**Manjimup Senior High School**

**Australian Curriculum**

**Science in Practice Year 11 – Task 3**

**Ocean acidification**

**Part A – Research (30%)**

You will be writing a persuasive article for a science magazine or newspaper to explain ocean acidification. Your article needs to include the relevant scientific concepts involved and to describe the impact of ocean acidification on a particular aquatic organism and society. The title will be; ‘*Ocean acidification is a future impact of the changing climate*’. It should be 500–1000 words in length and should include at least one image as well as a bibliography. Use this template to help collect notes for use when drafting your article.

1. **Explain the scientific concepts associated with ocean acidification. Begin by drafting some questions for yourself to research answers for. Following this up with notes from different sources.**

**Q1: How does the combustion of fossil fuels result in ocean acidification?**

**Q2:**

**Q3:**

|  |
| --- |
| Source title: **The state of ocean acidification** |
| Summary of important points: |
| Images: |
| Source link: CSIRO.au: <https://www.csiro.au/en/news/All/Articles/2020/November/the-state-of-ocean-acidification> |

|  |
| --- |
| Source title: |
| Summary of important points: |
| Images: |
| Source link: |

1. **Choose one of the following aquatic organisms to focus on in your article. If you prefer a different aquatic species, seek approval from your teacher.**

[**Pteropods**](https://www.pmel.noaa.gov/co2/story/What+is+Ocean+Acidification%3F) [**Molluscs**](https://projects.research-and-innovation.ec.europa.eu/en/horizon-magazine/sea-snails-prawns-front-line-ocean-acidification) [**Corals**](https://usa.oceana.org/effects-ocean-acidification-corals/)

**Describe the impact of the ocean acidification on your chosen aquatic organism. Begin**  **by drafting some questions for yourself to research answers for.**

**Q1: What impact does sea water pH have on the life cycle of ... ?**

**Q2:**

**Q3:**

|  |
| --- |
| Source title: |
| Summary of important points: |
| Images: |
| Source link: |

|  |
| --- |
| Source title: |
| Summary of important points: |
| Images: |
| Source link: |

1. **Describe the impacts that ocean acidification has on ocean ecosystems in general and on human society.**

**Again, begin by drafting some questions for yourself. Try to come up with questions**  **that will be interesting to address in your article.**

**Q1: What keystone species in the oceans have calcium carbonate bodies?**

**Q2:**

**Q3:**

|  |
| --- |
| Source title: |
| Summary of important points: |
| Images: |
| Source link: |

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| --- |
| Source title: |
| Summary of important points: |
| Images: |
| Source link: |

**Part A Marking Key**

|  |  |
| --- | --- |
| **Description** | **Mark** |
| Devises a set of research questions which clearly identify the scientific concepts and/or issues associated with the topic being explored | 3 |
| Devises a set of research questions which identify some of the scientific concepts and/or issues associated with the topic being explored | 2 |
| Devises a set of research questions with assistance | 1 |
| **Subtotal** | **/3** |
| Selects a range of reliable sources (at least five) that are relevant and useful to the chosen topic | 3 |
| Selects a few sources (three or four) that provide information and evidence on the chosen topic | 2 |
| Selects limited sources (at least two) provide information and evidence on the chosen topic | 1 |
| **Subtotal** | **/3** |
| Makes detailed notes that are relevant to the research questions, and shows an understanding of the scientific concepts associated with the topic being explored and the impacts of the discovery/innovation/issue explored | 4–5 |
| Makes notes that are relevant to the research questions, and shows some understanding of the scientific concepts associated with the topic being explored and the impacts of the discovery/innovation/issue explored | 3 |
| Makes notes that address the research questions | 2 |
| Makes notes that contain some links to the research questions | 1 |
| **Subtotal** | **/5** |
| Presents notes clearly, using an appropriate retrieval and/or note-making framework | 2 |
| Presents notes in some order | 1 |
| **Subtotal** | **/2** |
| Provides a bibliography that is consistent with school protocols | 2 |
| Provides a bibliography includes that includes inaccuracies or is inconsistent with school protocols | 1 |
| **Subtotal** | **/2** |
| **Research total** | **/15** |