

Light microscopy

- used to view animal and plant cells
- has restrictions in maximum magnification

Total magnification

- total magnification = power of the eyepiece lens $\times$ power of the objective lenses

Biological staining

- allows more detail of the cell to be seen

Electron microscopy

- has greater magnification than light microscopy
- can only be used to view dead tissue

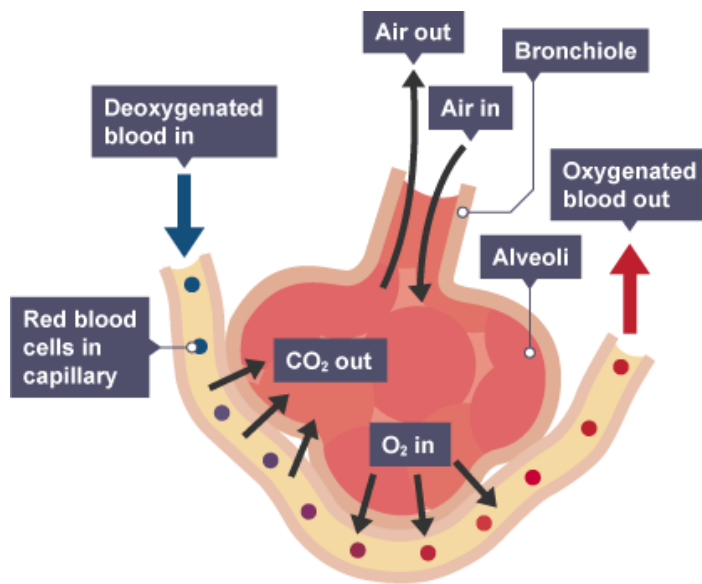
Specialised cells

- the differentiation of cells in multicellular organisms to become adapted for specific functions
- more efficient in performing specific functions than non-specialised cells

Levels of organisation

- cells
- tissues (groups of similar cells with a similar function)
- organs (groups of several tissues performing specific functions)
- organ systems
- organisms

The structure of an alveolus



The adaptations of alveoli for gas exchange

- large surface area
- thin wall
- moist lining
- rich blood supply

The percentage composition of inspired air

- oxygen: 21%
- carbon dioxide: 0.04%
- nitrogen: 79%
- water vapour: varies

The percentage composition of expired air

- oxygen: 16%
- carbon dioxide: 4%
- nitrogen: 79%
- water vapour: saturated

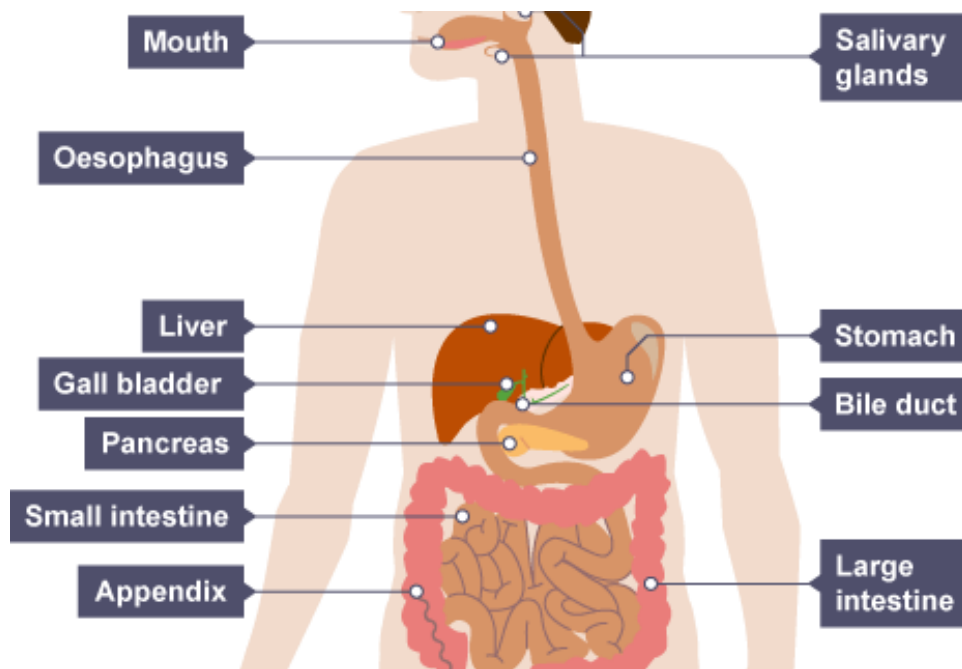
The use of lime water to indicate the presence of carbon dioxide

- uses a simple 'huff and puff' apparatus
- Lime water goes cloudy in the presence of carbon dioxide.

Cigarettes

- increase the risk of disease in the respiratory system
- contain nicotine, which is addictive
- (smoke) have chemicals that paralyse cilia and have particles that clog mucus, which prevents their function
- (smoke) destroy lung tissue, leading to emphysema
- (tobacco smoke) has tar, which contains carcinogens, which lead to lung cancer

The digestive system



Mouth

- begins starch digestion by carbohydrase/amylase in saliva

Stomach

- secretes protease

Pancreas

- secretes lipase, protease and carbohydrase into the small intestine

Small intestine

- continues digestion of fat, protein and starch
- absorbs digested molecules

Large intestine

- absorbs water

Liver

- secretes bile

Preview from Notesale.co.uk
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