**Inquiry Question 1: What inferences can be drawn from observations?**

|  |
| --- |
| Describe the Aboriginal and Torres Strait Islander Peoples’ process of leaching toxins from bush tucker. |
| Describe the Aboriginal and Torres Strait Islander Peoples’ process of locating sources of freshwater within bodies of saltwater. |

**Inquiry Question 2: How is secondary-sourced data used in practical investigations?**

|  |
| --- |
| Evaluate the usefulness of considering secondary-sourced research before undertaking an investigation to collect primary data.  *Consider: inferences, creating questions, hypotheses, methodology, avoiding unnecessary investigations.* |

**Inquiry Question 3: How does humans’ ability to recognise patterns affect the way they interpret data?**

|  |
| --- |
| Describe a chosen pattern that has been observed over time throughout the Universe or in nature. |
| Propose a hypothesis based on an irregular pattern observed over time. |
| Investigate the human tendency to observe patterns and misinterpret information (e.g., pareidolia or optical illusions). |
| Discuss how misinterpretation of data may influence experimental conclusions. |

**Inquiry Question 4: How can hypotheses and assumptions be tested?**

|  |
| --- |
| Discuss the role and significance of outliers in data analysis. |

**Inquiry Question 5: What generalisations and assumptions are made from observed data?**

|  |
| --- |
| Explain the conclusion developed from the soap vs bacteria depth study and compare this to the hypothesis created prior to the experiment. |
| Evaluate the accuracy, reliability and validity of the aforementioned experiment. |

**Inquiry Question 6: What role do peers play in scientific investigation?**

|  |
| --- |
| Assess the requirement of collaboration and alternative perspectives for large-scale scientific endeavours (e.g.: particle accelerators, periodic table, bioastronomy, plate tectonics). |
| Assess the current understanding (or lack thereof) of the origins of life on Earth. |
| Assess the current understanding (or lack thereof) of the idea that feynmanium will be the last chemical on the periodic table. |
| Assess the current understanding (or lack thereof) of the expanding universe and Hubble constant. |
| Evaluate the European settler bias towards Aboriginal and Torres Strait Islander Peoples’ ecological understanding and agricultural practices. |