# WJEC England Biology GCSE

## 2.1 - Transport in cells

Flashcards

This work by PMT Education is licensed under CC BY-NC-ND 4.0

# Define diffusion



CC BY NC ND

# Define diffusion

The net movement of molecules from an area of high concentration to an area of low concentration down their concentration gradient


CC BY NC ND

# How does temperature affect the rate of diffusion?



CC BY NC ND

# How does temperature affect the rate of diffusion?

As the temperature increases, so does the rate of diffusion as the particles have more kinetic energy and move faster


CC BY NC ND

# How does the concentration gradient affect the rate of diffusion?



CC BY NC ND

How does the concentration gradient affect the rate of diffusion?

The greater the concentration gradient (the difference between the two areas), the faster the rate of diffusion


CC BY NC ND

# How does the surface area of the membrane affect the rate of diffusion?


CC BY NC ND

How does the surface area of the membrane affect the rate of diffusion?

As the surface area increases so does the rate of diffusion as there is more space for the particles to move through


CC BY NC ND

# Define osmosis


CC BY NC ND

# Define osmosis

The net movement of water molecules from a high water potential to a low water potential down their water potential gradient across a partially permeable membrane


CC BY NC ND

# Define active transport



CC BY NC ND

# Define active transport

The movement of molecules from a low concentration to a high concentration against their concentration gradient using energy


CC BY NC ND

# Why do large multicellular organisms need transport systems?



CC BY NC ND

# Why do large multicellular organisms need transport systems?

They have a small surface area to volume ratio and so the rate of diffusion alone would not be fast enough to transport substances around



CC BY NC ND

# Give 4 examples of substances transported within organisms



CC BY NC ND

Give 4 examples of substances transported within organisms

- $O_2$ is transported in for respiration
- $CO_2$ is transported out from respiration
- Dissolved food molecules from digestion
- Urea and waste products



CC BY NC ND