

Movement into and out of cells

Diffusion

Net movement down gradient

High to low concentration Random movement

Through cell membrane

Gases Solutes

Importance

Oxygen for respiration Carbon dioxide for photosynthesis

Food absorption Urea removal

Factors **Supplement**

Surface area Temperature Concentration gradient

Distance

Osmosis

Osmosis of water

Partially permeable membrane Cell membrane

Investigations

Dialysis tubing Potato cylinders

Percentage change in mass

Water potential **Supplement**

High to low Dilute to concentrated

Plant cells in solutions **Supplement**

Turgid Turgor pressure Flaccid Plasmolysis

Active transport **Supplement**

Against concentration gradient **Supplement**

Low to high

Energy from respiration **Supplement**

Mitochondria

Ion uptake by root hairs **Supplement**

Mineral ions Nitrate