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| Subject: Science Year 11 Curriculum Map 2022-2023 | | | |
| Terms | **Topics covered** and **core knowledge and skills** | Links to careers | Links to the Knowledge organiser and other additional resources |
| Term 1 | **Biology Core 2**   * Genetic inheritance * Variation * DNA & the genome * Genetic diagrams * Inherited disorders * Mitosis * Meiosis * Selective breeding * Plant organ systems * Osmosis * Diffusion * RP Diffusion * Carbon & water cycle * Waste management * Land use * Deforestation   **Chemistry Core 2**   * Earths early atmosphere * The greenhouse effect * Atmospheric pollutants * Evidence for global climate change * Carbon footprint * Global warming * Reducing the use of resources * Reversible reactions * Rate of reaction concentration * Rate of reaction Temperature * Rate of reaction surface area * Rate of reaction pressure * Calculating rate of reaction   **Physics Core 2**   * Transvese & longitudinal waves * RP Waves * Types of electromagnetic waves * Uses & Application of EM waves * Properties of EM Waves * (HT) Properties of EM waves * (HT) Suitability of EM waves * RP Infrared * Radioactive decay & nuclear radiation * Nuclear equations * Half life * Contamination & Irradiation * Mass number, atomic number & Isotopes * Developing the model of the atom | [Genetic counsellor](https://www.prospects.ac.uk/job-profiles/genetic-counsellor)  [Geophysicist](https://www.prospects.ac.uk/job-profiles/geophysicist) | <https://maritime.rivoagency.com/admin/wp-content/uploads/sites/20/2022/10/BE1-PART-A-KO.pdf>  <https://maritime.rivoagency.com/admin/wp-content/uploads/sites/20/2022/10/CC2-KO.pdf> |
| Term 2 | **Biology Extension 1**   * Photosynthesis * Uses of glucose from photosynthesis * Rate of photsynthesis * RP Photosyntheiss * Protist diseases * Viral & fungal diseases * Resistant bacteria * Stem cells * Genetic engineering * Antibiotics & painkillers * Discovery & development of drugs * Vaccination * Metabolism * Homeostasis * Control of blood glucose * (HT) Negative feedback * (HT) Hormones for infertility   **Chemistry Extension 1**   * Reversible reactions * Equilibrium * Changing conditions & Equilibrium * Effects of changing concentration on equilibrium * Effect of changing temperature & pressure on equilibrium * Conservation of mass & balancing equations * Mass changes when a gas is involved * Moles(HT) * Using moles to balance equations * Amount of substances in equations * Concentrations of solutions * Limiting reactants * Bond energies * Waste water treatment * Life cycle assessments * Development of the periodic table * Development of the model of the atom * Plum pudding & scattering     **Physics Extension 1**   * Distance time relationship * Velocity time graphs * Falling objects & F=MA * (HT) Momentum * (HT) Conservation of momentum * RP Hookes law * Changes in energy calculations * Gravity * Work done & energy transfer * Factors affecting breaking distance * RP Reaction time * (HT) Electric motors * Particle motion in gases * Change of state & specific latent heat * Density of materials * RP Density | [Plant breeder](https://www.prospects.ac.uk/job-profiles/plant-breeder-geneticist)  [Water quality Scientist](https://www.prospects.ac.uk/job-profiles/water-quality-scientist)  [Aerospace engineer](https://www.prospects.ac.uk/job-profiles/aerospace-engineer) | <https://maritime.rivoagency.com/admin/wp-content/uploads/sites/20/2022/10/BE1-PART-B-KO.pdf>  <https://maritime.rivoagency.com/admin/wp-content/uploads/sites/20/2022/10/CE1-KO.pdf>  <https://maritime.rivoagency.com/admin/wp-content/uploads/sites/20/2022/10/PE1-KO.pdf> |
| Term 3 | **Revision** |  |  |