

Keywords: Autumn 1

Science

Topic Title: Cell Biology

Introduction to the topic: In this topic you will explore what cells look like, how cells make more of themselves and how substances are transported in cells.

What lessons will you cover during the topic? Cells, microscopes, stem cells, cell cycle, transport in cells and osmosis.

Keyword	Definition
Eukaryotic cell	A type of cell that has a nucleus
Prokaryotic cell	Simple cell that does not have a nucleus – the DNA is free in the cytoplasm.
Magnification	Amount that an image of something is scaled up when viewed through a microscope.
Resolution	Fineness of detail that can be seen in an image – the higher the resolution of an image the more detail it has.
Adult stem cell	A type of stem cell found in specific locations of adults. They can only differentiate into a limited number of related cell types.
Cell cycle	Series of stages that a cell goes through as it is growing and dividing.
Differentiation	When an unspecialised cell becomes a more specialised cell type.
Embryonic stem cell	A type of stem cell found in the embryo, capable of dividing into almost any cell type.
Active transport	A process that is required to move molecules against a concentration

	gradient. It requires energy from respiration to do this.
Diffusion	The movement of molecules from an area of higher concentration to an area of lower concentration
Osmosis	Movement of water molecules across a selectively permeable membrane from a region of higher water concentration to a region of lower water concentration.