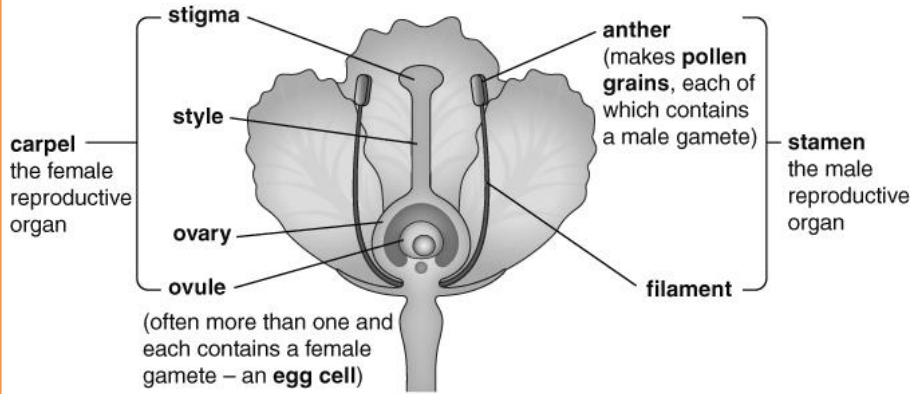


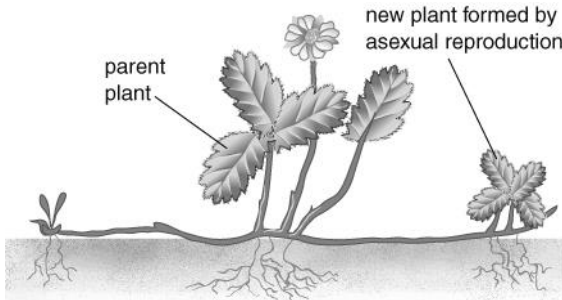
Plants and their reproduction

Sexual reproduction needs two parents to produce **sex cells** or **gametes**. The gametes fuse to produce a **fertilised egg cell** or **zygote**. The zygote uses **cell division** to grow into an **embryo**, which can grow into an adult and become a parent (completing its **life cycle**).



The offspring from sexual reproduction contain **characteristics** from both parents. The differences in these characteristics is **inherited variation**.

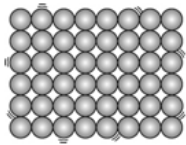
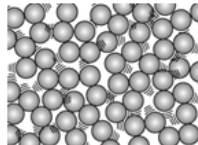
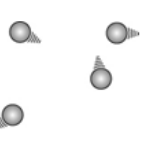
Some plants can reproduce using **asexual reproduction**. This is when *one* parent plant is able to produce offspring (e.g. by using **runners** in strawberries or **tubers** in potatoes).



Offspring are identical to the parents plant. Clones are formed.

A growing plant needs light, air, water, warmth and nutrients - **mineral salts**(LAWWN)

Fluids

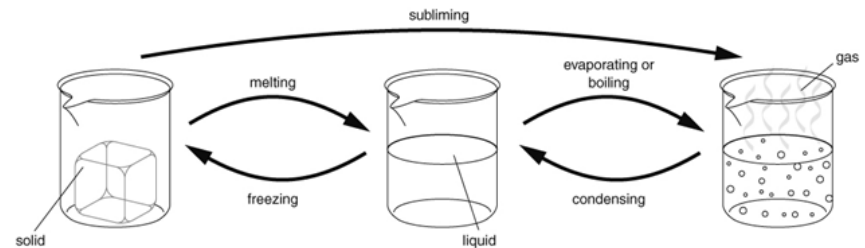
	Solids	Liquids	Gases
Properties	<ul style="list-style-type: none"> fixed volume fixed shape 	<ul style="list-style-type: none"> fixed volume take shape of container 	<ul style="list-style-type: none"> expand to fill container take shape of container
Particle diagram			
Particles	<ul style="list-style-type: none"> are close together are held in fixed positions by strong forces 	<ul style="list-style-type: none"> are close together are held by fairly strong forces can move around 	<ul style="list-style-type: none"> are far apart are held by very weak forces can move around

Density

Density is the mass of a certain volume of something, and it can be calculated using this formula:

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

The units for density are g/cm³ or kg/m³.



Both gases and liquids are fluids. Fluids can flow. Pressure in fluids acts in all directions. The particles in fluids are moving all the time and hitting the walls of containers and other things they come into contact with. The force of the collisions causes pressure, which acts in all directions.

The pressure of gas in a container can be increased by:

- putting more particles into the container (so there will be more collisions with the container walls each second).
- heating the gas (so the particles move faster, hitting the walls harder and more often).
- reducing the volume of the container (so the particles do not have as far to go between the walls and so collide with the walls more often).

Key vocabulary:

Biodiversity - The range of different species of organisms in an area.

Population - The number of a certain organism found in a certain area

Asexual reproduction - Producing new organisms from one parent only

Gamete - A cell used for sexual reproduction.

Sexual reproduction - Reproduction that needs two individuals to produce a new organism of the same type

Variation - The differences between things

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

Fertilisation - Fusing of a male gamete with a female gamete

Chemical change - A change which forms one or more new substances.

Physical change - A change in which no new substances are formed (e.g. changes of state).

Upthrust - A force that pushes things up in liquids and gases.

Friction - A force between two objects that are touching. It usually acts to slow things down or prevent movement.

Weight - The amount of force with which gravity pulls things. It is measured in newtons (N). Your weight would change if you went into space or to another planet

Videos



Quizzes

