

**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 23/1Australia 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.
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| 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.
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| 3 | 5 Feb. 24 | Swimming Carnival Friday 9/2 | **Monohybrid Cross****LG3- SC6, 7*** Definitions
* Predict genotypes and phenotypes of offspring.
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* Predict genotypes and phenotypes of offspring.
 | **Sex-Linked Punnet Squares****LG3- SC8*** Sex-linked crosses.
* Predict genotypes and phenotypes of offspring.
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| 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.
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| 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
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| 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).
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| 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.
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| 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.
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| 10 | 25 Mar. 24 | Good Friday29/3 | **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** |