**

SCIENCE READINESS BOOK

*Analyse the extent to which society has undergone change to use of energy in society*

|  |  |
| --- | --- |
| ***Component 1:***  ***Component 2:*** | ***Relationship between components:*** |
| ***Implication(s):*** | |

*Analyse the extent to which transport has changed in the last 50 years.*

|  |  |
| --- | --- |
| ***Component 1:***  ***Component 2:*** | ***Relationship between components:*** |
| ***Implication(s):*** | |

*Evaluate the use of nuclear reactors for generating electricity in Australia.*

|  |  |
| --- | --- |
| ***Description of feature or issue:*** | |
| ***Points for (advantages)*** | ***Points against (disadvantages)*** |
| ***Criteria:*** | |
| ***Judgement of each point against criteria*** | |

*Describe the future use of fingerprinting in MGHS to the parents*

|  |  |  |
| --- | --- | --- |
| ***Issue identified:*** | | |
| ***Points for:*** | *and* | ***Points against:*** |

*Explain how social, ethical and environmental considerations influence the production of new materials such as polymers and ceramics.*

|  |  |  |
| --- | --- | --- |
| ***Cause:*** | ***Effect:*** | ***Why and/or how:*** |

*Evaluate scientific evidence of a current issue affecting society that is the result of human activity on global systems.*

|  |  |
| --- | --- |
| ***Description of feature or issue:*** | |
| ***Points for (advantages)*** | ***Points against (disadvantages)*** |
| ***Criteria:*** | |
| ***Judgement of each point against criteria*** | |

*Analyse the problems or issues you see with waste management or pollution on the organisms that live on the lithosphere and in the hydrosphere.*

|  |  |
| --- | --- |
| ***Component 1:*** *(gene expression)*  ***Component 2:*** *(maintenance and repair)* | ***Relationship between components:*** |
| ***Implication(s):*** | |

*Analyse a marine food web. Propose what may happen if a biotic and an abiotic factor is changed*

|  |  |
| --- | --- |
| ***Component 1:***  ***Component 2:*** | ***Relationship between components:*** |
| ***Implication(s):*** | |

*Choose one of the products from crude oil. Evaluate the benefits and problems for the community in their manufacture and use.*

|  |  |
| --- | --- |
| ***Description of feature or issue:*** | |
| ***Points for (advantages)*** | ***Points against (disadvantages)*** |
| ***Criteria:*** | |
| ***Judgement of each point against criteria*** | |

*Explain the key characteristics and trends of the periodic table*

|  |  |  |
| --- | --- | --- |
| ***Cause:*** | ***Effect:*** | ***Why and/or how:*** |

*Explain the key characteristics of the carbon cycle. Illustrate this on a diagram.*

|  |  |  |
| --- | --- | --- |
| ***Cause:*** | ***Effect:*** | ***Why and/or how:*** |

*Justify uses of radioisotopes in medicine and in Agriculture using specific examples.*

|  |  |
| --- | --- |
| ***Component 1:***  ***Component 2:*** | ***Relationship between components:*** |
| ***Implication(s):*** | |

|  |
| --- |
| ***Argument/point of view/conclusion:*** |
| ***Points supporting the argument/point of view/conclusion:*** |

*Evaluate ways in which Aboriginal and Torress Strait Islander people conserve and manage ecosystems.*

|  |  |
| --- | --- |
| ***Description of feature or issue:*** | |
| ***Points for (advantages)*** | ***Points against (disadvantages)*** |
| ***Criteria:*** | |
| ***Judgement of each point against criteria*** | |

*Compare and contrast sexual and asexual reproduction*

|  |  |  |
| --- | --- | --- |
| ***Objects being compared:*** | | |
| ***Similarities:*** | *and* | ***Differences*** |

*Assess the role of antibiotics in treatment of diseases in our society.*

|  |  |
| --- | --- |
| ***Points for (advantages)*** | ***Points against (disadvantages)*** |
| ***Judgement:*** | |

*Explain how aeroplanes are able to stay in the air*

|  |  |  |
| --- | --- | --- |
| ***Cause:*** | ***Effect:*** | ***Why and/or how:*** |

*Describe how music would affect your concentration and driving ability*

|  |
| --- |
| ***Object/thing being described:*** |
| ***Characteristics or features:*** |

*Make a judgement on the success of air bags, crumple zones and ABS in reducing fatalities in car accidents*

|  |
| --- |
| ***Argument/point of view/conclusion:*** |
| ***Points supporting the argument/point of view/conclusion:*** |

*Evaluate the impact of Lamarck’s and Wallace’s work on that of Charles Darwin.*

|  |  |
| --- | --- |
| ***Description of feature or issue*** | |
| ***Points for (advantages)*** | ***Points against (disadvantages)*** |
| ***Criteria:*** | |
| ***Judgement of each point against criteria*** | |

*Watson and Crick’s working style was more successful than that of Franklin and Wilkins. Discuss what made the working style of Watson and Crick more successful.*

|  |  |  |
| --- | --- | --- |
| ***Issue identified:*** | | |
| ***Points for:*** | *and* | ***Points against*** |