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| **STUDENT UNIT PLANNER** |
| Year Level: | 9 | Student check list: 🗹 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:** | 2 / 2024 |
| **Unit Title:**  | Heat, Light, Sound and Electricity  |
| **Assessment:** | Assignment (due week 10) |
| **Key Resource:**  | STILE App Lessons |
| **WK** | **Wk. Beg** | **Holidays or variations this week** | **Lesson 1** | **Lesson 2**  | **Lesson 3**  |
| 1 | 15 Apr. 24 |  | **Light energy**Discuss the wave model of lightIdentify key components of a wave diagram (wavelength and frequency)Identify light as part of the EMS (ROYGBIV) | **Light Energy**Explain the movement of light through a glass block using a diagramInvestigate and explain the refraction and reflection of light using labelled diagrams | **Light Energy**Ray boxes and experiment with light using mirrors, lenses, Perspex block and explore refraction |
| 2 | 22 Apr. 24 | ANZAC DAY 25th  | **Light Energy**Ray boxes and experiment with light using mirrors, lenses, Perspex block and explore refraction | **Sound energy**Explain how sound energy is transmitted using the wave model Describe transverse and longitudinal waves | **Sound energy** Explain pitch and loudness in terms of wave propertiesExplain how and why the speed of sound changes in different materialsPractical: Investigate Pitch and Loudness |
| 3 | 29 Apr. 24 |  | **Electrical energy** Introduction to Electricity – Van De Graaff DemonstrationExplain voltage and current and resistance for an electric circuit | **Electrical energy** Electric circuit symbols and basic circuit diagrams. | **Electrical energy**Practical: Investigate factors that effect the transfer of energy through an electric circuit.Series and parallel circuits to measure voltage, current and resistance |
| 4 | 6 May. 24 | LABOUR DAY 6th  | **Catch up day** | **Heat energy** Discuss the particle model Explain conduction in terms of the particle model | **Heat energy**Practical: Investigate heat conduction  |
| 5 | 13 May. 24 |  | **Heat energy**Explore and explain the movement of heat energy through different mediums (Conductors and Insulators) | **Heat energy** Practical: Investigate the movement of heat through different mediums (conductors and insulators) | **Heat energy** Explain how convection occurs in terms of the particle model |
| 6 | 20 May. 24 |  | **Heat energy** Practical: Investigate and explain the transfer of heat through convection | **Heat energy** Describe the wave modelHeat transfer through radiation | **Heat energy**Practical: Investigate heat transfer through radiation |
| 7 | 27 May. 24 |  | **Assignment Lesson** * Hand out and introduce assignment

Aim/Hypothesis/ Method/Risk Assessment | **Assignment Lesson**Conduct Experiment and collect results | **Assignment Lesson** Conduct Experiment and collect results |
| 8 | 3 Jun. 24 |  | **Assignment Lesson** * Conduct Experiment and collect results
 | **Assignment Lesson*** Data Analysis
* Complete Graph 1
 | **Assignment Lesson*** Data Analysis
* Complete Graph 1
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| 9 | 10 Jun. 24 |  | **Assignment Lesson*** Discussion Questions
* Conclusion
 | **Assignment Lesson*** Discussion Questions
* Conclusion
 | **Assignment Lesson*** Commence Section 2
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| 10 | 17 Jun. 24 |  | **Assignment Lesson*** Assignment Due
 | **End of Term Activities** | **End of Term Activities** |