

**STUDENT UNIT PLANNER**

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| **Year Level:** | | | 10 | | Student checklist: 🗹 when you know… | |
| **Subject:** | | | Science | | 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:** | | | 1 / 2024 | |
| **Unit Title:** | | | Genetics (Biology) + Chemistry | |
| **Assessment:** | | | Exam | |
| **Key Resource:** | | | OneNote | |
| **WK** | **Wk. Beg** | **Holidays or variations this week** | **Lesson 1** | **Lesson 2** | | **Lesson 3** |
| 1 | 22 Jan. 24 | Year 10 Begin Tuesday 23/1  Australia Day Friday 26/1 |  | **What Is DNA?**  **LG1- SC2, 3**   * Definitions * Structure – genes, chromosomes, DNA double helix. * Inherited vs non-inherited traits. | | **DNA Model**  **LG1- SC2, 3**   * Make a DNA model – CSIRO double helix science club. * Stileapp – DNA. |
| 2 | 29 Jan. 24 |  | **Extracting DNA From Fruit**  **LG1- SC2**   * Extracting DNA from fruit investigation. | **Mitosis**  **LG2- SC4**   * Stages of mitosis to produce two daughter cells. | | **Meiosis and Fertilisation**  **LG2- SC4, 5**   * Meiosis (contrast with mitosis). * Fertilisation and variation. |
| 3 | 5 Feb. 24 | Swimming Carnival Friday 9/2 | **Monohybrid Cross**  **LG3- SC6, 7**   * Definitions * Predict genotypes and phenotypes of offspring. | **Monohybrid Cross**  **LG3- SC6, 7**   * Definitions * Predict genotypes and phenotypes of offspring. | | **Sex-Linked Punnet Squares**  **LG3- SC8**   * Sex-linked crosses. * Predict genotypes and phenotypes of offspring. |
| 4 | 12 Feb. 24 | My PB Tuesday 13/2 | **Pedigree Charts**  **LG3- SC9**   * Draw a pedigree chart. | **Pedigree Charts**  **LG3- SC10**   * Draw a pedigree chart. | | **Genetic Mutation**  **LG4- SC11, 12**   * Definition * Germline versus Somatic (definition and consequences). * Causing factors. |
| 5 | 19 Feb. 24 |  | **Evolution and Natural Selection**  **LG5- SC13, 14, 15**   * Darwin’s Theory * Processes – variation, isolation, selection. | **Natural Selection**  **LG5- SC16, 17**   * Investigation/Practice | | **Evidence for Evolution**  **LG6- SC18, 19**   * Investigation/Practice |
| 6 | 26 Feb. 24 |  | **Evidence for Evolution**  **LG6- SC18, 19**   * Investigation/Practice | **Revision** | | **Revision** |
| 7 | 4 Mar. 24 |  | **EXAM** | **Introduce Chemistry Unit**  **LG1- SC1, 2, 3**   * Structure of the atom. * Bohr model diagram. | | **Structure of Periodic Table**  **LG2- SC4**   * Identifying structure of the periodic table (groups and periods). * Group names (grp 1,2,7,8). |
| 8 | 11 Mar. 24 |  | **Periodic Table- Properties of Elements**  **LG2- SC5, 6, 7**   * Analyse how the periodic table organises elements to predict the properties of an element. | **Chemical Reactions**  **LG3- SC8, 9, 10**   * Define key terms used in chemical reactions and equations. * Describe and list examples of the 5 main types of reactions. | | **Chemical Reactions**  **LG3- SC8, 9, 10**   * Describe and list examples of the 5 main types of reactions. |
| 9 | 18 Mar. 24 |  | **Formation of Ions**  **LG3- SC10**   * Describe the formation of ions (anions and cations). * Predict chemical formulas using a table of ions. | **Chemical Formula**  **LG3- SC10**   * (REVIEW)Predict chemical formulas using a table of ions. | | **Balancing Equations**  **LG3- SC10**   * Identify balanced equations. * Justify the Law of Conservation of Mass by writing balanced equations. |
| 10 | 25 Mar. 24 | Good Friday  29/3 | **Balancing Equations Cont.**  **LG3- SC10**   * Justify the Law of Conservation of Mass by writing balanced equations. | **Reaction Rates**  **LG4- SC11, 12, 13**   * Define key terms used in reaction rates. * Identify and explain key factors that affect the rate of a reaction. | | **Student Experiment Hand Out**  **LG5- SC14, 15, 16** |