B2: Cells and Control

1. Mitosis	
Interphase	Cell parts are made and DNA chromosomes are replicated.
Mitosis	When one cell divides into two genetically identical daughter cells.
Prophase	The membrane of the nucleus breaks down and spindle fibres start to form.
Metaphase	Spindle fibres fully form and chromosomes line up across the **m**iddle of the cell.
Anaphase	Chromosomes get pulled apart and move to each end of the cell.
Telophase	A new membrane forms around each set of chromosomes to form **t**wo nuclei.
Cytokinesis	The two new cells fully separate.
Diploid cell	Have two sets of chromosomes (23 pairs in humans).
Asexual	Type of reproduction with just one parent producing a clone of itself through mitosis.

2. Animal Growth	
Growth	Increase in size due to increased numbers of cells.
Differentiation	An unspecialised cell becomes specialised.
Specialised cell	A cell with special features designed for a specific job.

3. Plant Growth	
Plant growth	Cell division creates more cells, elongation makes these cells get bigger.
Meristems	Areas in the tips of roots and shoots where cell division and differentiation happens.

4. Stem Cells	
Stem cell	An unspecialised cell that can undergo cell division and differentiation to form specialised cells.
Embryonic stem cell	A stem cell that can become any kind of cell. Found in developing embryos.

5. The Nervous System	
Nervous system	Organ system made up of the CNS and nerves.
Stimulus	Anything your body is sensitive to
Sense organ	Contain receptor cells that detect stimuli (e.g. eyes, ears, skin).
Neurone	A nerve cell
Impulse	Electrical message carried by a neuron.
Response	The action that the nervous system makes happen.
Sensory Neurone	Nerve cell that carries impulses from sense organs to the CNS.
Cell body	The central part of a nerve cell containing its nucleus.
Dendron and axon	The long parts of a nerve cell carrying impulses towards the cell body (dendron) and away from it (axon)
Dendrites	Branches at the beginning of a dendron that connect to receptor cells or another neuron.
Myelin sheath	A fatty layer around the axon and dendron that insulates it.

6. Neurotransmission Speeds	
Neuro-transmission	The travelling of an impulse along a neuron and into another.
Effector	The body part that produces the response, often a muscle.
Synapse	Small gap between two neurons where the axon terminals of one meet the dendrites of another.
Neuro-transmitter	Chemicals released by axon terminals that diffuse across the synapse to trigger a new impulse the dendrite of another neuron.
Relay neuron	Nerve cell in the CNS that links sensory and motor neurones.
Motor neuron	Nerve cell that carries impulses from the CNS to effectors. Dendrites join onto cell body, long axon.
Reflexes	Automatic responses that happen very quickly without conscious thought to keep the body safe.