

Subject	Science
Unit/Topic	Year 9 Cells

Key Vocabulary	Definition
Eukaryotic	Cell with a nucleus.
Prokaryotic	Cell without a nucleus.
Organelles	Small structures inside a cell e.g. nucleus.
Microscopy	Using a microscope to magnify a sample.
Magnification	How many times bigger an lens makes an image appear.
Resolution	The ability to distinguish between two parts. A higher resolution gives a sharper image. Electron microscopes give a higher resolution.
Nucleus	Contains DNA.
Plasmid	Rings of DNA found in prokaryotic cells.
Cytoplasm	Where chemical reactions take place.
Cell membrane	Controls what enters and leaves the cell.
Cell wall	Provides strength to the cell.
Cellulose	A carbohydrate that makes up a cell wall.
Mitochondria	Where aerobic respiration takes place.
Ribosomes	Where proteins are made.
Chloroplasts	Where photosynthesis occurs.
Vacuole	Contains cell sap.
Differentiation	When a cell becomes a specialised cell.

Specialised cell	A cell that has differentiated so that it has a unique structure that enables it to carry out a specific function e.g sperm cell, palisade cell.
Mitosis	Cell division where one set of chromosomes are pulled to each end of the cell and the nucleus divides.
Chromosome	A long molecule made of coiled up DNA, found in the nucleus.
DNA	The molecule in cells that stores genetic information.
Gene	A section of DNA, found on a chromosome, which contains the instructions needed to make a protein, and so controls the development of a characteristic.
Stem cell	Cells that are undifferentiated but can turn into any type of cell.
Embryonic stem cell	Stem cells found in embryos (cells that will form the foetus). They can differentiate into all types of animal cells.
Adult bone marrow	Stem cells found in adults. They can only differentiated into types of bone and blood cells.
Meristem tissue	Found in growing tips of plant shoots and roots that is able to differentiate into plant cells.
Therapeutic cloning	A type of cloning where the embryo is made to have the same genetic information as the patient. Can be used to treat paralysis.
Diffusion	The movement of particles from a HIGH concentration to a LOW concentration down a concentration gradient.
Surface area to volume ratio	A proportion that is used to explain why larger multicellular organisms require a gas exchange system.
Osmosis	The movement of WATER from a DILUTE solution to a MORE CONCENTRATED solution through a partially permeable membrane.
Active transport	The movement of particles, e.g. mineral ions, from a HIGH concentration to a LOW concentration, AGAINST the concentration gradient, using ENERGY.