**Joseph Banks Secondary College**

Year 12 Integrated Science: General

****Unit 4 - Task 10

**Assessment type: Extended Response – Types of Energy**

**Conditions**

Period allowed for completion of the task:

* Four Lessons of class time dedicated to completing the extended response.
* A device (ipad/laptop) may be used to access research material on Seqta and on the internet.
* Class notes from your book.

Use your prior knowledge from classwork, prior lessons and internet resources to answer the questions.

**Task Weighting:**

10% of the school mark for this pair of units

**NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Research the definitions of energy, power and work. Define and compare forms of energy by providing common examples (30 marks)**

**Energy**

|  |  |
| --- | --- |
| * define and describe relationships between | * define and compare forms of energy |
| * + kinetic |
| * + energy | * + potential |
| * + power | * + thermal |
| * + work | * + chemical |
|  | * + electrical |
|  | * + electro-chemical |
|  | * + electromagnetic (light) |
|  | * + sound   + nuclear |

Energy transformations:

* Explain, using appropriate examples, how energy is transformed from one type of energy to another.

**Task description**

* Research the definitions of energy, power and work, then produce a detailed paragraph for each definition and a final paragraph on the relationships between the three.
* Research sources of information to define and compare the different forms of energy
* for each form of energy, identify and compare **two (2)** common examples or uses; the two examples should be described in approximately 100 words
* images may be included and referred to, when comparing the forms of energy
* Include all references in an appropriately set out reference list.
* Plagiarism will result in zero marks being awarded for each section containing plagiarism.

|  |  |
| --- | --- |
| **What needs to be submitted for assessment** | **Due dates** |
| * Definitions of energy, power and work | 24/9/19 |
| * Comparison of the different forms of energy | 24/9/19 |

|  |  |  |
| --- | --- | --- |
| **Research the definitions of energy, power and work. Define and compare forms of energy, by providing common examples** | **Maximum possible mark** | **Allocated mark** |
| Documents definitions and relationships of energy, power and work   * accurate detailed definitions and correct use of terminology * minor/small errors or some details missing in each definition, uses terminology correctly to define of each term * terminology incorrect and/or critical information missing | 5–6  3–4  1–2 | **/6** |
| * different forms of energy, with two examples or uses of each form of energy * accurate identification of each energy type and correct descriptions of two common examples, using appropriate terminology * correct terminology in identifying each energy type but has minor/small errors in some descriptions of the examples * some energy types defined in general terms, with minor errors in some descriptions of the examples * incorrect use of terminology to identify and describe examples of the energy types | 13–16  9–12  5–8  1–4 | **/16** |
| Explain how energy is transformed from one form to another.   * Uses appropriate examples to provide detailed descriptions of the transformation of energy between different forms. * Uses an example to identify the energy transformations with minor/small errors in some descriptions. * Uses general terms to identify some energy transformations with some critical information missing and/or poorly explained. | 5-6  3-4  0-2 | **/6** |
| * appropriate reference list * limited or no reference list provided | 2  0–1 | **/2** |
| **Total** | | **/30** |