

Subject Area: Year 9 Science

| Term 1A Knowledge, skills and key concepts | Term 1B Knowledge, skills and key concepts | Term 2A Knowledge, skills and key concepts |
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| Autumn 1 - Weeks 1-6 (6 weeks) | Autumn 2 - Weeks 8-15 (8 weeks) | Spring 1 – Weeks 16-20 (5 weeks) |
| Content Reactivity Series <ul style="list-style-type: none"> Recap of the periodic table Reactions of metals Reactivity series | Content Inheritance, variation and evolution <ul style="list-style-type: none"> Inheritance and DNA Variation and natural selection Extinction and biodiversity | Content Waves <ul style="list-style-type: none"> Properties of a waves Light waves- reflection and refraction Sound waves and the ear Nuclear radiation |
| Assessment objectives This is the knowledge, application and skills assessed by the end of topic test: <ul style="list-style-type: none"> Describe the structure of the periodic table. Describe how metals react with acids, water, oxygen and carbonates. Recall the reactivity series for metals. Explain displacement reactions. | Assessment objectives This is the knowledge, application and skills assessed by the end of topic test: <ul style="list-style-type: none"> Describe how characteristics are inherited from our parents, Explain how variation is a result of both genetics and the environment. Describe the work of scientists in the field of genetics. Describe the process of natural selection. Explain how species can become extinct and the importance of maintaining biodiversity. | Assessment objectives This is the knowledge, application and skills assessed by the end of topic test: <ul style="list-style-type: none"> Describe the features of a wave and the effects of changing pitch and amplitude Construct ray diagrams for reflection and refraction Describe the different types of nuclear radiation Describe the uses and effects of nuclear radiation. |
| End of topic test - Week 7 (6 weeks of learning and prep) | End of topic test week 8 | End of topic test (in exam week) |
| Spring 2- Weeks 22 (end of spring 1) -27 (6 weeks) | Summer 1 – Weeks 28-32 (5 weeks) | Summer 2 – Weeks 34-40 (7 weeks) |
| Content Skills <ul style="list-style-type: none"> Equipment and measurements Producing and analysing data Scientific methods and analysis Developing models and theories | Content Building blocks of life <ul style="list-style-type: none"> Cell organelles Microscopes and the magnification equation DNA, Chromosomes and cell division. Cell transport | Content Building blocks of chemistry <ul style="list-style-type: none"> Structure of the atom The development of the periodic table Patterns and trends within the periodic table. Techniques for separating mixtures |
| Assessment objectives This is the knowledge, application and skills assessed by the end of topic test: <ul style="list-style-type: none"> Identify risks and describe necessary precautions Identify appropriate equipment for measuring and minimising errors. Produce appropriate graphs and interpret a variety of data formats. Use, apply and re-arrange equations. Write that produce valid results and evaluate the work of other scientists. Evaluate models and describe how scientific theories change. | Assessment objectives This is the knowledge, application and skills assessed by the end of topic test: <ul style="list-style-type: none"> Describe how cells are organised. Explain how to make a slide and how to use the magnification equation Use, apply and re-arrange the magnification equation. Convert between different units of measurement. Compare and contrast light and electron microscopes. Describe the genetic makeup of a cell. Describe how substances are transported in cells. | Assessment objectives This is the knowledge, application and skills assessed by the end of topic test: <ul style="list-style-type: none"> Describe how an atom is organised. Explain how different techniques can be used to separate mixtures. Demonstrate an awareness of how the periodic table was developed and how it is organised Explain the trends found within the periodic table. |
| End of topic test (week 6) | End of topic test (exam week) | End of year test |