**Triple Science**

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| **Biology** | **Chemistry** | **Physics** |
| **SB1- Key Concepts in Biology**SB1a MicroscopesSB1b Plant and Animal Cells/*Using Microscopes*SB1c Specialised CellsSB1d Inside BacteriaSB1e Enzymes and NutritionSB1f *Testing Foods*SB1g Enzyme ActionSB1h Enzyme Activity/*pH and Enzymes*SB1i Transporting Substances *Osmosis in Potato***SB2- Cells and Control**SB2a MitosisSB2b Growth in AnimalsSB2c Growth in PlantsSB2d Stem CellsSB2e The BrainSB2f Brain and Spinal Cord ProblemsSB2g The Nervous SystemSB2h The EyeSB2i Neurotransmissions Speeds**SB3- Genetics**SB3a Sexual and Asexual ReproductionSB3b MeiosisSB3ci DNASB3cii DNA ExtractionSB3d Protein SynthesisSB3e Genetic Variants and PhenotypesSB3f MendelSB3g AllelesSB3h InheritanceSB3i Multiple and Missing AllelesSB3j Gene MutationSB3k Variation**SB4- Natural Selection and Genetic Modification**SB4a Evidence for Human EvolutionSB4b Darwin’s TheorySB4c Development of Darwin’s TheorySB4d ClassificationSB4e Breeds and VarietiesSB4f Tissue CultureSB4g Genes in Agriculture and MedicineSB4h GM and MedicineSB4i Fertilizers and Biological Control**SB5- Health, Disease and the Development of Medicines**SB5a Health and DiseaseSB5b Non-Communicable DiseasesSB5c Cardiovascular DiseaseSB5d PathogensSB5e Spreading PathogensSB5f Virus Life CyclesSB5g Plant DefencesSB5h Plant DiseasesSB5i Physical and Chemical BarriersSB5j The Immune SystemSB5k *Antibiotics*SB5l Monoclonal Antibodies**SB6- Plant Structures and Their Functions**SB6a PhotosynthesisSB6b Factors that Affect Photosynthesis *Light Intensity and Photosynthesis*SB6c Absorbing Water and Mineral IonsSB6d Transpiration and TranslocationSB6e Plant Adaptations SB6f Plant HormonesSB6g Uses of Plant Hormones**SB7- Animal Coordination, Control and Homeostasis**SB7a HormonesSB7b Hormonal Control of Metabolic RateSB7c The Menstrual CycleSB7d Hormones and the Menstrual CycleSB7e Control of Blood GlucoseSB7f Type 2 DiabetesSB7g ThermoregulationSB7h OsmoregulationSB7i The Kidneys**SB8- Exchange and Transport in Animals**SB8a Efficient Transport and ExchangeSB8b Factors Affecting DiffusionSB8c The Circulatory SystemSB8d The HeartSB8e Cellular Respiration/*Respiration Rates***SB9- Ecosystems and Material Cycles**SB9a EcosystemsSB9b Energy TransferSB9c Abiotic Factors and Communities *Quadrats/Transects*SB9d Biotic Factors and CommunitiesSB9e Assessing Pollution SB9f Parasitism and MutualismSB9g Biodiversity and HumansSB9h Preserving BiodiversitySB9i Food SecuritySB9j The Water CycleSB9k The Carbon CycleSB9l The Nitrogen CycleSB9m Rates of Decomposition | **SC1- States of Matter**SC1a States of Matter**SC2- Methods of Separating and Purifying Substances**SC2a MixturesSC2b Filtration and CrystallisationSC2c Paper ChromatographySC2d Distillation/*Investigating Inks*SC2e Drinking Water**SC3- Atomic Structure**SC3a Structure of an AtomSC3b Atomic Number and Mass NumberSC3c Isotopes**SC4- The Periodic Table**SC4a Elements and the Periodic TableSC4b Atomic Number and the Periodic TableSC4c Electronic Configurations and the Periodic Table**SC5- Ionic Bonding**SC5a Ionic BondsSC5b Ionic LatticesSC5c Properties of Ionic Compounds**SC6- Covalent Bonding**SC6a Covalent Bonding**SC7- Types of Substances**SC7a Molecular CompoundsSC7b Allotropes of CarbonSC7c Properties of MetalsSC7d Bonding Models**SC8- Acids and Alkalis**SC8a Acids, Alkalis and IndicatorsSC8b Looking at AcidsSC8c Bases and Salts/*Preparing Copper Sulfate*SC8d Alkalis and Balancing EquationsSC8e Alkalis and NeutralisationSC8f Reactions of Acids with Metals & CarbonatesSC8g Solubility**SC9- Calculations Involving Masses**SC9a Masses and Empirical FormulaSC9b Conservation of MassSC9c Moles**SC10- Electrolytic Processes**SC10a Electrolysis *of Copper Sulfate Solution*SC10b Products of Electrolysis**SC11- Obtaining and Using Metals**SC11a ReactivitySC11b OresSC11c Oxidation and ReductionSC11d Life Cycle Assessment and Recycling**SC12- Reversible Reactions and Equilibria**SC12a Dynamic Equilibrium**SC13- Transition Metals, Alloys and Corrosion**SC13a Transition MetalsSC13b CorrosionSC13c ElectroplatingSC13d AlloyingSC13e Uses of Metals and their Alloys**SC14- Quantitative Analysis**SC14a YieldsSC14b Atom EconomySC14c ConcentrationsSC14d *Titrations* and CalculationsSC14e Molar Volume of Gases**SC15- Dynamic Equilibria, Calculations Involving Volume**SC15a Fertilisers and the Haber ProcessSC15b Factors Affecting Equilibrium **SC16- Chemical Cells and Fuel Cells**SC16a Chemical Cells and Fuel Cells **SC17- Groups in the Periodic Table**SC17a Group 1SC17b Group 7SC17c Halogen ReactivitySC17d Group 0**SC18- Rates of Reaction**SC18a Rates of ReactionSC18b Factors Affecting Reaction Rates *Investigating RR’s*SC18c Catalysts and Activation Energy**SC19- Heat Energy Changes in Chemical Reactions**SC19a Exothermic and Endothermic ReactionsSC19b Energy Changes in Reactions**SC20- Fuels**SC20a Hydrocarbons in Crude Oil and Natural GasSC20b Fraction Distillation of Crude OilSC20c The Alkane Homologous SeriesSC20d Complete and Incomplete CombustionSC20e Combustible Fuels and PollutionSC20f Breaking Down Hydrocarbons**SC21- Earth and Atmospheric Science**SC21a The Early AtmosphereSC21b The Changing AtmosphereSC21c The Atmosphere TodaySC21d Climate Change**SC22- Hydrocarbons**SC22a Alkanes and AlkenesSC22b Reactions of Alkanes and Alkenes**SC23- Alcohols and Carboxylic Acids**SC23a Ethanol ProductionSC23b Alcohols/*The Combustion of Alcohols*SC23c Carboxylic Acids**SC24- Polymers**SC24a Addition PolymerisationSC24b Polymer Properties and UsesSC24c Condensation PolymerisationSC24d Problems with Polymers**SC25- Qualitative Analysis – Tests for Ions**SC25a Flame Tests and PhotometrySC25b Tests for Positive IonsSC25c Tests for Negative Ions/*Identifying Ions***SC26- Bulk and Surface Properties of Matter**SC26a Choosing MaterialsSC26b Composite MaterialsSC26c Nanoparticles  | **SP1- Motion**SP1a Vectors and ScalarsSP1b Distance/Time GraphsSP1c AccelerationSP1d Velocity/Time Graphs**SP2- Forces and Motion**SP2a Resultant ForcesSP2b Newton’s First LawSP2c Mass and WeightSP2d Newton’s Second Law/*Investigating Acceleration*SP2e Newton’s Third LawSP2f MomentumSP2g Stopping DistancesSP2h Braking Distances and EnergySP2i Crash Hazards**SP3- Conservation of Energy**SP3a Energy Stores and TransfersSP3b Energy EfficiencySP3c Keeping WarmSP3d Stored EnergiesSP3e Non-Renewable ResourcesSP3f Renewable Resources**SP4- Waves**SP4a Describing WavesSP4b Wave Speeds/*Investigating Waves*SP4c RefractionSP4d Waves Crossing BoundariesSP4e Ears and HearingSP4f UltrasoundSP4g Infrasound**SP5- Light and the Electromagnetic Spectrum**SP5a Ray Diagrams/*Investigating Refraction*SP5b ColourSP5c LensesSP5d Electromagnetic WavesSP5e The Electromagnetic SpectrumSP5f Using the Long WavelengthsSP5g Radiation and TemperatureSP5h Using the Short WavelengthsSP5i EM Radiation Dangers**SP6- Radioactivity**SP6a Atomic ModelsSP6b Inside AtomsSP6c Electrons and OrbitsSP6d Background RadiationSP6e Types of RadiationSP6f Radioactive DecaySP6g Half-LifeSP6h Using RadioactivitySP6i Dangers of RadioactivitySP6j Radioactivity in Medicine SP6k Nuclear FissionSP6l Nuclear Fusion**SP7- Astronomy** SP7a The Solar SystemSP7b Gravity and OrbitsSP7c Life-cycles of StarsSP7d Red-ShiftSP7e Origin of the Universe **SP8- Energy-Forces Doing Work**SP8a Work and Power**SP9- Forces and Their Effects**SP9a Objects Affecting Each OtherSP9b Vector DiagramsSP9c Rotational Forces**SP10- Electricity and Circuits**SP10a Electric CircuitsSP10b Current and Potential DifferenceSP10c Current, Charge and EnergySP10d ResistanceSP10e More Resistance/*Investigating Resistance*SP10f Transferring EnergySP10g PowerSP10h Transferring Energy by ElectricitySP10i Electrical Safety**SP11- Static Electricity**SP11a Charges and Static ElectricitySP11b Dangers and Uses of Static ElectricitySP11c Electric Fields**SP12- Magnetism and the Motor Effect**SP12a Magnets and Magnetic FieldsSP12b ElectromagnetismSP12c Magnetic Forces**SP13- Electromagnetic Induction**SP13a Electromagnetic InductionSP13b The National GridSP13c Transformers and Energy**SP14- Particle Model**SP14a Particles and Density/*Investigating Densities*SP14b Energy and Changes of StateSP14c Energy Calculations/*Investigating Water*SP14d Gas Temperature and PressureSP14e Gas Pressure and Volume**SP15- Forces and Matter**SP15a Bending & Stretching/*Investigating Springs*SP15b Extension and Energy TransfersSP15c Pressure in FluidsSP15d Pressure and Upthrust |