

**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 demonstration  See 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? | | Stileapp  There are lessons on: Atoms; Periodic Table; Radiation; Chemical Reactions |
| 9 | 2 Sep. 24 |  | Stileapp  There are lessons on: Atoms; Periodic Table; Radiation; Chemical Reactions | Revision | | Revision |
| 10 | 9 Sep. 24 |  | Exam | Exam catch up | | Extension activity |