### MYP 5.1 Physics Criteria D – Reflecting on the impacts of science

<table>
<thead>
<tr>
<th>Achievement level</th>
<th>Descriptor</th>
<th>Clarifications/Task Specific Rubric</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>The student does not reach a standard described by any of the descriptors below.</td>
<td>□ Give a brief account of the problems addressed by science relating to address the issue for ………………….</td>
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</tbody>
</table>
| 1-2               | The student is able to:  
  i. **outline** the ways in which science is used to address a specific problem or issue  
  ii. **outline** the implications of the use of science to solve a specific problem or issue, interacting with a factor  
  iii. **apply** scientific language to communicate understanding but does so with limited success  
  iv. document sources, with limited success. | □ Give a brief account of stating the way science is used to address the problem relating to an aspect of …………………...  
 □ Give a brief account of the implications of using science to solve the issue for ……………………….. Include a factor from the list below in your outline.  
 □ **use scientific language** to communicate knowledge and understanding with limited success  
 -use limited appropriate scientific vocabulary correctly  
 -use of scientific language to communicate limited understanding of ……………………………...  
 □ Credit some sources of information in a Works Cited section but **not in a consistent format**  
 □ Reference limited information in the text but **not in a consistent format** or **not able** to reference information in the text. |
| 3-4               | The student is able to:  
  i. **summarize** the ways in which science is used to address a specific problem or issue  
  ii. **describe** the implications of using science to solve a specific problem or issue, interacting with a factor  
  iii. sometimes **apply** scientific language to communicate understanding  
  iv. sometimes document sources correctly. | □ □ □ Give a concise account of the general theme or major points of the way science is used to address the issue  
 □ □ □ Give a detailed account of the implications of using science to solve the issue for ……………………….. Include a factor from the list below in your description.  
 □ □ □ Sometimes use scientific language to communicate knowledge and understanding -uses some appropriate scientific vocabulary correctly  
 -use of scientific language to communicate some understanding of …………………...  
 □ □ □ Credit sources of information in a Works Cited section but **not using MLA format**  
 □ □ □ Reference some information in the text but **not using MLA format** |
| 5-6               | The student is able to:  
  i. **describe** the ways in which science is applied and used to address a specific problem or issue  
  ii. **discuss** the implications of using science and its application to solve a specific problem or issue, interacting with a factor  
  iii. **usually apply** scientific language to communicate understanding clearly and precisely  
  iv. **usually document sources correctly.** | □ □ □ Give a detailed account of the way science is used to address the issue for …………………...  
 □ □ □ **Give a detailed account** of the way science is used to address the problem relating to an aspect of ………………………..  
 □ □ □ **Offer a considered and balanced review that includes a range of arguments, factors and hypothesis clearly presented and supported by appropriate** of the implications of using science to solve the issue ………………………..  
 Include a factor from the list below in your discussion.  
 □ □ □ Mostly using scientific language, communicate knowledge and understanding about… |
The student is able to:

i. **explain** the ways in which science is applied and used to address a specific problem or issue

ii. **discuss and evaluate** the implications of using science and its application to solve a specific problem or issue, interacting with a factor

iii. **consistently apply** scientific language to communicate understanding **clearly and precisely**

iv. document sources **completely**.

- **Give a detailed account** of the problems addressed by science relating to your EM – wave.
- **Give a detailed account** of the way science is used to address the issue - Explain (the problem of your choosing) - Include accurate, labelled diagrams of …………………………………………………... - Include correctly labelled …………………………………………………...

- **Offer a considered and balanced review** that includes a range of arguments, including advantages and limitations. This should be clearly presented and supported by appropriate evidence of the implications of using science to solve the issue.

  Include a **factor** in your discussion.

- **Reach a conclusion** by weighing up the strengths and limitations of the implications of using science to solve the issue of …………………………………………………... Include a **factor** from the list below in your evaluation.

- **Consistently use scientific language** to communicate knowledge and understanding **clearly and precisely**.  - use appropriate scientific vocabulary correctly with few error  - use scientific language to communicate clear understanding of your EM – wave.

- **Credit sources of information** in a Works Cited section using **MLA format** with **almost no mistakes**.

- **Reference appropriate information** in the text using **MLA format** with **almost no mistakes**.

### Factors

<table>
<thead>
<tr>
<th>Factors</th>
<th>1 Economical</th>
<th>2 Environmental</th>
<th>3 Ethical</th>
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<tr>
<td>The implications of using science and its application to solve a specific problem or issue, interacting with a factor</td>
<td>Production, distribution, and use of income, wealth, and commodities</td>
<td>Circumstances, objects, or conditions by which one is surrounded</td>
<td>Process of rational inquiry to decide on issues as right or wrong, as applied to the people and their actions</td>
</tr>
<tr>
<td>4 Cultural</td>
<td>5 Political</td>
<td>6 Social</td>
<td>7 Moral</td>
</tr>
<tr>
<td>Patterns of knowledge, behaviour, beliefs, shared attitudes, values, goals and practices that characterize groups of people</td>
<td>Relates to government or public affairs</td>
<td>Interactions between groups of people involving issues such as welfare, safety, rights, justice or class</td>
<td>Principles of right or wrong behaviour derived from a particular society</td>
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