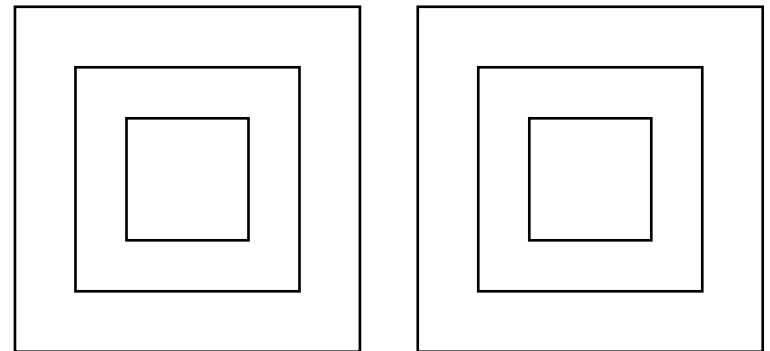


Shade (add Black)-----Original Hue-----Tint (add White)

## 4. Josef Albers' Composition



**Task:** Copy and colour in the boxes below to create a Josef Albers inspired work using warm or cool colours. Include a tint and a shade. This can be done using colouring pencils or paint.



## 5. What is Impressionism?

**Impression:** An effect, feeling, or image retained from an experience.

### Impressionist

#### Movement:

- A 19th-century art movement that originated with a group of Paris-based artists.
- They did not try to paint a reflection of real life, but an 'impression' of what the person, light, atmosphere, object or landscape looked like to them.

#### Who were the Impressionists?

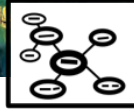
**Claude Monet – 1840-1926**

**Edgar Degas 1834 - 1917**

**Camille Pissarro 1830 - 1903**



## 6. Impressionist Techniques



- They used **short, thick strokes of paint** to capture the essence of the object rather than the subject's details.
- Quickly applied brush strokes give the **painterly illusion** of movement and spontaneity.
- A thick **impasto** application of paint means that even reflections on the water's surface appear as substantial as any object in a scene.
- The Impressionists lightened their palettes to include pure, intense colours.
- **Complementary colours** were used for their vibrant contrasts.
- Impressionists avoided hard edges by working **wet into wet**.
- Impressionists often painted at a **time of day** when there were long shadows. This technique of painting outdoors helped impressionists better depict the **effects of light** and emphasise the vibrancy of colours.

## 7. Claude Monet 1840-1926



Impression, Sunrise – 1872 Claude Monet first shown at what would become known as the "Exhibition of the Impressionists" in Paris in April, 1874. The painting is credited with inspiring the name of the Impressionist Movement.

## 8. Mary Cassatt 1844-1926



Mary Cassatt was an American painter and printmaker. She lived much of her adult life in France, where she befriended Edgar Degas and exhibited with the Impressionists.

## 9. Landscape Painting En Plein Air – Capturing Light

'Plein air' painting is the act of painting outside, and it came to prominence in the 18th Century, when paint makers began to manufacture tubes of oil paint. This made it easier to take painting materials outside, to capture the ever-changing light across the landscape.



### Painting Techniques:

- Dashes
- Daubes
- Washes
- Paint consistency – adding water etc.



## Extra Task – Draw from a landscape



1. Choose a view to work from.  
Make a light sketch of the leading lines and shapes.



2. Add a range of tones and mark making to build depth and show light.



## 10. Colour Temperature & Time of day

Monet painted the haystacks numerous times between 1890 –1891, to explore the subtle changes in light and atmospheric colour, at varying times of day.

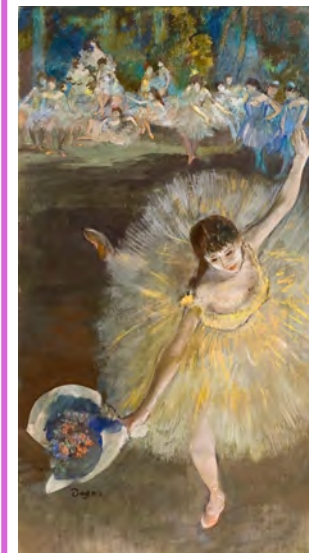


## 11. Task – Learn the famous Impressionist Picture



Japanese bridge – Claude Monet

Mary Cassatt- Mother playing with her child 1899



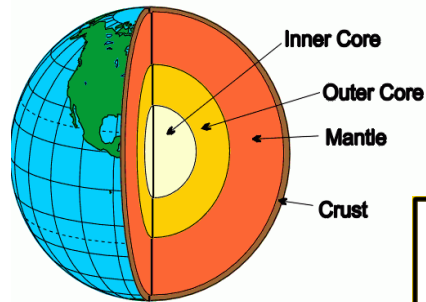
Edgar Degas –finishing the arabesque 1877



## 1. Structure of the Earth

The Earth is a planet and is the shape of a sphere. There are **three layers that make up the Earth's structure**.

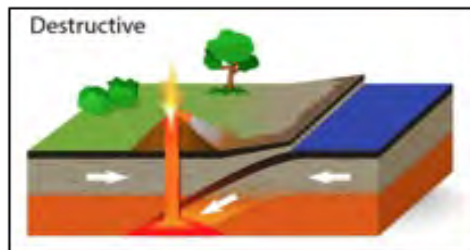
1. **Crust:** the rocky outer layer
2. **Mantle:** the semi-solid middle layer
3. **Core:** the innermost layer which is divided into an inner core and outer core



## 2. Plate Boundaries

### Destructive plate margins

A destructive plate boundary occurs when an oceanic plate is forced under (or subducts) a continental plate.



**Landforms:** Fold Mountains and Oceanic trenches

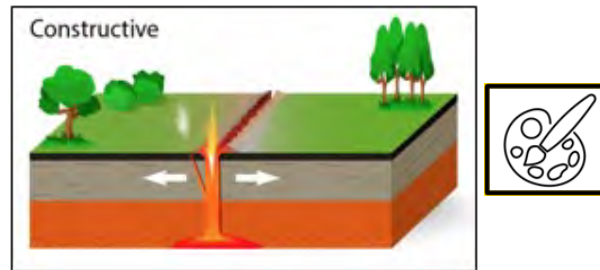
**Example:** Pacific Plate and the Eurasian Plate



## 3. Plate Boundaries Continued

### Constructive plate margins

A constructive plate boundary occurs when two plates move away from each other.



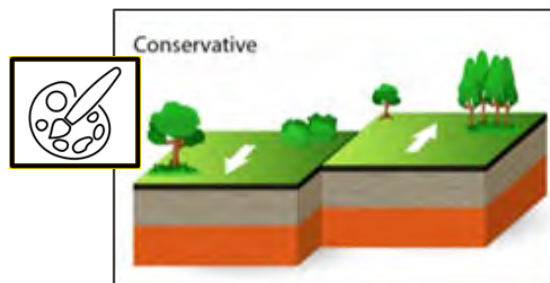
**Landforms:** Ocean ridge and volcanic islands

**Example:** Iceland lies on the Mid Atlantic Ridge, where the North American and Eurasian plates are moving away from each other.



### 4. Conservative plate margins

A conservative plate boundary occurs when two plates slide past each other.



**Landforms:** There are no volcanoes at a conservative plate boundary. A large-scale landform found along a conservative plate boundary is a fault line.

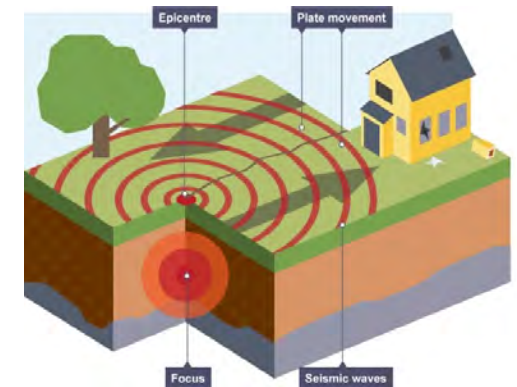
**Example:** One of the most active fault lines in the world is the San Andreas fault line in California, USA.



## 5. Earthquakes

Definition: An **earthquake** is a sudden and sometimes violent movement of the Earth's crust.

Earthquakes occur due to a **release of energy** that causes the Earth's crust to **move suddenly**.



**Focus:** The point inside the Earth's crust where the earthquake originates from.

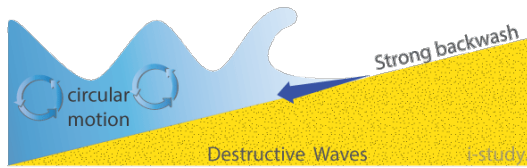
**Seismic Waves:** The earthquake's energy is released in seismic waves and they spread out from the focus.

**Epicentre:** Is the point on the Earth's surface directly above the focus. This is where the seismic waves are the most powerful.

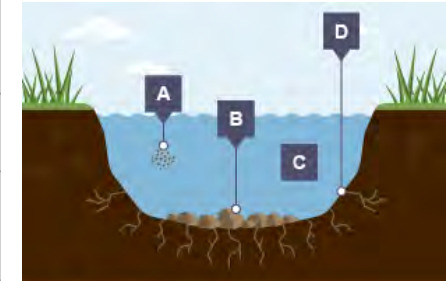


## 6. Coasts - Types of waves and erosion

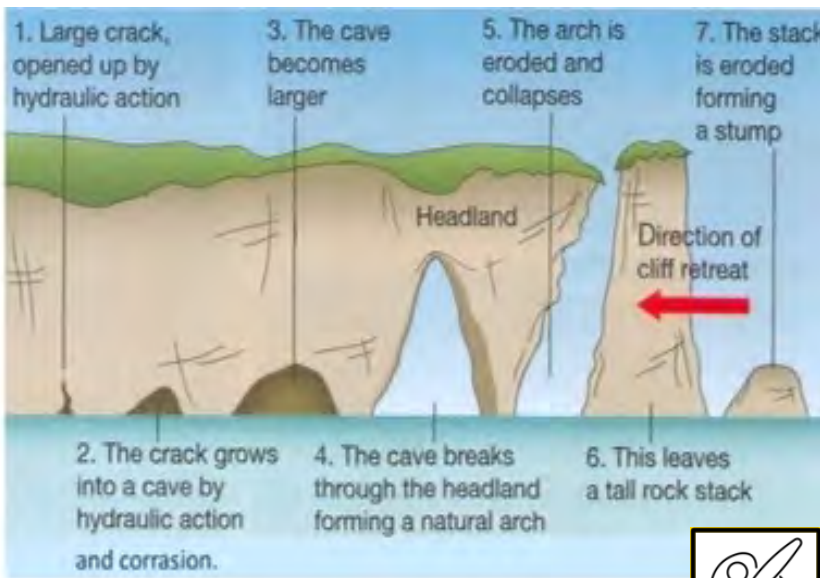
Erosion is when rocks are worn away by waves.



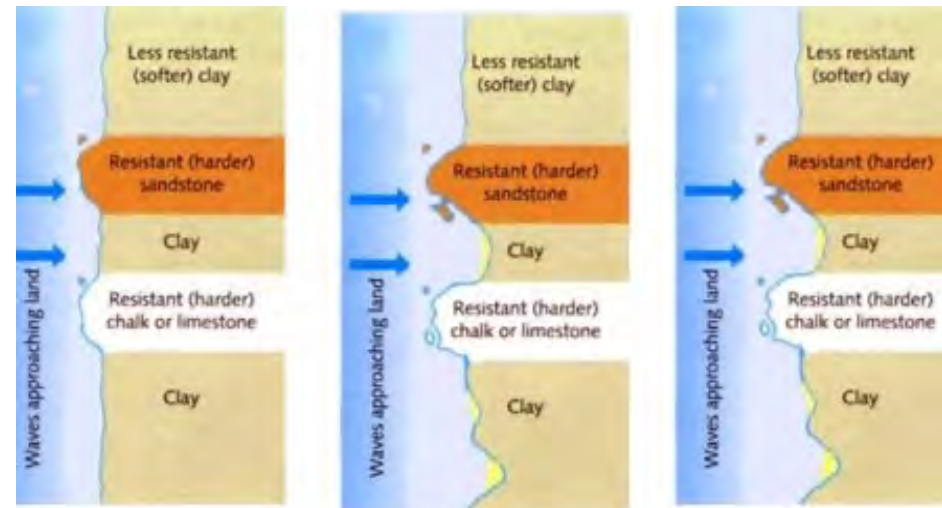
<b>D - Hydraulic action</b>	Waves force air into cracks in the rock. This force causes rocks to eventually break.
<b>B - Abrasion</b>	Sediment carried by waves wears surface of rock away almost like sandpaper
<b>C - Solution</b>	Chemicals in water dissolve certain types of rock such as limestone.
<b>A - Attrition</b>	Rocks crashing into each other result in them becoming smoother and more rounded.



## 7. Formation of sea stacks



## 8. Formation of headlands and bays



Sea attacking a coastline of varying resistance will erode the weaker rock more quickly

The result is that a series of headlands form on the harder rocks.....

.....and sheltered bays form in the weaker rocks



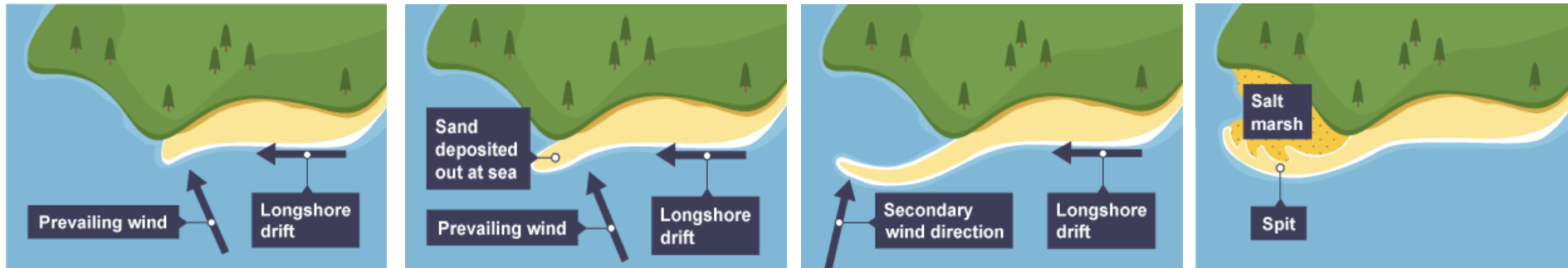
### 9. Formation of Spits

The diagram shows the building of a spit by longshore drift across the mouth of a river.



Spits often have a curved or hooked end as a secondary wind and wave direction curves the end of the spit as waves strike from this second and different direction. A series of such hooks can develop over time.

The spit creates an area of calmer water, sheltered by the spit. A lagoon, salt marsh and finally dry land can develop in this sheltered area.



### 10+11. Soft Engineering

Soft engineering options use natural processes to protect the coast. Here are some examples:

#### Beach nourishment

Sand or shingle is placed on a beach to create a higher and wider beach. This will absorb more wave energy and protect the land behind.

**Advantages** - The beach looks natural and it can help to attract more tourists.

**Disadvantages** - The new sand and shingle will wash away and so the process needs to be repeated over time.

#### Dune regeneration

Sand dunes provide natural protection against storms and flooding. By planting in the area, sand is trapped and large dunes form, providing a barrier between the sea and the land.

**Advantages** - Sand dunes provide natural protection from the sea. It is relatively cheap to carry out planting projects.

**Disadvantages** - There is no guarantee that the sand dunes will stay in place. They may be damaged by storms or by people walking over them.



# WHAT?WHEN?

## KS3 Homework Timetable

Monday	Tuesday	Wednesday	Thursday	Friday
English	Maths	Science	D and T	Art
Music	Drama	PE	History	Geography
		RPE	French	
Your personal reading every day				

Week beginning	Box number
20 <sup>th</sup> April	1
27 <sup>th</sup> April	2
4 <sup>th</sup> May	3
11 <sup>th</sup> May	4
18 <sup>th</sup> May	5
Summer half term	
1 <sup>st</sup> June	6
8 <sup>th</sup> June	7
15 <sup>th</sup> June	8
22 <sup>nd</sup> June	9
29 <sup>th</sup> June	10
6 <sup>th</sup> July	11
Activities Week	
Summer Holidays begin	

**Sparx Maths**  
Homework

**dreambox**  
READING PLUS 

Aim to complete 30 minutes on each of the above platforms each week.

You could do these during the extra slots on Mondays and Fridays.



For Computing only, complete your keyword definitions on the ePortfolio as per your teacher's direction.

