INFORMATION SHEET

Useful Words

Solute – something which can dissolve in water, e.g. salt.
Solvent – something in which substances can dissolve, e.g. water.
Solution – when a solute is completely dissolved in a solvent.
Osmosis – movement of water into or out of cells because of their solute concentrations.
Endosmosis – movement of water into a cell when placed in tap water.
Exosmosis – movement of water out of a cell when placed in salty water.
Turgor pressure – the pressure inside a cell after it has taken in lots of water.
Plasmolysis – the pulling away of the cell membrane from the cell wall after a cell has lost a lot of water.
Cell sap – the contents of a vacuole found in plant cells.
Isotonic point – the point at which solutes are perfectly balanced on either side of a cell membrane. The point at which cells neither lose nor gain water.

Key Concepts

- When water enters plant tissue it feels firm (turgor pressure increases).
- When water leaves plant tissue it feels soft (decreased turgor pressure).
- After more than 10 minutes of water loss the cells will collapse due to plasmolysis (see useful words).
- Adding salt to tap water increases the solute concentration.
- A difference in solute concentration between the inside of a plant cell and the surrounding solution causes water to move (osmosis).

Reference Diagram

Diagram of a 'normal' plant cell taken from the stem of a plant.
(This cell has been lying in tap water for 25 minutes.)