

Structure and Function of the...

Red Blood Cell

Function:

- Transport oxygen from lungs to other cells in body

note:

- Equation: $haemoglobin + oxygen \rightleftharpoons oxyhaemoglobin$
in lungs



- Red Blood cells also play a role in transporting carbon dioxide (more in chapter of Respiration)

Adaptations of the Red Blood Cell

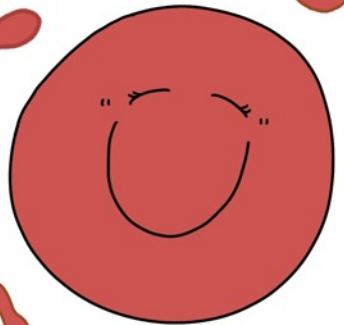
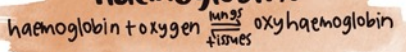
Circular Biconcave Shape:

To increase surface area to volume ratio to increase rate of absorption of oxygen

Lacks nucleus:

To pack in more haemoglobin to increase oxygen-carrying capacity of blood

Cytoplasm contains haemoglobin:



Elastic:

To change shape so they can fit into tiny & narrow blood capillaries

Root Hair Cell

Function:

- Absorbs water and dissolved mineral salts from the soil into the roots

Adaptations of the Root Hair Cell

Long and narrow protrusion

To increase surface area to volume ratio to increase rate of absorption of water and mineral salts

contains a lot of mitochondria

To release energy from respiration for active transport of mineral ions, against a concentration gradient

