



Heart failure can be treated with a transplant or artificial heart

AQA GCSE ORGANISATION part 3

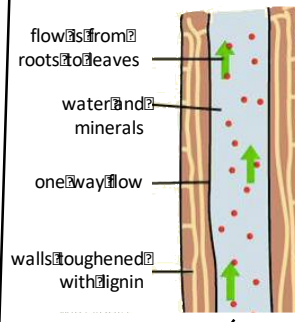
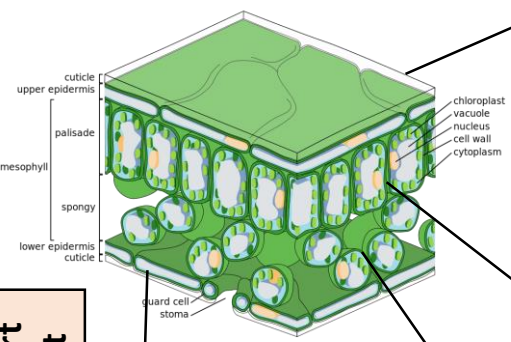
Plant tissues



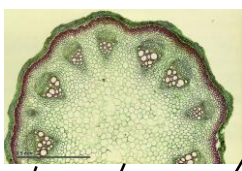
Disease	Cause	Effect	Treatment
Coronary heart disease (CHD)	A build up for fatty substances in the coronary arteries (atherosclerosis)	Oxygen-ated blood cannot get to the cardiac muscle.	Stents: inserted into the blocked artery to open it up. Statins: lower harmful cholesterol.
Faulty heart valves	Valves don't open or close properly	Blood can leak or flow in the wrong direction	Biological valve transplant or a mechanical valve can be inserted

Plant organ systems

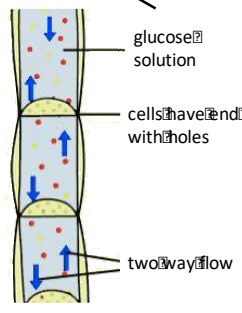
The roots, stem and leaves form a plant organ system for transport of substances around the plant



xylem



phloem



Epidermal tissues	Waxy cuticle (top layer of the leaf)	Reduces water loss from the leaf
	Guard cells and stomata	Guard cells open and close the stomata to control water loss and allow for gas exchange (oxygen and carbon dioxide).
Palisade mesophyll	Palisade cells	Cells near the top surface of the leaf that are packed with chloroplasts that contain chlorophyll. Both adaptations maximize photosynthesis.
Spongy mesophyll	Air spaces in the leaf between cells	Increased surface area for gas exchange so that carbon dioxide can diffuse into photosynthesising cells.
xylem	Hollow tubes strengthened by lignin adapted for the transportation of water in the transpiration stream	Allows transport of water and mineral ions from the roots to the stem and the leaves.
phloem	Cell sap moves from one phloem cell to the next through pores in the end walls	Transports dissolved sugars from the leaves to the rest of the plant for immediate use or storage (translocation).
Meristem tissue	New cells (roots and shoot tips) are made here including root hair cells	Root hair cells have an increased surface area for the uptake of water by osmosis, and mineral ions by active transport.

Cancer

Non-communicable diseases

The result of changes in DNA that lead to uncontrolled growth and division

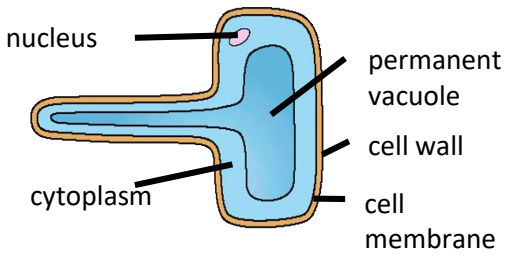
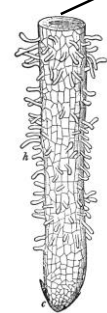
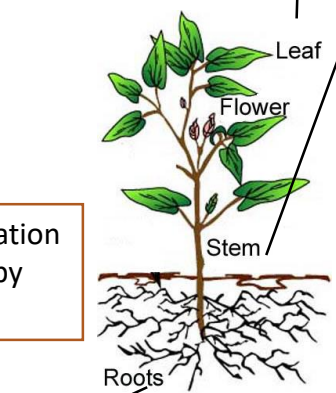
Benign tumour	Contained in one area of the body (usually by a membrane) – not cancer.
Malignant tumour	Invade tissues and spread to different parts of the body to form secondary tumours.

Some cancers have genetic risk factors.

Carcinogens and ionising radiation increase the risk of cancer by changing/ damaging DNA

Risk factors for heart/lung disease and certain types of cancer include drinking alcohol, diet, obesity and smoking

These risks factors can also affect the brain, liver and the health of unborn babies



A potometer is used to measure the amount of water lost over time (rate of transpiration)

Transpiration

Transpiration	The rate at which water is lost from the leaves of a plant. The transpiration stream is the column of water moving through the roots, stem and leaves	Temperature, humidity, air movement and light intensity affect the rate of transpiration.
---------------	---	---

