**B3 Key Terms**

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| **Key Term** | **Definition** |
| Mitochondria | Structure in a cell that makes energy |
| Ribosomes | Structure in a cell that is too small to be seen by microscopes, makes proteins |
| Gene | Contains a different sequence of bases and codes for a particular protein |
| Enzyme | Biological catalysts that have a high specificity for their substrate |
| Gene mutation | A change in the base sequence that may alter the protein |
| Optimum  | Where an enzyme works best |
| Denature | Enzyme changes shape so it can not bind to the substrate |
| Aerobic respiration | Breaking down glucose with oxygen to make energy |
| ATP | Energy |
| Anaerobic respiration | Breaking down glucose WITHOUT oxygen into lactic acid to make a small amount of energy |
| Fatigue | Oxygen debt and build up of lactic acid |
| Multicellular | Organisms made with more than one cell |
| DNA Replication | Create identical copies of DNA |
| Diploid | Pairs of chromosomes (e.g. in humans =46) |
| Haploid | Half the normal number of chromosomes (e.g. in humans =23) |
| Gamete | Sperm of egg cells, they are haploid |
| Mitosis | Cell division of body cells to make 2 genetically identical diploid copies |
| Meiosis | Cell division in gametes to make 4 genetically different haploid cells |
| Fertilisation | Gametes combine to form diploid zygote |
| Acrosome | Area in head of the sperm cell that contains enzymes to break down the egg membrane |
| Red blood cell | Carries oxygen around the blood, contains lots of haemoglobin |
| Artery | Transports blood away from the heart |
| Veins | Transports blood towards the heart |
| Capillaries | Exchange materials with tissues |
| Double circulatory system | Blood passes through the heart twice in one circuit around the body this allows the blood to flow at higher pressure |
| Bacteria Cell | A cell that doesn’t have a nucleus |
| Dry Mass | A measure of growth, remove all the water from an organism and weigh it |
| Stem Cells | Undifferentiated (simple) cells that can turn into any type of cell |
| Meristems | Plant stem cells |
| Selective Breeding | Breeding together individuals with the characteristics you want, can lead to inbreeding |
| Genetic Engineering | Taking gene from one organism and inserting it into the DNA of another organism |
| Gene therapy | Changing a person’s genes in an attempt to cure disorders |
| Cloning | Make a genetically identical copy |
| Tissue culture | Taking a small piece of a plant and growing it to make a clone |