**2023**

Year 12 Integrated Science – Unit 3

Task 3: Ecosystem Biotic and Abiotic Factors

Weighting: 10% Due date: 06/04/2023

Student Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Background**:

In ecosystems, abiotic (non living) and biotic (living) factors impact on the ecosystem. This can influence the diversity and species richness in which is present. Different examples of ecosystems include:

* Mangroves
* Seagrass Ecosystems
* Intertidal zones
* Coral Reef
* Estuaries
* Seaweed forests

Each of these ecosystems are characterized by different environmental conditions, which therefore influences the biological community that we see present

***Assessment***

For this task you will be investigating one ecosystem of your choosing from the list above (if you wish to choose another can you please get it checked by myself). You will need to choose a location from around the world and investigate the biology of this ecosystem and how abiotic conditions influence the ecosystem. You will present the information it in a form of your choosing. This may include:

* Brochure
* Poster
* Media presentation
* Fact sheet
* Powerpoint Presentation

You will be researching the abiotic factors of the ecosystem, discussing how this impacts the biotic components of the system. It is expected you check the **rubric** to understand how grades will be allocated. As a minimum you will need to include:

* Abiotic conditions of the ecosystem
* Food chain or food web encompassing the various forms of biology
* Examples of symbiosis in the ecosystem (mutualism, parasitism, commensalism)
* Examples of adaptations to the abiotic conditions which allows organisms to survive
* How the abiotic conditions are changing (particularly how humans impact the abiotic conditions of the ecosystem)

Marks will be allocated for overall presentation and it is expected that there is a minimum of **five references**

|  |  |  |  |
| --- | --- | --- | --- |
| **0 MARKS** | **1 MARK** | **2 MARKS** | **3 MARKS** |
| **Presentation**  Information is not presented clearly, overall structure is missing, with missing headings. Missing images | Structure is missing with information presented in a confusing manner. Headings included. Images included do not add to the argument | Demonstrates good structure but still shows some issues with format. Headings included. Images included add to the argument somewhat. Text chosen is not clear and concise | Demonstrates information in a clear and structured way. Headings included are informative. Text chosen in clear and concise. Images chosen add the argument |
| **Abiotic conditions**  Not included | Some abiotic conditions included and/or no details of the abiotic conditions | Some abiotic conditions included with details included | All abiotic conditions included with details included |
| **Biology**  No food chain or food web included OR google image included | Food chain/web included with details lacking or errors | Food web included with vital species missing | Food web included with all important species in the ecosystem included |
| **Symbiosis**  Fails to include or symbiosis example is not symbiosis | Includes symbiosis example but lacks details | Includes 1 example of symbiosis including details | Includes multiple examples of **different** symbiosis and includes details of how it is symbiosis |
| **Adaptations**  Included no adaptations or incorrect | Includes one adaptation of organisms biology to abiotic conditions, but lacks details | Includes more than one adaptation to biology with details lacking **OR** includes one adaptation of biology to abiotic conditions | Includes multiple examples of adaptations to biology with details included |
| **Influence of abiotic conditions**  Not included or incorrect | Attempts to describe how humans impact abiotic conditions but lacks details | Describes one way the abiotic conditions are influenced with details | Describes multiples ways in which the abiotic conditions are change with reference to how humans are impacting on them |
| **References**  Less than 5 references included | Five references included in incorrect format | Five references in correct format | More than 5 references in correct format |