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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** |  |  |