

Main Points of the Science course — Year 10

UNIT	Atoms and Ions	Acids, Bases and Metals	Human Body	Genetics	Forces and Motion	Electromagnetism
	Elements, Mixtures and compounds	Physical and Chemical change	Human body skeleton – name of main bones	Main steps of reproduction – meiosis, gametes, fertilisation	Contact (friction) and non-contact forces (magnetism, gravity)	Static electricity – movement of charges + discharge
	Dissolving, and solutions	Reactants and products	Muscles and bones of Arm	DNA structure and base pairing A-T and C-G (nucleotides)	Balanced / unbalanced force diagrams	Electrical circuits + symbols
	Atoms structure – protons, electrons and neutrons	Gas tests – Oxygen, carbon dioxide and hydrogen	Main parts of synovial joint in the elbow	Chromosome, alleles, DNA and gene relationship	Calculating net force	Series and parallel circuits with voltage and current rules
	Periodic Table and electron arrangement	Acids – HCl, H ₂ SO ₄ , HNO ₃ Base - NaOH	Circulatory system – main parts, heart arteries, veins	Variation – continuous and discontinuous	Work $W=fd$ and Power $P=W/t$ calculations	voltage - volts and current - amps rules
	Ions – formation and charges	Neutralisation reactions	Parts of the heart and their function	Punnett squares showing dominant and recessive offspring	Mass and weight – definitions and calculations $F=mg$	Insulators and conductors
	Writing compounds	pH and indicators – litmus and Universal indicator colours	Parts of blood –red cells, white cells, plasma, platelets – and their function	Homozygous and heterozygous - Genotype causing phenotype	Calculating speed $v=d/t$	Resistance - reduces current in a circuit
	Word and formula equations	Metal properties and their uses	Respiratory system – lungs etc and their function	Male XY and female XX inheritance	Distance / time graphs	Magnetism – like charges repel, opposite charges attract
	Balancing formula equations	Metal reactions with oxygen and acid	Breathing, gas exchange and respiration	Genetic disorders and mutation	Speed / time graphs	Magnetic force fields