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| Subject: Science Year 9 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 | **Wireless technology**   * Describe what waves are and give examples. * Name the two types of waves. * Label parts of a transverse and longitudinal wave. * Describe the motion of particles in a transverse and longitudinal waves. * Define the terms frequency, wavelength and amplitude. * Recall and use the wave equation. * Describe how sound travels. * Describe how light travels. * Name the parts of the electromagnetic spectrum in order. * Describe how to calculate the speed sound in air. * Describe how to make measurements of frequency and wavelength in a ripple tank. * Describe the law of reflection. * Describe what happens to light when it reaches a boundary.   **Addiction support worker**   * Students can describe various roles working within the addiction support worker industry. * Students can state what a drug is. BB Sport Science Year 8 * Students can describe the different types of drugs and state examples. BB Sport Science Year 8 * Students can describe the law around the possession of illegal drugs. * Students can link their learning to careers within addiction support work. * Students can describe the risks associated with excessive alcohol consumption. * Students can state risk factors for smoking and explain issues with smoking when pregnant. * Students can explain how smoking causes CHD. BB Sport Science Year 8 * Students can give their opinion on Pablo Escobar. * Students can describe what drug misuse and addiction are and state where locally support can be achieved. * Students can give the uses of painkillers and antibiotics. * Students can describe the problems with overusing antibiotics. * Students can explain the process of clinical trials. * Students can describe the impact drugs can have on relationships and society. | [Wireless technology](https://learn.org/articles/Careers_in_Wireless_Communications_Your_Questions_Answered.html)  [Addiction support worker career](https://nationalcareers.service.gov.uk/job-profiles/substance-misuse-outreach-worker) | <https://maritime.rivoagency.com/admin/wp-content/uploads/sites/20/2022/10/Waves-KO.pdf>  <https://maritime.rivoagency.com/admin/wp-content/uploads/sites/20/2022/10/Addiction-Support-worker-KO.pdf> |
| Term 2 | **Science Skills Year 9**   * How to construct a risk assessment. * The difference between a hazard, risk and control. * The contents of an experimental plan. * Different ways data can be presented. * How to calculate an accurate mean * How to interpret tables and graphs. * State what a graph should contain. * Be able to plot graphs. * Calculate the gradient of a graph. * Construct simple evaluations. * Identify if results are repeatable and reproducible. * Explain how to overcome errors. * Write simple word equations * Balance simple symbol equations. * Convert in and out of standard form. * Work out % increase and decrease.   **Particle Science** | [Careers in medicine](https://www.prospects.ac.uk/careers-advice/what-can-i-do-with-my-degree/medicine) | <https://maritime.rivoagency.com/admin/wp-content/uploads/sites/20/2022/10/Year-9-Into-to-sci-KO.pdf>  <https://maritime.rivoagency.com/admin/wp-content/uploads/sites/20/2022/10/Particles-KO.pdf> |
| Term 3 | **Biology Fundamental 1**   * Organisation * Plant tissue * Animal & plant cells * Eukaryotic & Prokaryotic cells * Microscopy * Microscopy Required Practical * Diffusion * Specialised cells * Cell differentiation * Cell division * Sex determination * Reproduction * Contraception   **Chemistry Fundamental 1**   * Gas tests * Pure substances * Formulations * Chromatography * RP Chromatography * Atoms, Elements & compounds * Mixtures * The Atom * Drawing Electron structure * The periodic table * Group 0 * Group 1 * Group 7 | [Careers in chemistry](https://www.strath.ac.uk/science/chemistry/studywithus/careersinchemistry/https:/www.prospects.ac.uk/careers-advice/what-can-i-do-with-my-degree/food-science)  [Careers in Cell biology](https://www.mnstate.edu/academics/majors/cellular-molecular-biology/careers-outcomes/) |  |