

**STUDENT Unit Planner**

**Term 3 2024**

**Year 9 Science**

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| **Year Level:** |   | Student checklist: 🗹 when you know… |
| **Subject:**  |   | [ ] Assessment due dates[ ] The learning goals and success criteria for this term [ ] Changes to routines e.g. excursions[ ] When assessment practice lessons will occur (exemplars)[ ] When revision lessons will occur |
| **Term/Year:** | 3 / 2024 |
| **Unit Title:**  |   |
| **Assessment:** |   |
| **Key Resource:**  |   |
| **WK** | **Wk. Beg** | **Holidays or variations this week** | **Lesson 1** | **Lesson 2**  | **Lesson 3**  |
| 1 | 8 Jul. 24 |  | **HISTORY OF THE ATOM***Investigate how the structure of atoms have changed over time* | **PERIODIC TABLE - STRUCTURE OF THE ATOM***Describe the structure of atoms in terms of the nucleus, protons, neutrons and electrons and their charge* *Determine how many protons, neutrons and electrons are in an atom* | **PERIODIC TABLE – STRUCTURE OF THE ATOM USING BOHR DIAGRAMS** FIRST 20 ELEMENTS*Model the structure of an atom in terms of the nucleus, protons, neutrons and electrons using Bohr-Rutherford shell diagrams**Compare the mass and charge of protons, neutrons and electrons* |
| 2 | 15 Jul. 24 |  | BOHR DIAGRAMS AND CHARGES (ions) | **PRAC** - FLAME TESTS | **PERIODIC TABLE - ISOTOPES***Explain how isotopes atoms differ and write isotopes using isotope notation.* |
| 3 | 22 Jul. 24 |  | **HALF LIFE AND USES OF RADIATION \****Define isotope, radioisotope, radioactive decay, radiation and half-life.* | **RADIOACTIVITY***Describe in simple terms how alpha and beta particles and gamma radiation are released from unstable atoms* *Identify and describe useful applications and effects/hazards of radiation in medicine, industry, carbon dating* | **CHEMICAL REACTIONS** **PRAC LESSON***Identify reactants and products in chemical reactions*Demonstrations or stations to review chemical reactions, reactants, products |
| 4 | 29 Jul. 24 |  | **WRITING SIMPLE IONIC FORMULAS** | **WRITING SIMPLE IONIC FORMULAS** | **Chemical reactions PRAC LESSON \*** |
| 5 | 5 Aug. 24 |  | **LAW OF CONSERVATION OF MASS \***Introduce the concept of conservation of mass – students make predictions about each demonstrationSee below for instructions | **LAW OF CONSERVATION OF MASS \*** | **LAW OF CONSERVATION OF MASS \***Continued |
| 6 | 12 Aug. 24 |  | **WRITING EQUATIONS***Model chemical reactions in terms of rearrangement of atoms**Describe observed reactions using word equations* | **Balancing Equations** | **Balancing Equations** |
| 7 | 19 Aug. 24 |  | **Chemical Reactions - PRAC LESSON \***Series of pracs that enable observations to be made, writing of formulas and balancing equations | **Chemical Reactions - PRAC LESSON \*** | **FAIR TESTING \***Part A - Range of metals in acid (3 with varying reactivity)Task - Order from most reactive to least reactive |
| 8 | 26 Aug. 24 |  | **FAIR TESTING \***Part B – How much hydrogen gas does magnesium produce. | **FAIR TESTING \***Part B – How much hydrogen gas does magnesium produce? | StileappThere are lessons on: Atoms; Periodic Table; Radiation; Chemical Reactions |
| 9 | 2 Sep. 24 |  | StileappThere are lessons on: Atoms; Periodic Table; Radiation; Chemical Reactions | Revision | Revision |
| 10 | 9 Sep. 24 |  | Exam | Exam catch up | Extension activity |