



**Yate Academy**

*High Expectations, High Achievement*

Year 7

Knowledge  
Organisers

Module 4

## Yr 7 Art. Technique and skills. Module 4 Knowledge Organiser

### How to sculpt a clay skull

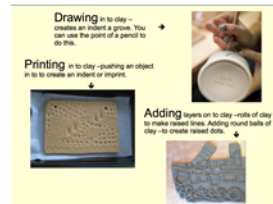
Learners will be taught how to make two thumb pots, join them together and then mould into the basic shape of the skull.

In Module 5 they will refine their sculpting skills by add a jaw, teeth and design inspired by the Mexican festival, 'day of the dead'.

### Examples of latest clay skulls



"Thumb Pot" or "Pinch Pot"



### Day of the dead, Mexican festival.

Learners will research and investigate the Mexican festival, Day of the dead.

Learners will create a research page that presents their findings.

Learners will practice their presentation skills, focusing on an ability to demonstrate :- Neat titles, well presented written work with high quality information, good composition, and high quality

### What makes a good sketchbook research page?



AO1 – Develop your ideas through investigations, including artist research.



## Module 4 Knowledge Organiser

### KPI 1:

Use Word to enhance work adding or changing:

- Borders
- Font style
- Pictures
- Bullet
- Alignment
- Page background(colour, image)
- Rotate/Layer pictures
- Shapes/boxes

KPI 2: Collecting data and information:

- ✓ Write open questions
- ✓ Write closed questions
- ✓ Advantages and disadvantage of using questionnaire/interview questions to collect information
- ✓ Primary and secondary data

KPI 3: Import data to develop a solution:

- ☐ Write a report
- ☐ Add graphs
- ☐ Link information
- ☐ Proof read
- ☐ Word count

### Resources / Information

<http://www.bbc.co.uk/education/guides/zdydmp3/revision>

<http://www.bbc.co.uk/education/guides/znjmn39/revision>

[http://www.bbc.co.uk/schools/gcsebitesize/dida/using\\_ict/spreadsheetsrev3.shtml](http://www.bbc.co.uk/schools/gcsebitesize/dida/using_ict/spreadsheetsrev3.shtml)

KPI 4: Collecting data and raw facts and processing them:

- ❖ Select appropriate Charts/Graphs
- ❖ Label title and axis
- ❖ Analysis collected data

## Year 7 Drama Knowledge Organiser

### **Commedia Dell'Arte** **14<sup>th</sup> Century Italian** **Theatre**

Very old type of theatre which can be traced back to 16th century in Italy.

Troupes of actors would travel around the country performing plays in market squares.

The plays were often comedies and topics included:

- Mistaken identities
- Servants tricking their masters
- Love triangles (e.g. girl loves boy, boy loves girl, old man loves girl, girls father wants her to marry old man etc...)

Plays contain 'STOCK' characters who the audiences would be familiar with. These characters wore masks and their movements were very physical and over the top.

Commedia was the origin of 'Slapstick' such as Charlie Chaplin, the Chuckle Brothers and Tom and Jerry cartoons.

Modern versions of Commedia include Pantomime and Punch and Judy.

### **Key Characters** **Low Status**

**Zanni:** High Energy, talks directly to the audience, boisterous, confident, loud

**Arlecchino:** Trickster, Nimble, Quick, Full of energy, Master of Disguise and mimics other people.

**Columbina:** Wife of Arlecchino, Confident, Womanly, Boisterous, walks like she is dancing

### **High Status**

**Il Dottore:** The Doctor, very Pompous, Arrogant and Stupid

**Pantalone:** Tight Fisted, Sleazy old man, very Rich and Greedy

**Isabella:** Beautiful and ditzzy

### **Key Skills**

**Mime:** The actor uses movement, gestures, facial expressions and body language to communicate meaning to the audience. Uses gestures to suggest handling objects

**Comedy:** A genre of theatre intended to make the audience laugh at the performance

**Duologue:** Two actors on stage during a scene

**Masks:** Often used to show Stock characters

**Physicality:** Over the top and exaggerated gestures and body language

**Status:** Rank or Social standing often relating to Power and Confidence

### **Characterisation**

- **Body Language:** The way the actor uses posture, stance and gestures to communicate meaning.
- **Facial Expressions:** The use of expression on the actors face to communicate emotions to the audience
- **Voice:** The way the actor uses pitch, tone, volume and accent to communicate character and meaning for the audience.
- **Movement:** The use of pace, staging, space and levels

**Plot**

**PART I—"THE OLD BUCCANEER"** An old sailor, calling himself "the captain"—real name "Billy" Bones—comes to lodge at the Admiral Benbow Inn, paying Jim Hawkins, a few pennies to keep a lookout for a one-legged "*seafaring man*". When Billy dies; Jim finds a sea chest, containing money, a journal, and a map. He and Dr. Livesey decide to mount an expedition to find buried treasure.

**PART II—"THE SEA COOK"** Jim and friends travel to Bristol to find a ship (Hispaniola) and crew for the journey. We are introduced to "Long John" Silver and Captain Smollett, are to lead the trip. During the voyage Jim—concealed in an apple barrel—overhears Silver planning a mutiny. Jim alerts his friends.

**PART III—"MY SHORE ADVENTURE"** They arrive at the island and Jim sneaks ashore. While exploring he overhears Silver plotting and murdering several crewmen. Jim meets Ben Gunn who was marooned on the island by Silver and he agrees to help Jim.

**PART IV—"THE STOCKADE"** Meanwhile, Jim's friends have abandoned ship and come ashore to occupy an old stockade. There is a battle for the stockade with the pirates. Jim finds the stockade and joins them. The next morning, Silver appears under a flag of truce. Jim and friends refuse to hand over the map and Silver threatens attack, another battle begins.

**PART V—"MY SEA ADVENTURE"** After the battle several of Jim's friends are either killed or wounded. Jim escapes and finds the pirate ship abandoned, which he then takes control of. Once on board he realises a pirate still remains. They reach a truce but in the end the pirate betrays Jim. There is a battle which Jim wins. Jim returns to the stockade to find Silver has taken it over.

**PART VI—"CAPTAIN SILVER"** Silver and the others argue about whether to kill Jim, Silver finds out that Jim knows the whereabouts of the ship. Silver and the others set out with the map, taking Jim along as hostage. On their way to find the treasure, they are ambushed by Jim's friends. They realise that Ben Gunn has had the treasure all along. Jim and friends, with Silver as prisoner get back on board the Hispaniola and head back to England. Silver escapes...

**Characters**

Jim Hawkins – a teenager who narrates most of the story  
 Mrs Hawkins – Jim's mother  
 Dr Livesey – town Doctor, smart, narrates part iv  
 Squire Trelawney – Local landowner who talks too much  
 Captain Smollett – Captain of the Hispaniola. Honest.  
 Ben Gunn – Ex pirate. Marooned. Gone crazy.  
 Long John Silver – Pirate ringleader. 'Cook' on ship.  
 Israel Hands – Pirate eventually defeated by Jim  
 Dick, George, Morgan --(Pirates)  
 Billy Bones – Old pirate who likes his rum. Being hunted for a map.  
 Black Dog – Old Pirate, looking for a treasure map  
 Blind Pew – Evil, blind pirate.  
 Job Anderson- Pirate. Forces Silver to start the mutiny early  
 Redruth – works for the Squire  
 Abraham Gray – Pirate who turns good guy  
 Captain Flint – deceased pirate with a terrifying reputation  
 Hispaniola – the Ship  
 The Admiral Benbow – The Inn that Jim lives in.

**Context****Piracy**

- 1700's tradition of seafaring. Britain a maritime nation.
- A time of exploration – ships exploring the east/America etc.
- The golden age of pirates – 1650-1680. Often in the Caribbean and Pacific Oceans. There were many real life pirates e.g. Blackbeard, a notorious pirate probably born in Bristol and died in battle
- Colonial powers (Britain, France, Spain) were trying to expand their colonies by sailing around the world and trading valuables. As a result of this, they engaged in several battles with pirates who were after the same.

**Bristol**

- Bristol—an important sea port famous for designing and building docks and harbours
- Bristol also famous for its ship-building skill which started the famous saying "ship shape in Bristol fashion"—meaning "well-built craftsmanship"
- If you wanted a great sailing ship, Bristol was the place to go

**Vocabulary****Technical language:**

Noun  
 Verb  
 Adjective  
 Adverb  
 Simile  
 Metaphor  
 Personification  
 Alliteration  
 Onomatopoeia  
 Narrator  
**Maritime/seafaring language**  
 Maritime  
 Quay/harbour/dock  
 Starboard/larboard  
 Scuppers  
 Ebb  
 Booms  
 Blocks  
 Rudder  
 Mast  
 Bow/stern  
 Fore hold  
 Schooner  
 Berth  
 Companion  
 Coxswain  
 Foc's'le (forecastle)  
 Mizzen/fore-sail  
 Luff  
 Coracle  
 buccaneer

**Themes**

Conflict  
 Friendship  
 Adventure/Journey/quest  
 Coming of age (growing up)  
 Fathers and father figures  
 Savagery vs. civilisation  
 Good vs. evil  
 Death

**Key quotes****LJS**

- He was very tall and strong, with a face as big as a ham — plain and pale, but intelligent and smiling
- hopping about upon it like a bird
- and I thought I knew what a buccaneer was like — a very different creature,
- "Yes, my lad," said he; "such is my name, to be sure. And who may you be?"

**BG**

- What it was, whether bear or man or monkey, I could in no wise tell
- From trunk to trunk the creature flitted like a deer, running manlike on two legs, but unlike any man that I had ever seen
- His skin, wherever it was exposed, was burnt by the sun; even his lips were black, and his fair eyes looked quite startling
- Clothed with tatters of old ship's canvas and old sea-cloth, and this extraordinary patchwork was all held together by a system of the most various and incongruous fastenings, brass buttons, bits of stick, and loops of tarry gaskin



## FRENCH YEAR 7 MODULE 4 – MA JOURNÉE

MO 1 – 15 : (KPI 1 Know the key vocabulary for the module)

### La routine du matin Morning routine

À quelle heure est-ce que tu te lèves?	<i>What time do you get up?</i>
Je me brosse les dents.	<i>I brush my teeth/ I'm brushing my teeth.</i>
Je me douche.	<i>I have a shower/ I'm having a shower.</i>
Je m'habille.	<i>I get dressed/ I'm getting dressed.</i>
Je me lave.	<i>I'm having a wash.</i>
Je me lève.	<i>I get up/ I'm getting up.</i>
Je me réveille.	<i>I wake up/ I'm waking up.</i>
Je prends le petit déjeuner.	<i>I have breakfast/ I'm having breakfast.</i>
Je vais au collège.	<i>I go to school/ I'm going to school.</i>
et puis	<i>and then</i>

### La routine du soir Evening routine

Je me couche.	<i>I go to bed.</i>
Je fais mes devoirs.	<i>I do my homework.</i>
Je fais du vélo.	<i>I go cycling.</i>
Je fais la vaisselle.	<i>I do the washing-up.</i>
Je mange.	<i>I eat.</i>
Je prends le goûter.	<i>I have a snack.</i>
Je regarde la télé.	<i>I watch television.</i>
Je rentre à la maison.	<i>I go home.</i>
le week-end	<i>at the weekend</i>

### Les matières scolaires School subjects

l'anglais	<i>English</i>
le dessin	<i>art</i>
le français	<i>French</i>
la géographie	<i>geography</i>
l'histoire	<i>history</i>
l'histoire-géo	<i>humanities</i>
l'informatique	<i>IT</i>
les maths	<i>maths</i>
la musique	<i>music</i>
le sport	<i>PE</i>
la technologie	<i>technology</i>
le théâtre	<i>drama</i>
les sciences	<i>science</i>

### L'emploi du temps The timetable

la cantine	<i>the canteen</i>
commencer	<i>to start</i>
finir	<i>to finish</i>
un cours	<i>a lesson</i>
l'étude	<i>supervised study</i>
	<i>time</i>
les maths	<i>maths</i>
les sciences	<i>science</i>
le déjeuner	<i>lunch</i>
la récréation	
toujours	

In words like **récréation**, the 'tion' part sounds like this: ssee-on and not like this: shee-on. Build up the words, a bit at a time: ré-crée-a-tion



### Les nombres 69-100 Numbers 69-100

soixante-neuf	<i>69</i>
soixante-dix	<i>70</i>
soixante et onze	<i>71</i>
soixante-douze	<i>72</i>
soixante-treize	<i>73</i>
soixante-quatorze	<i>74</i>
soixante-quinze	<i>75</i>
soixante-seize	<i>76</i>
soixante-dix-sept	<i>77</i>
soixante-dix-huit	<i>78</i>
soixante-dix-neuf	<i>79</i>
quatre-vingts	<i>80</i>
quatre-vingt-un	<i>81</i>
quatre-vingt-dix	<i>90</i>
quatre-vingt-onze	<i>91</i>
quatre-vingt-douze	<i>92</i>
quatre-vingt-treize	<i>93</i>
quatre-vingt-quatorze	<i>94</i>
quatre-vingt-quinze	<i>95</i>
quatre-vingt-seize	<i>96</i>
quatre-vingt-dix-sept	<i>97</i>
quatre-vingt-dix-huit	<i>98</i>
quatre-vingt-dix-neuf	<i>99</i>
cent	<i>100</i>



### Stratégie 5

#### Words that won't go away!

When you learn French in *Expo* you see that some words come up again and again. No matter what you're talking about they're there all the time. These are "high-frequency words". Because they occur so often they are extremely important. You need to know what they mean.

Look through the words on pages 96 and 97 and make a list of what you think are high frequency words. Write down what they mean in English. Here are three to start you off:

je  
très  
à

### Les opinions

### Opinions

Tu aimes ...?	<i>Do you like ...?</i>
J'adore ...	<i>I love ...</i>
J'aime ...	<i>I like ...</i>
Je n'aime pas ...	<i>I don't like ...</i>
Je déteste ...	<i>I hate ...</i>
pourquoi?	<i>why?</i>
parce que	<i>because</i>
C'est ...	<i>It is ...</i>
amusant	<i>fun</i>
difficile	<i>hard</i>
ennuyeux	<i>boring</i>
facile	<i>easy</i>
intéressant	<i>interesting</i>
ma matière préférée	<i>my favourite subject</i>
assez	<i>quite</i>
très	<i>very</i>
trop	<i>too</i>
un peu	<i>a little bit</i>
et	<i>and</i>
mais	<i>but</i>
le prof	<i>the teacher</i>
sévère	<i>strict</i>
sympa	<i>nice</i>
Nous avons beaucoup de devoirs.	<i>We have a lot of homework.</i>

Y7 HISTORY KNOWLEDGE ORGANISER: THE REFORMATION				KPI 5 Key Figures in the Reformation				
TIMELINE		Henry VIII		Anne Boleyn	Thomas Cromwell		William Tyndale	
1517	Martin Luther criticises the Pope and the selling of indulgences		Clever, athletic, and very religious  Wanted to divorce his first wife, Catherine of Aragon, but is refused permission by the Pope  Broke the English Church away from Rome and created his own Church, the Church of England, with himself as head  Reopened 3 monasteries in the 1540s  Hungry for money and power	Young, beautiful, and a Protestant  Gave Henry William Tyndale's <i>Obedience of a Christian Man</i>  Executed in 1536 after Cromwell told Henry that she had been unfaithful	Born the son of a blacksmith but rose to become Henry's chief advisor  A firm Protestant and follower of Martin Luther  Persuaded Henry to shut down the monasteries  Suggested Anne of Cleves as a suitable wife for Henry because she was a Protestant  Paid £400 to print English bibles  Executed in 1540 for making too many Protestant changes	Wrote <i>The Obedience of a Christian Man</i> , a book attacking the Pope		
1527	Henry VIII first meets Anne Boleyn					Martin Luther		
1529	Anne Boleyn gives Tyndale's <i>Obedience of a Christian Man</i> to Henry VIII					A German Protestant who attacked the Pope and the sale of indulgences		
1529	Henry breaks with the Catholic church, creating the Church of England							
1533	Henry marries Anne Boleyn							
1534	Act of Supremacy makes Henry head of the Church of England							
1536	Dissolution of the Monasteries begins							
1536	Anne Boleyn executed							
1539	First English Bible published							
1540	Anne of Cleves marriage fails		KPI 6 Key Events in the Reformation					
1540	Thomas Cromwell executed		The Break from Rome 1529	The Pope lived in Rome, so breaking from Rome meant leaving the Catholic Church. This was confirmed with the 1534 Act of Supremacy which made Henry head of the Church of England.				
1540	Last monastery, Waltham Abbey, shut down							
1540s	Henry reopens three monasteries		The Dissolution of the Monasteries 1536-1540	In 1536, Thomas Cromwell suggested to Henry that he could become wealthier and more powerful by dissolving the monasteries. Over 900 were shut down and Henry took their wealth, raising £1.3 million. The last monastery, Waltham Abbey, was shut down in 1540.				
Catholic Beliefs		Protestant Beliefs						
The Pope should be head of the Church  Bibles and services should be in Latin  Priests can sell indulgences  Monks living in monasteries were important		The King should be head of the Church  Bibles and services should be in English  Priests should not sell indulgences  Monks living in monasteries were not important						
			The English Bible 1539	Before the Reformation all bibles were in Latin. The first English bible was released in 1539 and every church was ordered to have one.				
			Anne of Cleves 1540	Cromwell desperately wanted Henry to marry Anne of Cleves, a Protestant princess, because he believed this would make Henry more Protestant. Henry agreed but when Anne arrived in England she was not as pretty as Cromwell had said she was and Henry refused to marry her.				
KPI 4 The English Church before the Reformation				Key Vocabulary				
The Church was healthy: Most people accepted the power of the Pope and the Lollards had little support  Monks served the poor, educated children, and looked after the sick  Church services were exciting, with singing, colourful images, and incense		The Church was NOT healthy: Rich people were able to buy indulgences to pardon their sins  Bibles and church services were in Latin which most people could not understand  Protestants like Martin Luther attacked the Pope and the sale of indulgences		Act of Supremacy Anne of Cleves Bibles Catholics Church of England Dissolving Divorce Incense Indulgences	Law making Henry head of church Protestant princess Christian holy books Christians who supported the Pope Henry's new Protestant church Shutting down To end a marriage Sweet smelling substance Certificates that pardoned sins	Latin Lollards Monasteries Monks Protestants Pardon Pope Priests Rome	Language of the Catholic church Early Protestants, opposed the pope Where monks lived and worked Men who gave their lives to God Christians who opposed the pope To forgive your sins Head of the Catholic Church Leaders of church services City in Italy, home of the pope	

## Year 7 RE- Module 1- What does it mean to be a Muslim?

### KPI 1- to use key words to describe religious practices and beliefs

Allah- God

Prophet Muhammad- founder of Islam

Qur'an- the holy book

Mosque- a place of worship

Imam- a person who leads the prayers in a mosque

Salah- a prayer performed 5 times a day

Rak'ahs- part of Salah

Makkah (Mecca) - the birthplace of the Prophet Muhammad

Five Pillars- acts considered mandatory for Muslims

Haji- pilgrimage to Makkah

Ka'bah- square stone building at the centre of the Great Mosque in Makkah

Zakah- payment paid annually under Islamic law

Khums- 1/5<sup>th</sup>/20% of savings paid annually by Muslims

Ummah- the whole community of Muslims bound together by ties of religion.

### KPI 2- to describe the key features of Islam – The 5 Pillars

**Shahadah:**

declaration of faith

**Salah:** prayer.

**Zakat:** giving a fixed

proportion to charity

**Saum:** fasting during

the month of Ramadan

behaviour and strive

**Hajj:** pilgrimage to

Mecca

### KPI 3- To identify and describe the features of Islamic worship

Public worship takes place in the **mosque**.

The Imam leads the people in the **rak'ahs**. **Friday prayers** are obligatory for men.

Before worshipping **Allah**, Muslims perform ritual washing called **wudu**, to prepare for prayer.

When they enter the **mosque**, Muslims remove their shoes and sit on the floor facing the prayer wall which orients them in the direction of **Makkah (Mecca)**.

Women may attend the mosque but sit separately from men.

**The Hajj**- it is a duty to go on pilgrimage to **Makkah (Mecca)** at least once in their lifetime, as long as they are physically able and can afford it. The pilgrimage to Makkah is called **Hajj** and is the fifth **Pillar of Islam**. On the first day of the Hajj, pilgrims walk around the **Ka'bah** seven times in an anti-clockwise direction while repeating prayers.

### KPI 4- To describe and explain Muslim views on wealth

Islam teaches that **all wealth and riches come from Allah** (God) and are intended for the benefit of all humanity.

**Zakah** is 2.5% of a Muslim's income and savings after they have taken care of their families. **Zakah** is central to the **ummah**, the worldwide brotherhood of Muslims.

### KPI 5- To describe and explain Muslim views on the role of the family

Families are considered to be at the heart of every Muslim community.

Family life was created by **Allah** to keep society together and Muslims should follow the example of the **Prophet Muhammad**, who was married and raised a family.

The traditional Muslim family is an **extended family**. It usually includes parents, children, grandparents and elderly relatives. Most Muslims believe that extended families mean greater stability, continuity, love and support for each other.

Many Muslims believe that family life is the foundation of human society providing a secure, healthy and nurturing environment for parents and growing children. The best place to pass on and develop human virtues such as love, kindness, mercy and compassion is in a family.

The family unit should encourage the individual to see themselves as part of a wider community and should discourage anti-social behaviour.

### KPI 6- to describe and explain Muslim views on moral evil

Islam seeks peace and harmony within a community, the **ummah** and also between countries. Islam teaches that reconciliation is of great importance.

Peace is central to Islam and the religion aims to achieve a world without attack, conflict or unjust rulers. A peaceful solution to any situation of conflict must be sought and if an enemy offers peace Muslims should accept it. The Qur'an reminds Muslims that Allah is always watching and taking account of their actions. This belief is clearly expressed in the following verse: *If the enemy inclines towards peace, then you should also incline towards peace and trust in Allah, for He is the One that hears and knows all- Qur'an 8:61*

Islam teaches that **prejudice** and **discrimination** of any kind are wrong, because we are all creations of **Allah** and are therefore equal.



## Important Ideas

**Averages:** Are used to summarise a set of data by identifying a central or typical value. There are three different averages we use – the mean, mode and median.

**Spread:** Is used to represent how far apart the smaller and larger values in a set of data are from each other. The range is a measure of spread.

**Frequency:** The number of times something occurs. In data it refers to the number of pieces of data in the set.

**Data:** The actual pieces of information collected during a study.

## Key Words

**Mean:** Is a calculated central value. To find it we add together all the values and divide by the number of values.

**Mode:** Is the most typical or most commonly occurring value in a set of data.

**Median:** The central or half-way value when the data is put into size order.

**Range:** The difference between the lowest and highest value.

**Qualitative:** Data which is descriptive, uses words not numbers. E.g: Green, blue, orange.

**Quantitative:** Measures quantities using numbers. E.g: Shoe sizes, Heights.

**Continuous:** Data that can take any numerical value in a range. E.g: Time, Weight, Distance, Money

**Discrete:** Data which can only take specific values. E.g: Rolling a dice, flipping a coin

**Bar Chart:** used to compare the magnitude of similar items.

**Pictogram:** makes use of pictures to represent frequencies.

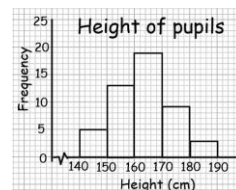
**Scatter Graph:** allows you to investigate the relationship between 2 variables. This is called **correlation**.

**Pie Chart:** are used to represent large data sets. They allow you to quickly compare the size of each category. Generally, pie charts are used to show **qualitative** data.

## Types of graphs and their features:

### Converting between Fractions, Decimals and Percentages:

All charts should have labelled axes. Frequency always starts at zero, but other numbered axes do not have to. All numbers should form an evenly spaced scale.



#### Bar Charts

- Frequency on the vertical axis
- Bars touch for continuous data (left)
- Bars do not touch for discrete data (right)
- Dual bar charts need a key (right)



### Means from Frequency Table:

Shoe size	frequency	
3	12	36
4	27	108
5	43	215
6	11	66
7	7	49

Totals 100 474

$$\text{Mean} = 474 \div 100 = 4.74$$

**Step 1** Multiply the data x frequency

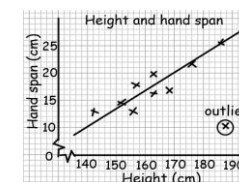
**Step 2** Add up the new column

**Step 3** Add up the frequency

**Step 4** Divide the new column total by the frequency

#### Scatter graphs

- Plots two sets of variables.
- Axes do not need to start at zero.
- A line of best fit should go through the centre of the data.
- Sloping upwards is a **positive correlation**, downwards is a **negative correlation**.
- Outliers do not follow the trend of the rest.



### Pie Charts

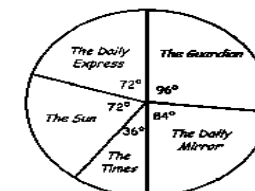
To draw a pie chart we need to know the angle we need to draw for each category. To do this we use the **scaling method**. We need to divide the total frequency by 360°, the number of degrees in a circle. This tells us how many degrees represent one piece of data.

$$360 \div 30 = 12^\circ$$

To work out each category's associated angle we then multiply 12 by each frequency, as shown below.

Finally we then draw each angle inside a circle.

Newspaper	No of people	Working	Angle
The Guardian	8	$8 \times 12^\circ$	$96^\circ$
Daily Mirror	7	$7 \times 12^\circ$	$84^\circ$
The Times	3	$3 \times 12^\circ$	$36^\circ$
The Sun	6	$6 \times 12^\circ$	$72^\circ$
Daily Express	6	$6 \times 12^\circ$	$72^\circ$
	30		$360^\circ$



**Top Tip:** Always draw each angle clockwise, using the previous line drawn to start.

### KPI: 1: Digestion & Nutrients

Starch: turns **iodine** from orange to **blue-black**

Reducing sugars: turn **Benedict's solution** from blue to **orange-red** on heating

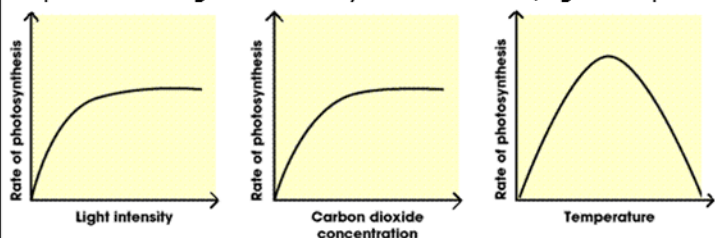
Proteins: turns **Biuret reagent** from pale blue to **lilac**

Mouth	Large pieces of food → small, adding <b>saliva</b>
Oesophagus	<b>Muscular</b> tube that moves food to stomach
Stomach	Secretes hydrochloric acid to break down food (P)
Liver	Releases <b>bile</b> to neutralise acid + break down fats
Pancreas	Releases enzymes (A,P,L)
Small intestines	Nutrients absorbed into the blood via <b>villi</b> (finger-like projections)
Large intestines	Water absorbed into the blood via <b>villi</b>
Rectum	Stores waste before release through anus

Specialised tissue include villi (for absorption) epithelial tissue (lining stomach) and muscular tissue (moving stomach walls)

### KPI: 5: Photosynthesis

**Water + carbon dioxide → Oxygen + glucose + energy**  
in presence of light. Limited by carbon dioxide, light and pH



### KPI: 4: Plant structures

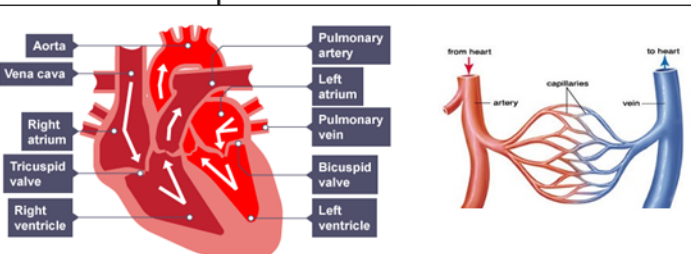
Specialised structures: include palisade cells (for photosynthesis), guard cells (movement of water+gases), epidermis (protect top of leaves), vascular tissue (movement of water + nutrients). Water moves through a plant by osmosis. Plants need active transport to absorb water and nutrients against the concentration gradient from the soil into the root hair cell. Plant cell walls give support to the plant.

### KPI: 2: Enzymes

**Biological catalysts** that speed up reactions e.g. digestion, e.g. protease (P) breaks down proteins, lipase (L) breaks down lipids, amylase (A) breaks down starch (see KPI 1 diagram). Enzymes are the “**key**” that break down the “**lock**” of the substrate (nutrient). High and low pH destroys the shape of enzymes (**denatures**) so they no longer work

### KPI: 3: Lungs, heart & blood vessels

Trachea	Hollow cartilage tube carrying air
Bronchus	Two tubes, each enters a lung
Bronchiole	Tiny tubes within the lungs
Alveoli	Air sacs at the end of each bronchiole. Large surface area for gas exchange
Diaphragm	Sheet of muscle under the lungs
Intercostal muscles	Muscles between the ribs, allowing them to move up & out, or down & in
Double circulatory	Heart pumps blood in two circuits; to lungs and to the rest of the body
Atrium (L+R)	Top chambers in the heart
Ventricle (L+R)	Lower chambers in the heart
Veins	Carry blood into the heart
Arteries	Carry blood away from the heart
Capillaries	Tiny blood vessels connect veins to arteries



### KPI: 6: Uses of glucose

- Respiration (during low-light conditions)
- Making cellulose (for cell walls)
- Stored as oils or fats (storing in seeds)
- Stored as starch (broken into glucose for use when no photosynthesis)

### KPI: 7: Diseases

Health	Physical and mental well being
Communicable	Disease that can be passed on (e.g. cold, measles)
Non-communicable	Disease that can't be passed on (e.g. cancer)
Pathogen	Disease-causing micro-organism
Bacteria	Pathogen, e.g. salmonella
Fungi	Varies in size, pathogen, e.g. athlete's foot
Virus	Pathogen, not alive, e.g. flu
Protist	Single-celled pathogen, e.g. malaria (carried by mosquito)
Mucus	Traps micro-organisms
White blood cells	Engulfs and destroys micro-organisms
Cilia	Hair-like structures
Barriers	Physical or chemical methods used by plants to stop micro-organisms

**Cultures of bacteria** can be grown on agar jelly in a petri dish. The dish should be sealed with tabs of tape and kept below body temperature so pathogens don't grow.

**Vaccines:** Dead or inactive pathogen is injected to develop immunity in a healthy person

## Year 7 Technology

### Module 4 Knowledge Organiser

#### 3 Categories of Woods

**HARDWOODS** – Hardwoods are deciduous trees. This means they lose their leaves during autumn and winter. They tend to be very hard because they grow very slowly.

**SOFTWOODS** – Softwoods are evergreen trees. This means they do not lose their leaves. They are not as strong as hardwoods but are still very useful. They grow quickly and look tall and thin.

**MAN MADE WOODS** - Man-made boards are made from pieces of natural wood. The pieces are compressed and glued together to form large, flat boards.

#### **TOOL TYPES**



#### Scales of Measurement:

- mm = millimetre
- cm = centimetre
- m = metre

#### SURFACE FINISHING:

Finishing is usually one of the last stages of making a project. It will usually involve sanding and applying a surface coating to protect your material and make it look better.

##### Some examples:

Paint, Varnish, Oil, Wax, Polish & Dip Coating. Electroplating = coating one metal with another.

#### Manufactured Boards

Engineered boards are manmade materials usually made by mixing wood chips and glues to make wooden sheets.

##### Examples:

Medium Density Fibreboard (MDF)  
Chipboard, Plywood and Hardboard

#### Timbers / Woods:

<i>Hardwoods:</i>	<i>Softwoods:</i>
Beech	Scots Pine
Oak	Cedar
Ash	Spruce



Cross-halving joint

Mortise + Tennon Joint

Dovetail Joint

#### Joining Materials Together:

Glues, welding, rivets  
Screws, bolts, nails

Wood joints can be either permanent or temporary depending on the type and if glue is used.

## This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.