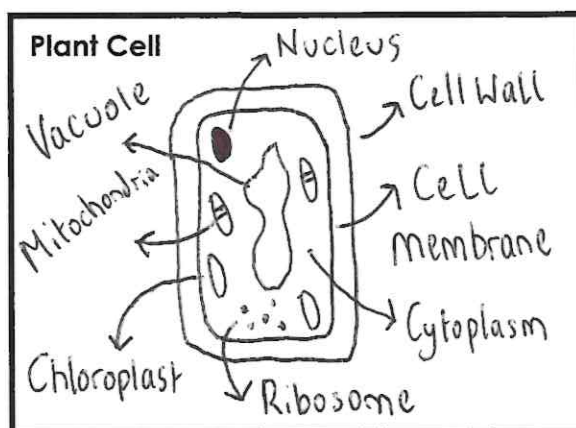
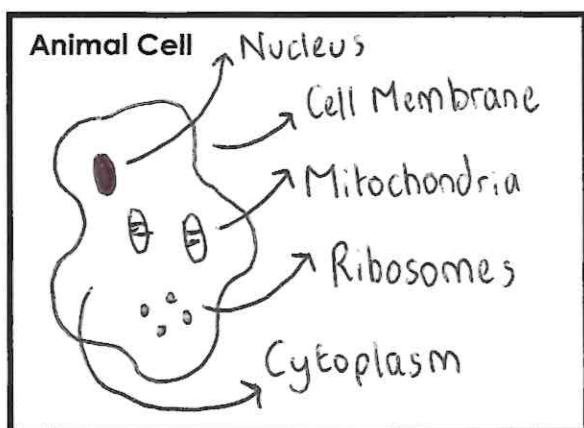




Do now: complete the quiz

1.	6.
2.	7.
3.	8.
4.	9.
5.	10.

Cell Biology Teacher note: draw cell first, then label as task



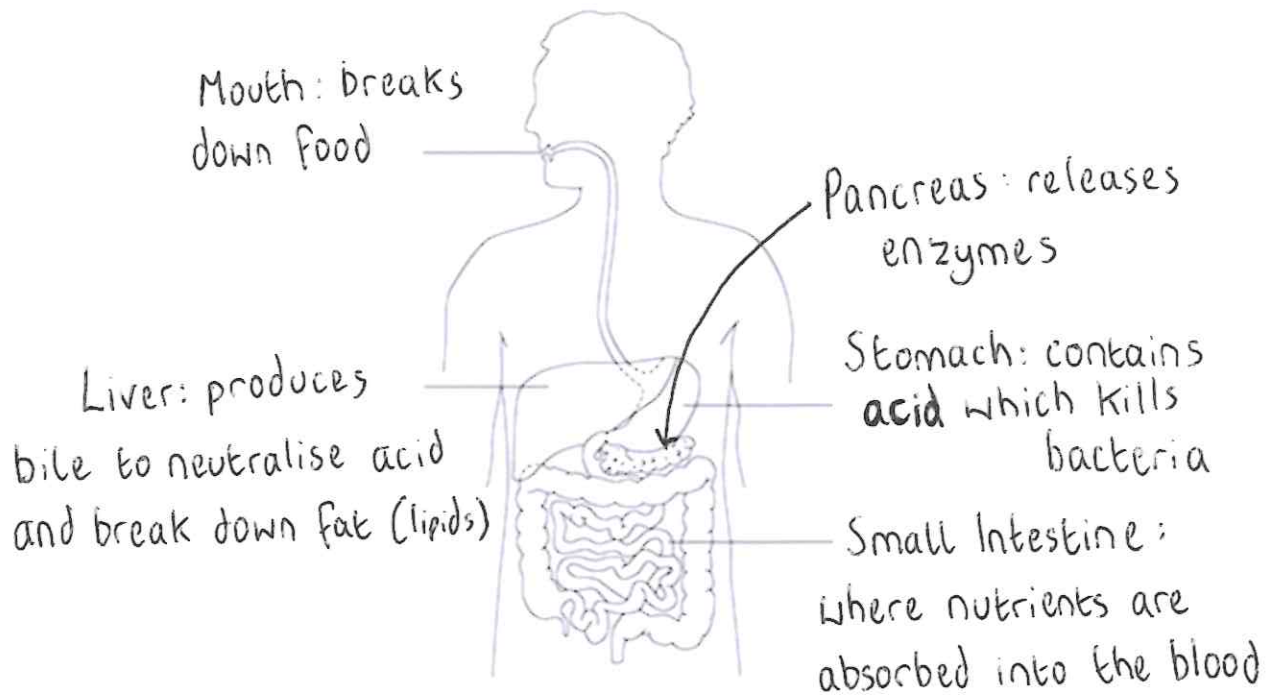
Functions of sub-cellular structures Teacher note: quiz first

Ribosome	Makes protein
Mitochondria	Releases energy from respiration
Chloroplast	Where photosynthesis takes place
Vacuole	Stores cell sap

Two Types of Respiration (Releases energy)

<p>Most energy Aerobic Respiration with O₂</p> <p>Happens in mitochondria</p> <p style="text-align: center;">Glucose + Oxygen</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Carbon Dioxide + Water</p>	<p>Least energy Anaerobic Respiration Without O₂</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px; vertical-align: top;"> <p style="text-align: center;"><u>Humans</u></p> <p>Product:</p> <p style="text-align: center;">lactic acid</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Causes cramp</p> </td> <td style="width: 50%; padding: 5px; vertical-align: top;"> <p style="text-align: center;"><u>Yeast</u></p> <p>Product:</p> <p style="text-align: center;">CO₂ and ethanol</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Alcohol</p> </td> </tr> </table>	<p style="text-align: center;"><u>Humans</u></p> <p>Product:</p> <p style="text-align: center;">lactic acid</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Causes cramp</p>	<p style="text-align: center;"><u>Yeast</u></p> <p>Product:</p> <p style="text-align: center;">CO₂ and ethanol</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Alcohol</p>
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The Digestive System



How our body helps digestion...

Specific enzymes break down food nutrients so they can be absorbed into blood. E.g.



Checkpoint: answer the questions on the board

1.

2.

3.

4.

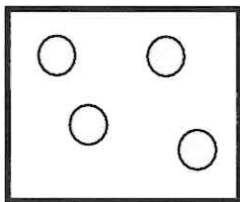
5.



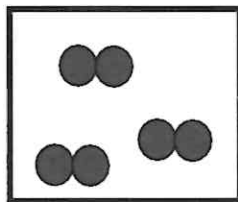
Do now: complete the quiz

1.	6.
2.	7.
3.	8.
4.	9.
5.	10.

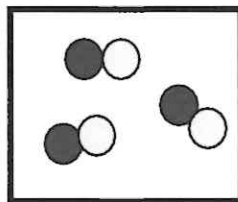
Particle Diagrams



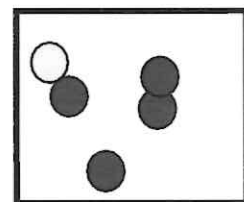
Element



Element (molecule)



Compound (molecule)



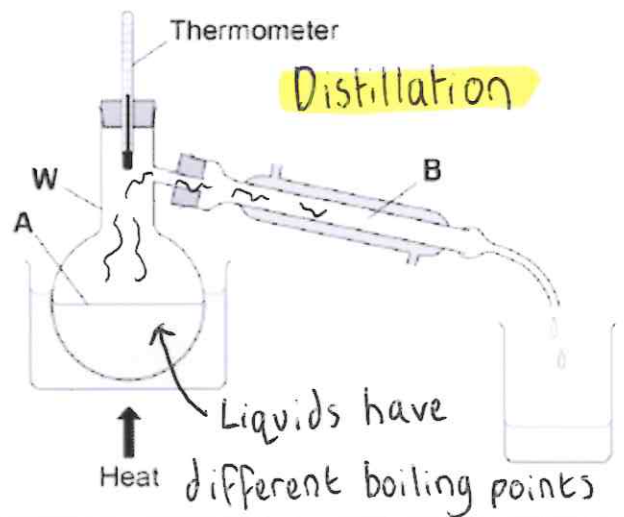
Mixture (molecules)

Molecules: a group of atoms together can be referred to as a molecule.
 For example: O_2 is a molecule of oxygen, H_2O is a molecule of water.

Separating Substances

Filtration: separate solid from liquid.

A: mixture of liquids
 B: condenser (cools down liquid) after they've been heated

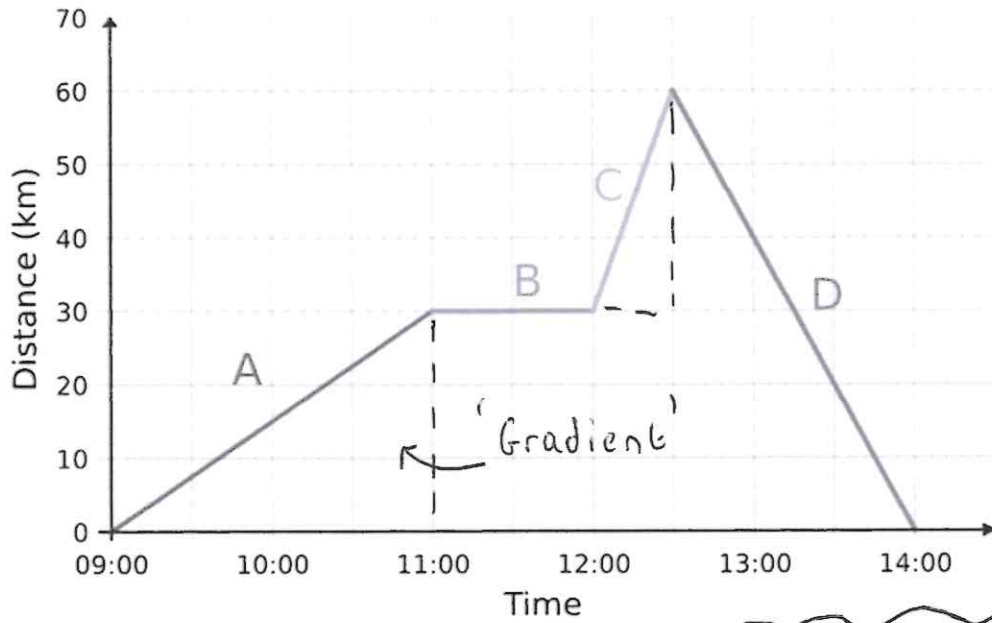


Checkpoint: answer the questions on the board

1.
2.
3.

Distance-Time Graphs

Shows the motion/speed on a journey



A: constant speed

B: stationary

C: constant speed

D: constant speed returning home

C is faster than D, steeper gradient

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

Speed (m/s)
distance (m)
time (s)

Checkpoint: answer the questions on the board

1.

2.

3.

4.

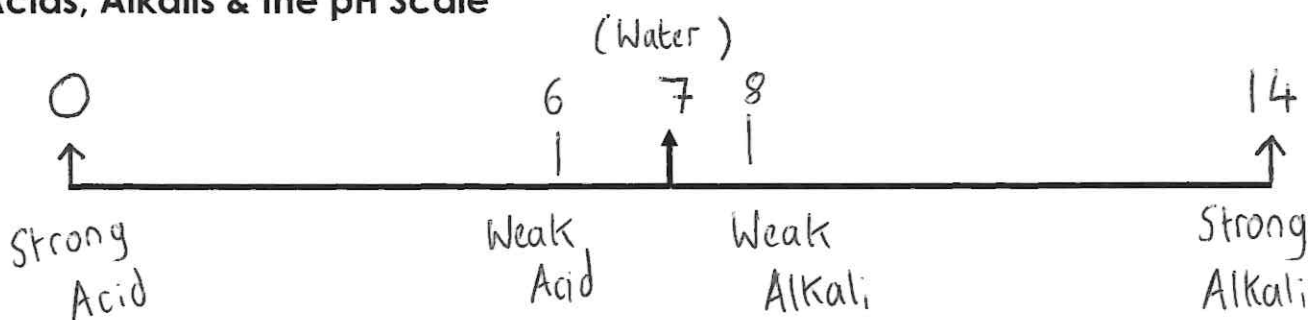
5.



Do now: complete the quiz

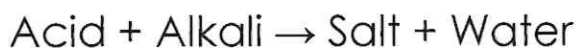
1.	6.
2.	7.
3.	8.
4.	9.
5.	10.

Acids, Alkalis & the pH Scale



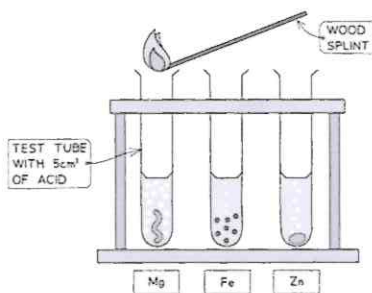
Neutralisation

- You can react an acid with an alkali, and this will make the two solutions cancel each other out, making a neutral saltwater solution.



By reacting different combinations of acids and alkalis you can make different types of salt.

Metal + Acid \rightarrow Salt + Hydrogen



Hydrogen gas makes a squeaky pop

Hydrochloric Acid \rightarrow Chloride Salts

Sulphuric Acid \rightarrow Sulphate Salts

Checkpoint: answer the questions on the board

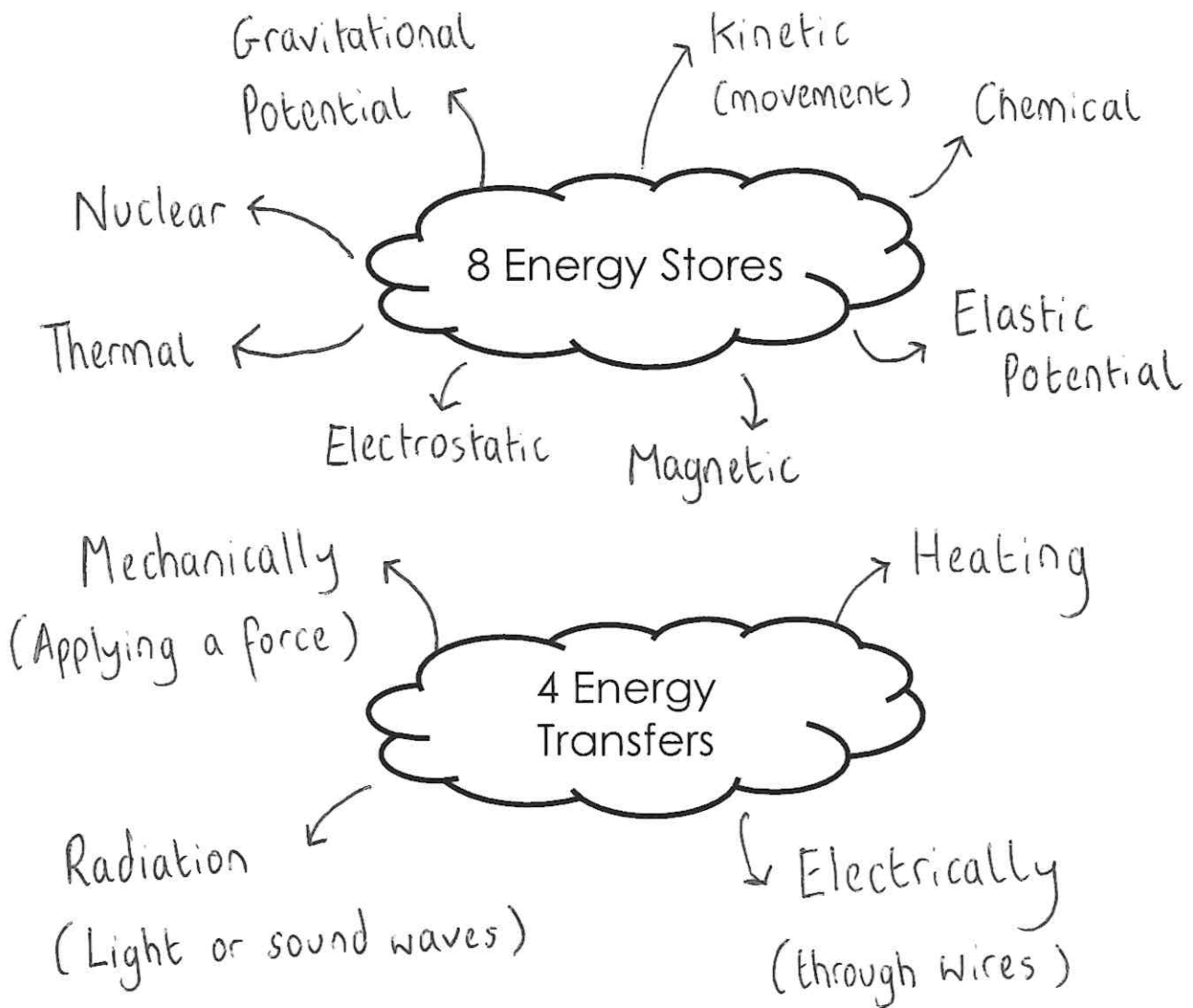
1.

2.

3.

Energy Stores & Energy Transfers

Energy is conserved



Checkpoint: answer the questions on the board

1.

2.

3.

4.

5.