Summer 2023 Triple Science GCSE AQA

Paper 1			**CGP pages:**	**Check**
Biology				
	Cells	*Eukaryotic and prokaryotic cells* *Microscopes* *Culturing Micro-organisms* *Differentiation and Specialisation* *Stem cells* *Cell cycle and mitosis* *Diffusion, osmosis, active transport (**Req Prac**)*	Higher 6-10	
	Organisation	*Digestion* *Food Tests (**Req Prac**)* *Enzymes (**Req Prac**)* *Lungs* *Circulatory System* *Cardiovascular disease* *Non-communicable disease and risk factors* *Cancer* *Transpiration and stomata*	Higher 11-18	
	Infection	*Communicable disease* *The 7 examples of disease* *Immune response* *Vaccination* *Monoclonal antibodies* *Drug trials* *Plant Disease*	Higher 19-23	
	Bioenergetics	*Photosynthesis* *Measuring the rate of photosynthesis (**Req Prac**)* *Respiration* *Metabolism*	Higher 24-26	
Chemistry	Atomic Structure	*Atoms, elements, compounds, isotopes* *Formulas and equations* *Separating mixtures* *History of the atom* *Electronic structure* *Development of the periodic table* *Metals and non metals* *Group 1/7/0* *Transition Metals*	Higher 6-13	
	Bonding	*Ions and ionic compounds* *Covalent bonding* *Polymers* *Simple and giant covalent compounds* *Allotropes of carbon* *Metallic bonding*	Higher 14-19	

		States of matter *Nanoparticles*		
	Quantitative	*Relative formula mass* *Conservation of mass* *Concentrations and solutions* *Moles* Limiting Reactants Atom Economy	Higher 20-23	
	Chemical Change	*Acids and bases* *Titrations* *Making salts (**Req Prac**)* *Metals and reactivity* *Extracting metals* *Electrolysis (**Req Prac**)*	Higher 24-28	
	Energy Change	*Exothermic and endothermic reactions* *Measuring energy changes (**Req Prac**)* *Energy profiles* *Bond energies* *Fuel Cells*	Higher 29-30	
Physics				
	Energy	*Energy stores and transfers* *Work done* *Specific Heat Capacity (**Req Prac**)* *Power* *Conduction and convection* *Reducing unwanted transfers and efficiency* *Energy resources – renewable and non-renewable*	Higher 6-11	
	Electricity	*Current and charge* *Resistance and Ohms Law* *Resistance of a wire (**Req Prac**)* *I-V characteristics* *Series and parallel circuits* *LDR and thermistors* *Electricity in the home (3 pin plug)* *Power* *National Grid* *Static*	Higher 12-19	
	Particle Model	*Particle model of solid/liquid/gas* *Density (**Req Prac**)* *Internal energy and change of state* *Specific Latent Heat* *Particle motion in gases* *Pressure in gases*	Higher 20-22	
	Atomic Structure	*Development of atomic model* *Isotopes* *Ionising Radiation*	Higher 23-26	

		Nuclear equations *Half life* *Irradiation and contamination* *Nuclear Fission and Fusion*		

Paper 2			CGP pages:
Biology	Homeostasis	*Nervous system* *Reaction time (**Req Prac**)* *Brain* *Eye and vision* *Hormonal system* *Blood glucose* *Diabetes* *Kidney* *Puberty and Menstrual Cycle* *Contraception and fertility* *Plant Hormones*	Higher 27-35
	Inheritance	*Asexual and Sexual reproduction* *DNA and chromosomes* *Meiosis* *Genetic diagrams (punnet squares and family trees)* *Mendel* *Cystic Fibrosis and Polydactyly* *Embryo Screening* *Mutations and natural selection* *Evolution and evidence from fossils* *Speciation* *Antibiotic resistant bacteria* *Selective Breeding* *Genetic Engineering* *Cloning* *Classification*	Higher 36-45
	Ecology	*Describing ecosystems* *Competition* *Abiotic and Biotic factors* *Adaptations* *Food Chains* *Using quadrats (**Req Prac)*** *Water Cycle and Carbon Cycle* *Biodiversity and Waste management* *Global warming* *Deforestation* *Decay **(Req Prac)*** *Trophic levels and biomass*	Higher 46-53

		Food security and farming	
Chemistry	Rates of Reaction	*Collision theory* *Factors affecting rate of reaction* *Measuring rate of reaction (gas syringe and disappearing cross **Req Prac)*** *Analysing graphs of rates and calculating rate* *Reversible reactions* *Le Chatelier's principle and dynamic equilibrium*	Higher 31-33
	Organic	*Hydrocarbons and crude oil* *Fractional distillation* *Cracking* *Alkene reactions* *Alcohols* *Carboxylic Acids* *Condensation Polymers*	Higher 34-40
	Chemical Analysis	*Purity and formulations* *Testing for gases (oxygen, hydrogen, chlorine and carbon dioxide)* *Chromatography (**Req Prac**)* *Ion Tests* *Flame Emission Spectroscopy*	Higher 41-44
	Atmosphere	*Changes in the atmosphere* *Climate change and greenhouse effect* *Carbon footprint* *Pollutants*	Higher 45-47
	Using Resources	*Alloys and corrosion* *Finite and renewable resources* *Sustainability* *Recycling* *Life Cycle Assessment - LCA* *Potable water (**Req Prac**)* *Waste water treatment* *Haber Process* *Fertilisers*	Higher 48-54
Physics	Forces	*Contact and non-contact forces* *Scalar and Vector quantities* *Calculating resultant force and work done* *Elasticity and Hooke's Law (**Req Prac**)* *Moments, levers and gears* *Fluid pressure and upthrust* *Speed and velocity* *Acceleration* *Distance-time and velocity-time graphs* *Terminal velocity*	Higher 27-37

		Newton's Laws *F=ma (**Req Prac**)* *Stopping distances and reaction time* *Momentum calculations*	
	Waves	*Wave features* *Transverse and longitudinal waves* *Wave speed* *Wave Equation* *Investigating waves (**Req Prac**)* *Refraction* *Electromagnetic Spectrum – uses and dangers* *Lenses* *Visible light and filters* *Investigating IR radiation (**Req Prac**)* *Black body radiation* *Sound waves* *Seismic Waves*	Higher 38-47
	Magnetism	*Permanent and induced magnets* *Magnetic fields* *Electromagnets* *Solenoids* *Motor effect* *Left hand rule* *Generator effect* *Speakers and microphones* *Transformers*	Higher 48-52
	Space	*Life Cycle of Stars* *Solar System* *Orbits* *Red Shift and Big Bang*	Higher 53-54